

SIX DAYS

THREE CONFERENCES

THREE FORUMS

ONE EXHIBITION



WAVES OF INNOVATION

28TH EDITION OF THE EUMW
CONFERENCE PROGRAMME
 EUROPE'S PREMIER MICROWAVE, RF, WIRELESS AND RADAR EVENT



WAVES OF INNOVATION

Register online at: www.eumw.eu





**PROMOTING EUROPEAN
MICROWAVES**

Join the
EuMA community

www.eumwa.org



Get your **benefits**



**European
Microwave
Week**

www.eumw.eu

► Reduced fees



**International
Journal**

► Free e-access



**Knowledge
Centre**

► Database

Future **EuMWs**

► 2026 London

► 2028 Gothenburg

► 2030 Paris

► 2027 Milan

► 2029 Düsseldorf

Table of Contents

WELCOME MESSAGES

Welcome to the 28 th European Microwave Week	6
Utrek me stadsie! – A Warm Welcome from the President of the European Microwave Association	7
Welcome to the 20 th European Microwave Integrated Circuits Conference, EuMIC 2025	8
Welcome to the 55 th European Microwave Conference, EuMC 2025	9
Welcome to the 22 nd European Radar Conference, EuRAD 2025	10
Welcome from the General TPC Chairs	11
Special Issue and Social Media	12

GENERAL INFORMATION

The EuMW 2025 Organising Committee	13
EuMA Awards	18
2025 EuMA and EuMW Committees	23
EuMW 2025 Reviewers	25
Travel Information	27
General information on the EuMW	28
Hotel Booking Form	31
Welcome to Utrecht!	34
Social Events	36

REGISTRATION

Workshops and Short Courses	39
Registration Information	41
Registration Fees	42

STUDENT ACTIVITIES AND WIM

14 th Tom Brazil Doctoral School of Microwaves	44
European Microwave School in Radars	45
Student Design Competition	46
Entrepreneurship in RF	47
Student Career Event	49
Connect with Leading Technology Companies!	49
The Defence, Security and Space Forum	53
6G Forum	55

WORKSHOPS AND SHORT COURSES

Welcome from Workshop/Short Course Chairs	102
Special Sessions	103
ANSYS & CADFEM	136
IHP	137
Dassault Systèmes	138

SESSION MATRIX

Sunday to Friday Overview	139
---------------------------	-----

VENUE OVERVIEW

Venue Overview	145
Conference Rooms and Routes	146
Exhibitor List (Stand Number)	147

The European Microwave Week 2025 organisers would like to thank the following companies for their help and valued support throughout this year's event.

MEDIA PARTNERS

procurement
pro 

hf-praxis
HF- und Mikrowellentechnik

IEEE
microwave
for the Microwave & Wireless Engineer
MAGAZINE

BITS&CHIPS

Electronic
Specifier

everythingRF

HIGH FREQUENCY
ELECTRONICS

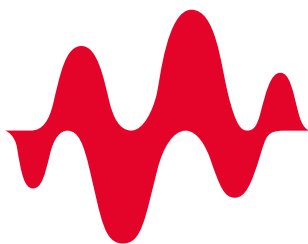
IEEE
microwave
for the Microwave & Wireless Engineer
MAGAZINE

MPD MICROWAVE
PRODUCT DIGEST

Microwaves&RF

Microwave
Journal


RF Globalnet

PLATINUM SPONSOR

KEYSIGHT
TECHNOLOGIES

SPONSORS



SUPPORTING INSTITUTIONS



EXHIBITOR SPONSORS



Welcome to the 28th European Microwave Week

It is our great pleasure to welcome you to the 28th European Microwave Week (EuMW 2025), which takes place from 21 to 26 September 2025 in the heart of the Netherlands, at a unique venue, the Royal Jaarbeurs in Utrecht. We are thrilled to host this vibrant international community in one of Europe's most historic and forward-looking cities.

The theme of the European Microwave Week of this year, "Waves of Innovation," highlights the continuous advancements and groundbreaking research in microwave, RF, and wireless technologies. It symbolizes the dynamic progress in these fields, driving innovations in communication, sensing, and emerging applications such as 6G, quantum technologies, and radar systems. By bringing together experts from academia and industry, this theme underscores the transformative impact of microwave technologies on the future of connectivity and engineering.

As always, European Microwave Week provides a comprehensive platform for knowledge exchange, collaboration, and discovery. EuMW 2025 features:

- The 55th European Microwave Conference (EuMC)
- The 20th European Microwave Integrated Circuits Conference (EuMIC)
- The 22nd European Radar Conference (EuRAD)

Together, these conferences present a diverse and in-depth technical program,

including plenary sessions, special and focused sessions, workshops, short courses, and more than 500 scientific papers. Topics span the full spectrum from microwave and millimeter-wave components and systems, to radar, 6G and beyond, terahertz technologies, integrated circuits, and sustainability in RF engineering.

Our program is further enriched by:

- A three-day international exhibition, with more than 300 exhibitors showcasing the latest advances in RF, microwave, and mm-wave technologies;
- Thematic forums including the 6G Forum, Automotive Forum, and Defence, Security and Space (DSS) Forum, which this year highlights Space Weather and its impact on space systems;
- Dedicated activities for the Women in Microwaves community, young professionals, and students, including the Student Career Event, the Tom Brazil Essay Competition, and tailored networking opportunities.

We are especially pleased to introduce a new highlight in this year's social programme: the EuMW Experience. Hop on the EuMW train at Utrecht Central station and join us for an evening event in the Utrecht Railway Museum. The EuMW Experience intends to foster a lively and friendly interaction between as many as possible of the week's participants against the backdrop of beautiful railway

travelling landmarks. Other networking opportunities include the EuMIC Get-Together at the historic Paushuize, the Welcome Reception in the Beatrix theater, and AperiRadar, a new social gathering following the EuRAD sessions.

Hosting EuMW in Utrecht offers attendees a unique experience. This lively, student-rich city blends medieval charm with modern innovation. With its iconic Dom Tower, vibrant canals, museums, and welcoming atmosphere, Utrecht provides the perfect backdrop for a week of high-level scientific exchange and personal connection.

We extend our sincere thanks to all contributors – authors, reviewers, sponsors, exhibitors, volunteers, and the local organizing team – for helping us create a rich, inclusive, and engaging European Microwave Week. We are also grateful to EuMA and Horizon House for their continued support and dedication to the EuMW community.

We look forward to meeting you in Utrecht and sharing an inspiring and unforgettable EuMW 2025 with you!

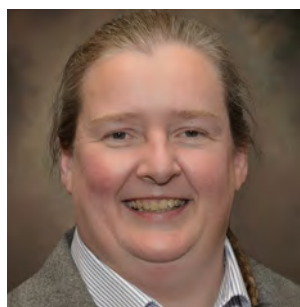
On behalf of the EuMW 2025 Organizing Committee,



MARK BENTUM

General Chair

Eindhoven University of Technology,
The Netherlands



DOMINIQUE SCHREURS

EuMW General Co-Chair

KU Leuven, Belgium

Utrek me stadsie! – A Warm Welcome from the President of the European Microwave Association

Welcome to the 28th European Microwave Week in vibrant Utrecht!

I am pleased to invite you to EuMW2025, a key event focused on groundbreaking developments in microwave theory and technologies. This event provides a unique opportunity to engage with world-renowned experts and fuels your passion for innovation. Utrecht, known for its centuries-old canals, lively street life, and rich spirit of creativity, is not just the heart of the Netherlands; it is a place where history and modernity blend seamlessly. EuMW2025 will showcase cutting-edge products and technologies, fostering dynamic exchanges within the microwave community.

At EuMA, we proudly support the microwave and RF sectors, promoting collaboration among scientists, engineers, and industry leaders. EuMW is our flagship event for knowledge sharing and networking, offering insights and opportunities to reconnect with peers worldwide.

Our commitment extends beyond the event itself. The 8th EuMA Internship Award in 2025 will again grant up to 10 awards of €4,500 each to outstanding Master's and PhD students, enabling internships in leading European industries. Details and applications are on our [website](#), with a November deadline.

Moreover, EuMA provides grants and reduced registration fees to students and

delegates from NIS countries attending EuMW, with special support for our Ukrainian colleagues.

EuMA offers [membership](#) to all working in the field of microwaves. Members enjoy reduced fees for attending EuMW and EuMA-sponsored events. EuMA members have free access to our archive of publications and the online version of the International Journal on Microwave and Wireless Technologies.

EuMA is very active on social media. Follow us @eumassociation on [Facebook](#), [LinkedIn](#), [Twitter](#), [YouTube](#) and [Instagram](#) to discover our latest posts. We encourage you to like, share, and engage with our content—we're proud to reach around 7,000 followers. Plus, don't miss our insightful webinars, available live and on-demand via our [webinar playlist on YouTube](#).



EuMW thrives thanks to collaborations with IEEE Societies MTT, AP, AESS, and ED; the GAAS Association; The MIKON Foundation; EurAAP; APMC; and our valued event organiser, Horizon House/Microwave Journal.

Preparing and hosting the EuMW is a major effort, from paper submission and review to on-site organisation. This is accomplished by a team of volunteers year by year. My special thanks go to Mark BENTUM, the 2025 General Chair, and Operational Officer David PRINSLOO; Treasurer Ulf JOHANSEN; General TPC Chair Diego CARATELLI; Hansi LAGER and Matthias GEISLER, the EuMC Chair and Co-Chair respectively; Marion MATTER-KAMMERER and Cicero VAUCHER, the EuMIC Chair and Co-Chair respectively; and Laura ANITORI and Kostas DORIS, the EuRAD Chair and Co-Chair respectively. Thank you all!

I extend my sincere gratitude to Ivar BAZZY and Michel ZOGHOB from Horizon House for their unwavering dedication over the years in organizing the exhibition and providing comprehensive support to ensure a comfortable experience during EuMW.

EuMW returns to Utrecht with an outstanding technical and scientific program and a top-tier exhibition. We are certain your time here will be well spent and memorable. EuMW2025 in Utrecht is more than an event—it's a celebration of our collective passion for advancing microwave technology.

Join us in Utrecht, or as the locals proudly say, "Utrek me stadsie!"



FRANK VAN DEN BOGAART
President European Microwave Association

Welcome to the 20th European Microwave Integrated Circuits Conference, EuMIC 2025

We are delighted to welcome you to Utrecht, The Netherlands, for the 20th European Microwave Integrated Circuits (EuMIC2025) Conference, which will take place on Monday, September 22nd, and Tuesday, September 23rd, 2025. The EuMIC conference has been jointly organised by the GAAS[®] Association and EuMA since 2006. The historic city of Utrecht is thrilled to host the Microwave Integrated Circuits community from around the globe.

Within the frame of the European Microwave Week (EuMW), the EuMIC is the premier European technical conference for RF & microwave integrated circuits. The conference aims to stimulate lively discussions among academia and industry, experts as well as newcomers, on innovations, developments and trends covering the broad range of microwave, mm-wave, terahertz and related topics, from materials, Silicon, III-V and emerging technologies to integrated device, circuits and their applications. These will be addressed in all aspects: theory, simulation, design, and measurement.

On Sunday, the day before the start of the conference, you can participate in one or more of the excellent workshops and short courses. Monday and Tuesday are equally busy days of the EuMIC conference. Monday will start with the Opening Session and continues with regular technical sessions and the Foundry session. The EuMIC Opening Session features two keynote addresses

by eminent speakers. Prof. Kostas Doris, NXP Semiconductors, The Netherlands, will present on 'mm-Wave Radar and Beyond: An Automotive Sensing Perspective', and Prof. Ullrich Pfeiffer, University of Wuppertal, Germany, will present on 'Next-Gen Terahertz SoCs: Light-Field Imaging and Scalable Incoherent Architectures'. The Foundry Session will discuss the strategy for investing in semiconductor technologies in Europe by a panel discussion with industrial and academic leaders. The day concludes with the EuMIC Get-Together, which will take place in the splendid location Paushuize in the historic city center of Utrecht, sponsored by Eindhoven University of Technology and the GAAS association.

Tuesday will start with technical sessions, followed by the EuMW opening sessions. An interactive poster session and more technical sessions in the afternoon and the EuMIC Closing session, make Tuesday a EuMIC day with a full program. The EuMIC Closing Session will start with a keynote by Prof. Yves Baeyens, Director of the High-Speed Electronics and Opto-Electronics Research Department, Nokia Bell Labs, about 'Progress in Design and Integration for Near-THz Wireless Communications Systems'. The EuMIC Prize Committee will award the EuMIC Prize for the best conference paper sponsored by the Eindhoven University of Technology and the two EuMIC Young Engineer Prizes sponsored by Huawei Italy. The GAAS[®] Association Tom Brazil Fellowship Award will be

celebrated. It is an essay competition in which young engineers provide their ideas on the role of microwaves in addressing global challenges.

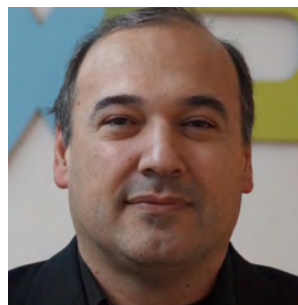
We are incredibly grateful for all the efforts from our panel of reviewers and TPC members. We also want to express our gratitude to all the authors, workshop organizers, and short-course leaders for their submissions and proposals, which ensured an event of the highest quality. A special thanks goes to past EuMIC teams for their incredibly generous support and to the EuMC, EuRAD, and EuMW2025 teams for discussions, sharing ideas, and helping in the local and practical organisation of the week.

We hope you enjoy days filled with fruitful discussions, knowledge exchange, and networking. We look forward to welcoming you personally in Utrecht for an exciting EuMIC conference.



MARION MATTERS-KAMMERER

EuMIC Chair
Eindhoven University of Technology,
The Netherlands



CICERO VAUCHER

EuMIC Co-Chair
NXP Semiconductors, The
Netherlands



PATRICK REYNAERT

EuMIC TPC Chair
KU Leuven, Belgium



PIYUSH KAUL

EuMIC TPC Co-Chair
Eindhoven University of Technology,
The Netherlands

Welcome to the 55th European Microwave Conference, EuMC 2025

It is our distinct honor and joy to welcome you to the 55th edition of the European Microwave Conference (EuMC2025)! This year, the more than 100-year-old Royal Jaarbeurs of Utrecht will be the place for experts over the entire spectrum of microwave equipment and applications to meet and send **Waves of Innovation** into the microwave scientific community.

As the feature event of the prestigious European Microwave Week, EuMC2025 will continue its tradition of being the largest European forum dedicated to the RF area in its broadest scope. This year we received over 470 submissions from more than 40 countries, with approximately 330 papers being accepted for the 60 conference sessions. The conference program will accommodate inspiring contributions encompassing the theory, design and validation of components and systems at all levels of RF technology - microwaves, millimeter-waves and (sub-)terahertz ranges, microwave photonics included. To further foster the practical applicability of the communicated achievements, several sessions will benefit from engaging industrial keynote talks from leading European companies. The conference's opening and closing plenary sessions will put the spotlight on critical development vectors, as envisioned by two world-class keynote lectures. Expect to experience unexpected takes on spearheads in the wider realm of microwave and, indeed, electrical engineering! And,

as always, EuMC2025 will reward excellence via its Best Paper Award and two Young Engineer Prizes.

The **Waves of Innovation** cannot be decoupled from a responsible and lucid approach to our planet's resources. To this end, EuMC2025 will have as center-point and guiding line **sustainability**, the emphasis being on the global environmental impact of RF technologies and applications. This theme will be discussed in full-day program-lines, hosting panel, regular and special sessions assembling exclusive contributions from leading researchers and industrial representatives in the field.

The broad scientific and technologic offering of the conference also comprises a wide spectrum of workshops, short courses and special sessions addressing both specialized topics and subjects of general concern, such as identifying effective educational strategies in the realm of electrical engineering.

EuMW2025 will be the perfect place for directly interacting with your peers and with industrial and governmental entities, thus establishing effective partnerships and forging lasting scientific relations. To foster that, this edition's main innovation is the **EuMW Experience**, an entire-evening event scheduled on September 24 in the Utrecht Railway Museum - the **Experience** is envisaged as a platform for lively and friendly interactions between as many as possible

of the Week's participants, against the backdrop of beautiful railway travelling landmarks.

A successful event is the result of a community effort. We then extend our entire gratitude to all submitting authors, to our expert reviewers, to our dedicated Technical Program Committee members, and to the volunteers whose efforts have made this conference possible.

We, the EuMC2025 core team, express our hope that, together, contributors, delegates, exhibition visitors, and volunteers will jointly make this conference a memorable event, both through its scientific outcomes and its human, personal enrichment. May the Waves of Innovation sustainably mark EuMC2025, Utrecht, the Netherlands, as a true turning point in the current and future roadmap of microwave developments.



IOAN LAGER

EuMC Chair

Delft University of Technology, The Netherlands



MATTHIAS GEISSLER

EuMC Co-Chair

IMST GMBH, Germany



ANN FRANCHOIS

EuMC TPC Chair

Ghent University, Belgium



KAMIL YAVUZ KAPUSUZ

EuMC TPC Co-Chair

Ghent University-IMEC, Belgium

Welcome to the 22nd European Radar Conference, EuRAD 2025

Dear colleagues from the international radar community, on behalf of the organizing committee, it is our pleasure to welcome you to the 22nd edition of the European Radar Conference (EuRAD 2025)! This year's event takes place from September 24 to 26 in the beautiful city of Utrecht, The Netherlands. We are looking forward to an exciting gathering of radar experts, innovators, and industry leaders. EuRAD 2025 continues to be a premier forum for sharing and discussing the latest advances in radar technology—spanning applications in automotive, defence, security, space, medical, and civil domains. Expect cutting-edge research, inspiring discussions, and great networking opportunities.

We are proud to host four outstanding keynote speakers who will highlight some of the most impactful developments in radar technology. Wednesday's opening session puts the spotlight on industrial innovation, especially in automotive and defence radar. Mark Steigemann, Chief Architect Radar Systems & Senior Fellow at NXP, will present "High Resolution Radar for Next-Level Autonomous Driving! Will AI at the Edge Change the Way of Thinking?", exploring the powerful combination of AI and high-resolution radar in the future of autonomous vehicles. Simon van den Berg, Technical Innovation Director at Thales Nederland, will talk about "Evolution of AESA Technologies and Trends in Military Phased Array Radar Systems", offering insights into recent breakthroughs in defence radar systems.

Friday's closing session will shift the focus to how major agencies are shaping radar R&D in both the United States and Europe. Frank Robey, Program Manager at DARPA, will present "The DARPA Approach to Radar Innovation", discussing advanced radar research from the U.S. Department of Defense. Salvatore D'Addio, Head of the RF Payloads and Technology Division at ESA, will present "Technology Developments and R&D Activities at the European Space Agency for Future Spaceborne Radars and RF Instruments", sharing ESA's exciting work on radar technologies for upcoming space missions. This closing session, held just before lunch, wraps up with the EuRAD Prize for best paper, along with two Young Engineer Prizes to recognize outstanding early-career contributions. Just like in previous editions, EuRAD 2025 will feature two specialized forums. The Defence, Security and Space (DSS) Forum will focus on Space Weather this year—examining how it impacts radar operations and what technological responses are emerging. The Automotive Forum will cover the latest innovations in radar for autonomous vehicles and smart mobility systems.

Of course, it is not all work—on Thursday, September 25, we invite you to unwind at our social event: AperiRadar! Hosted at the conference venue right after the technical sessions until 8:30 p.m., it is the perfect chance to relax, connect with fellow attendees, and exchange ideas in an informal setting. With great

food, drinks, and live music, it promises to be a memorable evening.

We are also proud to highlight that EuRAD 2025 is committed to sustainability. From greener logistics to thoughtful choices in event planning, this year's conference actively embraces a more environmentally friendly approach and content—because innovation and responsibility go hand in hand.

With 143 paper submissions and a rigorous peer-review process by the Technical Program Committee, we have selected 103 papers to be featured across 18 oral and focused sessions and two poster sessions. Topics will range from automotive radar and AI applications to mm-wave imaging and SAR techniques. Five workshops and short courses will round out the program, covering timely areas such as joint sensing and communication, multistatic radar, and advanced automotive radar processing.

A program this rich and diverse is only possible thanks to the dedication of many. We sincerely thank all authors, reviewers, and contributors who have made EuRAD 2025 what it is. We are confident it will be an inspiring, collaborative, and enjoyable event—and we look forward to welcoming you in Utrecht this September!



LAURA ANITORI
EuRAD Chair
CNIT, Italy



KOSTAS DORIS
EuRAD Co-Chair
NXP Semiconductors, The Netherlands



FRANCESCO FIORANELLI
EuRAD TPC Chair
Delft University of Technology, The Netherlands



RONNY HARMANNY
EuRAD TPC Chair
Thales Nederland B.V., The Netherlands

Welcome from the General TPC Chairs

Dear colleagues and friends,

It is with great pleasure that we welcome you to the 28th edition of the European Microwave Week (EuMW 2025), taking place from September 21 to 26, 2025, in the heart of the Netherlands, the historic and vibrant city of Utrecht. Nestled among centuries-old canals and overlooked by the iconic Dom Tower, Utrecht blends rich heritage with dynamic modernity, serving as an ideal setting for this premier gathering of the global microwave community.

The theme for this year, “Waves of Innovation,” celebrates the transformative journey of our field, where cutting-edge research in microwave and wireless systems continues to advance communications, sensing, quantum technologies, radar, and beyond, while reshaping technology and serving the evolving needs of society.

The technical programme reflects the dedication of a passionate community and saw an impressive 753 paper submissions, each rigorously evaluated through nearly 6000 reviews, ensuring the highest standards of scholarly excellence. These efforts resulted in 409 oral presentations and 85 poster contributions, structured into 88 sessions, including focused and special sessions spanning the full breadth of our discipline.

The programme addresses foundational

topics as well as emerging areas poised to redefine the future. Sustainability and environmentally friendly ICT are emphasized, showcasing innovative strategies for energy-efficient RF technologies. Collaborations with key partners have further enriched the programme, including joint sessions with APMC, EurAAP, and, for the first time, ESA. These sessions explore critical themes such as space microwave technologies, mm-wave and THz circuits, and advanced antenna systems, reinforcing the interdisciplinary nature of our field.

Beyond technical content, EuMW 2025 offers a wide range of opportunities for professional development and community building. The international exhibition, one of the largest in Europe for RF and microwaves, facilitates hands-on interaction and industry networking. Workshops, short courses, and training sessions provide practical insights into emerging tools and techniques.

We have placed special focus on fostering new talent and celebrating excellence. Events like the Student Career Event and Women in Microwaves promote inclusion and growth. Awards such as the Young Engineer Prizes, Tom Brazil Essay Competition on Sustainability, and best paper recognitions highlight our shared commitment to innovation and impact.

We extend our heartfelt thanks to all who made this event possible. The

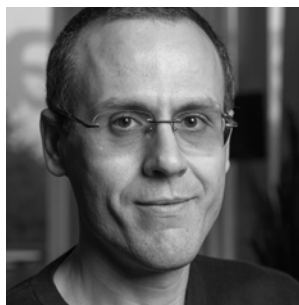
Technical Programme Committees—led by Ann Franchois and Kamil Yavuz Kapusuz (EuMC), Patrick Reynaert and Piyush Kaul (EuMIC), and Ronny Harmanny and Francesco Fioranelli (EuRAD)—along with 118 committee members, 66 sub-committee leaders, and 574 reviewers, shaped an exceptional programme and community experience.

Our gratitude also goes to EuMW 2025 General Chair Mark Bentum, Operational Officer David Prinsloo, and the local organizing committee for ensuring the highest standards in every detail. We warmly thank the EuMW Officers, the EuMA Board of Directors, and the Paper Management Team—Marc van Heijningen, Cristina Andrei, Megha Krishnaji Rao—and the Converia staff for their dedication and seamless coordination.

We also acknowledge with appreciation Guillaume Ducournau and Aurelian Crunteanu, organizers of the previous EuMW, whose insights and support helped us build on the legacy of excellence that defines this event.

We hope EuMW 2025 will be both intellectually rewarding and personally meaningful. Let us continue to connect Europe and the world through waves, advancing our field and inspiring the innovations of tomorrow.

We look forward to sharing this unforgettable week with you in Utrecht.



DIEGO CARATELLI
EuMW General TPC Chair
The Antenna Company,
The Netherlands



JACCO DE WIT
EuMW General TPC Co-Chair
TNO, The Netherlands

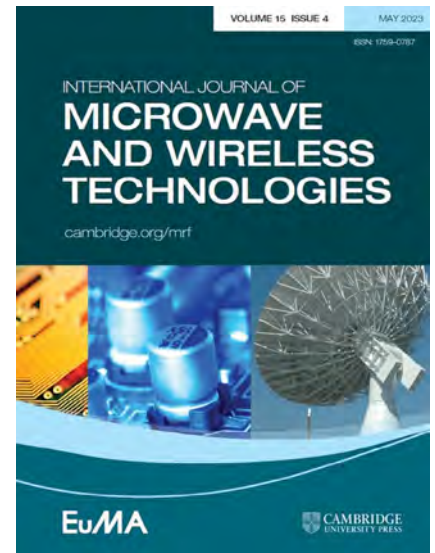
International Journal of Microwave and Wireless Technologies: EuMW2025 Special Issue

The International Journal of Microwave and Wireless Technologies was created in 2009 by the European Microwave Association (EuMA) and Cambridge University Press for the benefit of the microwave research community in Europe and overseas.

The journal is published ten times a year. It allows academic and industrial researchers to promote their work and stay connected with the most recent developments in microwave and RF technology. The journal is referenced in databases such as Scopus and Google Scholar and is indexed in the Thomson Reuters Web of Science. Following the success of previous microwave weeks, the journal will again publish a special issue dedicated to European Microwave Week 2025.

The authors of several highly ranked papers presented at the conferences will be invited to submit an extended version for publication in the journal. The special issue will be guest edited by Ann Francois, TPC chair of EuMC 2025, Patrick Reynaert, TPC chair of EuMIC 2025, and Ronny Harmanny, TPC chair of EuRAD 2025.

Accepted papers will be published online at <https://www.cambridge.org/core/journals/international-journal-of-microwave-and-wireless-technologies> and can be referenced using their DOI (Digital Object Identifier). Once all submissions are received, the articles will be collected into a dedicated Special Issue.

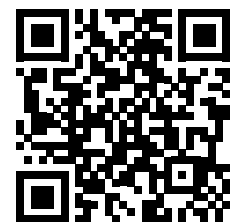
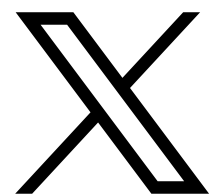
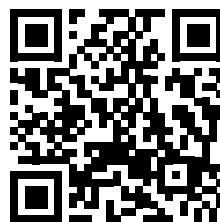
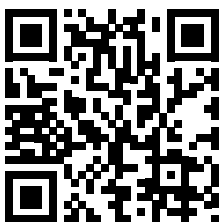


ANN FRANCHOIS AND
KAMIL YAVUZ KAPUSUZ
EuMC TPC Chair and Co-Chair

PATRICK REYNAERT AND
PIYUSH KAUL
EuMIC TPC Chair and Co-Chair

RONNY HARMANNY AND
FRANCESCO FIORANELLI
EuRAD TPC Chairs

Follow Us on Social Media



DARYNA PESINA
EuMA Innovation Team & Social
Media Editor

The EuMW 2025 Organising Committee



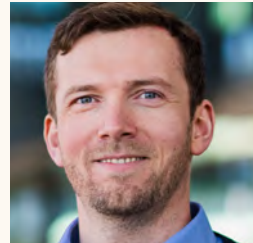
MARK BENTUM
EuMW General Chair & Local Sponsor Chair
Eindhoven University of Technology,
The Netherlands



DOMINIQUE SCHREURS
EuMW General Co-Chair
KU Leuven, Belgium



DAVID PRINSLOO
EuMW Operational Officer
ASTRON, The Netherlands



ULF JOHANNSEN
EuMW Treasurer
Eindhoven University of Technology,
The Netherlands



DIEGO CARATELLI
EuMW General TPC Chair
The Antenna Company, The Netherlands



JACCO DE WIT
EuMW General TPC Co-Chair
TNO, The Netherlands



SANDER BRONCKERS
Publication Chair
Eindhoven University of Technology,
The Netherlands



IOAN LAGER
EuMC Chair
Delft University of Technology, The Netherlands



MATTHIAS GEISSLER
EuMC Co-Chair
IMST GmbH, Germany



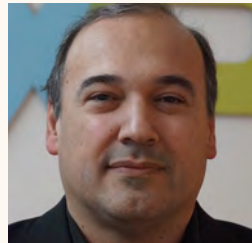
ANN FRANCHOIS
EuMC TPC Chair
Ghent University, Belgium



KAMIL YAVUZ KAPUSUZ
EuMC TPC Co-Chair
Ghent University - IMEC, Belgium



MARION MATTERS-KAMMERER
EuMIC Chair
Eindhoven University of Technology,
The Netherlands



CICERO VAUCHER
EuMIC Co-Chair
NXP Semiconductors, The Netherlands



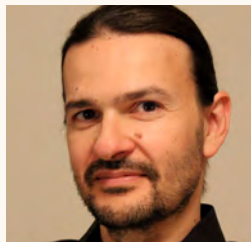
PATRICK REYNAERT
EuMIC TPC Chair
KU Leuven, Belgium



PIYUSH KAUL
EuMIC TPC Co-Chair
Eindhoven University of Technology,
The Netherlands



LAURA ANITORI
EuRAD Chair
CNI, Italy



KOSTAS DORIS
EuRAD Co-Chair & Automotive Forum Co-Chair
NXP Semiconductors, The Netherlands



FRANCESCO FIORANELLI
EuRAD TPC Chair
Delft University of Technology, The Netherlands



RONNY HARMANNY
EuRAD TPC Chair
Thales Nederland B.V., The Netherlands



BENJAMIN NUSS
Automotive Forum Chair
Karlsruhe Institute of Technology, Germany



THOMAS ZWICK
Automotive Forum Co-Chair
Karlsruhe Institute of Technology, Germany



MARTIN KUNERT
Automotive Forum Co-Chair
Radar Expert, Germany



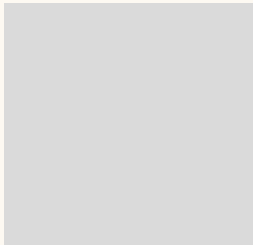
BART SMOLDERS
6G Forum Chair
Eindhoven University of Technology,
The Netherlands



ANDRE BOS
Defence, Security and Space Forum Chair
S&T, The Netherlands



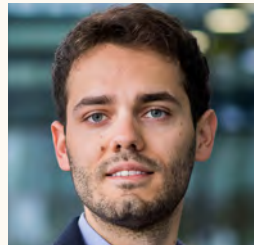
PATRICK HINDLE
Defence, Security and Space Forum
Microwave Journal, Great Britain



ANDREA NETO
Awards Committee Chair
Delft University of Technology, The Netherlands



ELMINE MEYER
Workshop, Short Course, Focus Session Chair
Eindhoven University of Technology,
The Netherlands



GABRIELE FEDERICO
Workshop, Short Course, Focus Session Chair
Eindhoven University of Technology,
The Netherlands



SIMON ROMMEL
Student Activities Chair
Eindhoven University of Technology,
The Netherlands



PAOLA ESCOBARI
Student Activities Chair
Eindhoven University of Technology,
The Netherlands



MARK OUDE ALINK
Poster Chair & Visa and Grants Chair
University of Twente, The Netherlands



ANOUK HUBRECHEN
WIM Chair
Antennex B.V., The Netherlands



DANIELLE VAN DER HAGEN
Local Arrangement Chair
Eindhoven University of Technology,
The Netherlands



YUQING JIAO
Visa and Grants Co-Chair
Eindhoven University of Technology,
The Netherlands



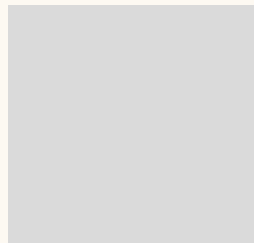
JORDI ZANDBOER
Student Volunteers Chair
Eindhoven University of Technology,
The Netherlands



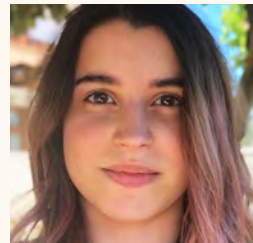
RADU BARBALESCU
Student Volunteers Co-Chair
Eindhoven University of Technology,
The Netherlands



LEROY DRIESSEN
Party Chair
Eindhoven University of Technology,
The Netherlands



LENNY HOEK
EuMW Experience Officer
Delft University of Technology, The Netherlands



CRISTINA YEPES
Local Social Media Chair
TNO, The Netherlands



DARYNA PESINA
EuMA Innovation Team and Social-Media Editor
Chalmers University of Technology, Sweden



MICHEL ZOGHOB
Event Director
Horizon House, United Kingdom



JULIE MILLS
Event Manager
Horizon House, United Kingdom



SALLY GARLAND
Hotels and Partner Programme
Connex Hotels and Events, United Kingdom



FRANK VAN DEN BOGAART
EuMA President
EuMA, Belgium



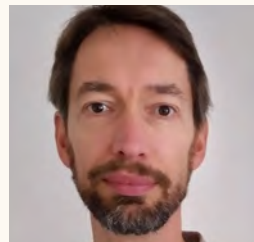
ANNEMIE VAN NIEUWERBURGH
EuMA Headquarters Assistant
EuMA, Belgium



DANIELLE VANHOENACKER
EuMA Treasurer
EuMA, Belgium



PAOLO COLANTONIO
EuMA Officer
Università di Roma Tor Vergata, Italy



MARC VAN HEIJNINGEN
Software Officer
TNO, The Netherlands



CRISTINA ANDREI
Software Officer
Brandenburg University of Technology, Germany



MEGHA KRISHNAJI RAO
Software Officer and EuMA Innovation Team
Ferdinand-Braun-Institut gGmbH (FBH), Germany

2024 European Microwave Week in Paris

Best Paper Prizes: EuMC

CONFERENCE PRIZE

Authors

R.J. Bootsman, D.P.N. Mul, M. Beikmirza, O. El Boustani, D. Maassen, B. van Velzen, M. Rousstia, R. Koster, J.R. Gajadharsing, T. Fritsch, Y. Shen, M.S. Alavi and L.C.N. de Vreede
ELCA, Delft University of Technology (The Netherlands)

Title

A Switch-Bank Approach for High-Power, High-Resolution, Fully-Digital Transmitters

Sponsors - IMA e.V.

IMA e.V.



YOUNG ENGINEER PRIZE

Authors

Leonhard Hahn, Lukas Bürk, Yu Zhu, Christian Carlowitz, Gerald Gold, Frank Ellinger and Martin Vossiek
Friedrich-Alexander Universität Erlangen-Nürnberg (Germany)

Title

Quasi-Optical Directional Coupler Based on 3D-Printed Dielectric Image Lines for sub-THz Applications

Sponsors - qorvo

QORVO
all around you



YOUNG ENGINEER PRIZE

Authors

Veronika Kienle, Mauro Ettore, Olivier de Sagazan, Ronan Sauleau, Christian Waldschmidt, Tobias Chaloun
Ulm University, Institute of Microwave Engineering (Germany)

Title

Low-Loss Frequency Selective Surface for Sub-Millimeter Wave Radiometer Applications

Sponsors - THALES France

THALES FRANCE



2024 European Microwave Week in Paris Best Paper Prizes: EuRAD

CONFERENCE PRIZE

Authors

Rossen Michev, Juergen Hasch, Carsten Naber, David Werbnat, Nora Hepp, Christian Waldschmidt
Robert Bosch GmbH (Germany)

Title

A Compact 77 GHz 4x4 MIMO Stepped Frequency OFDM Radar Demonstrator

Sponsors – THALES Nederland B.V.

THALES THALES NEDERLAND B.V.



YOUNG ENGINEER PRIZE

Authors

Marius Brinkmann, Matthias M. Saurer, Gerhard F. Hamberger, Thomas F. Eibert
Rohde & Schwarz GmbH & Co. KG (Germany)

Title

Sidelobe Suppression in Multistatic Radar Imaging Using Cyclic Richardson-Lucy Deconvolutions

Sponsors – THALES Nederland B.V.

THALES THALES NEDERLAND B.V.



YOUNG ENGINEER PRIZE

Authors

Max Heidbrink, Oliver Sura, Vinoth Kumar Rangaraj, Marc Reinecke, Marcel Hoffmann, Martin Vossiek
Institute of Microwaves and Photonics (LHFT),
Friedrich-Alexander-Universität Erlangen-Nürnberg(Germany)

Title

Concept for Automatic Annotation of Automotive Radar Data Using AI-Segmented Camera and Lidar Reference Data

Sponsors – HENSOLDT

HENSOLDT
Detect and Protect.



2024 European Microwave Week in Paris

Best Paper Prizes: EuMIC

CONFERENCE PRIZE

Authors

Filippo Ciabattini, Sara Hamzeloui, Akshay M. Arabhavi, Mojtaba Ebrahimi, Olivier Ostinelli and Colombo R. Bognesi
ETH- ZURICH (Switzerland)

Title

G-Band Large-Signal Characterization of InP/GaAsSb DHBTs with Record 38 % Power Added Efficiency at 170 GHz

Sponsors - Macom



YOUNG ENGINEER PRIZE

Authors

Manuel Wittlinger, Markus Grözing, Manfred Berroth, Georg Rademacher

Institute of Electrical and Optical Communications, University of Stuttgart (Germany)

Title

A Frequency-Agile Digital-to-RF Power Amplifier in 22 nm FD-SOI CMOS Technology

Sponsors - qorvo, GAAS



YOUNG ENGINEER PRIZE

Authors

Göksu Kaval, Gregor Lasser, Marcus Gavell, Chirstian Fager
Gotmic AB (Sweden)

Title

A 100-114 GHz GaAs MMIC Power Amplifier With Fully Integrated Dynamic Gate Bias Control for Linearization and Efficiency Enhancement

Sponsors - soitec, GAAS



EuMA Roberto Sorrentino Prize

THIS ANNUAL AWARD RECOGNIZES AN OUTSTANDING YOUNG PROFESSIONAL WHO IS A EUMA MEMBER WHO HAS DISTINGUISHED TECHNICAL ACHIEVEMENTS WITHIN THE MICROWAVE FIELDS OF INTEREST



2025 RECIPIENT: SIMONA DI MEO

Simona Di Meo exemplifies scientific excellence, leadership, commitment to innovation and is very promotional toward young professionals. She received the M.Sc. degree (cum laude) in electronic engineering and the Ph.D. degree in electronics and computer science from the University of Pavia, Pavia, Italy, in 2016 and 2020, respectively, where she is currently an assistant professor in the Microwave Lab. Simona demonstrates unwavering dedication to biomedical research, with a strong focus on diagnostic microwave systems. In that area, she focusses on dielectric characterization of biological tissue over a wide frequency range, on numerical feasibility studies of millimeter-wave imaging systems for detecting non-superficial tumors, on developing tissue-mimicking phantoms and on the design and implementation of imaging hardware for realistic and controlled phantom-based experiments.

Next to her scientific activities, Simona Di Meo's already impressive curriculum vitae stands out particularly by her biomedical education activities, by her dedication to ancillary academic activities, such as setting up the brand-new Doctoral School ('Microwaves for emerging medical technologies') within EuMA's EuMW 2022, and by her vast scientific editorial activities, including amongst many others being Associate Editor of the journal 'Bioelectromagnetics.'

The Roberto Sorrentino Prize, named in his remembrance, has been initiated by Linda Di Carlo Sorrentino in cooperation with RF Microtech, the Italian EM Society (SIEm) and EuMA. It recognizes an outstanding young professional who has distinguished technical achievements (not on a single paper) within the microwave field. This prize focuses on the individual rather than on specific achievements and would preferably be in yearly alternation between university and industry. The annual prize comprises a certificate, a medal and a financial award of € 4,000, contributed by Mrs. Linda Di Carlo Sorrentino, RF Microtech, SIEm, and EuMA.

EuMA Distinguished Service Award

THE DISTINGUISHED SERVICE AWARD WAS ESTABLISHED IN 2004 TO RECOGNIZE AN INDIVIDUAL “WHO HAS GIVEN OUTSTANDING SERVICE FOR THE BENEFIT OF THE EUROPEAN MICROWAVE COMMUNITY”



2025 RECIPIENT: DANIELLE VANHOENACKER-JANVIER

Prof. Danielle Vanhoenacker-Janvier is best known for her work on propagation modelling and the interaction with communication modulation schemes. For more than 30 years, her main activity domain was the study and modeling of atmospheric effects on propagation of electromagnetic waves from 100 MHz to 100 GHz for radar, satellite and cellular communication. She was responsible for two radio-wave propagation measurement campaigns (with Olympus and Alphasat satellites). She has a special interest in propagation above 10 GHz, propagation through a turbulent troposphere and in the use of numerical weather prediction software for the simulation of atmospheric effects, spinning off to radar cross section of airplane wake vortices and the evaluation of their Doppler spectra. Her signal processing activities focused on Fade Mitigation Techniques and Space-Time Coding.

Prof. Vanhoenacker-Janvier received the M.Sc. degree in electrical engineering and the Ph.D. degree in Applied Sciences from the Université Catholique de Louvain (UCLouvain), Louvain-la-Neuve, Belgium, in 1978 and 1987, respectively. Since 2000, she has been a Professor with UCLouvain, where she has been a Full Professor, since 2007. She was the Head of the Microwave Laboratory, Louvain-la-Neuve, from 2001 to 2006, where she founded the activities on the Design of Microwave Integrated Circuits on Silicon-on-Insulator, and was in charge of Student Affairs at the Louvain School of Engineering, Louvain-la-Neuve, from 2001 to 2011. She has been the Chair of the Doctoral Commission, since 2015, and retired from her alma mater in 2020. She has authored more than 200 technical papers and conference publications, and was coauthor of one book.

Less visible are her long-term activities for and within the EuMA that span more than 25 years. She was a reviewer for the European Microwave Conference from 1990-2018, member of its Management Committee from 1996 to 1999, secretary of the first “European Microwave Week”, with 1000 participants, in 1998 in Amsterdam, chair of the European Microwave Conference in 2010 in Paris, vice-Secretary Treasurer of the EuMA from 2006 to 2015 and finally Secretary General of the European Microwave Association from 2016 to 30 June 2025. In that last capacity, she took care of the financial details and position of the EuMA and entirely reformed the Association’s bookkeeping system to make it future-proof. This enormous amount of work was always done diligently, accurately and friendly, serving our entire community; a Distinguished Service avant la lettre.

EuMA Outstanding Career Award

THE OUTSTANDING CAREER AWARD WAS ESTABLISHED IN 2008, TO RECOGNIZE AN INDIVIDUAL “WHOSE CAREER HAS EXEMPLIFIED OUTSTANDING ACHIEVEMENTS IN THE FIELD OF MICROWAVES”



2025 RECIPIENT: BUMMAN KIM

Professor Bumman Kim is one of the giants of the microwave domain, who has made large and lasting contributions to microwave power amplifiers. Prof. Kim entirely restructured the Doherty amplifier configuration and created the modern Doherty configuration in 2000, often referred to as the offset line technique. The Doherty concept was already invented using vacuum tubes in 1936, but not applicable to microwave amplification because of its low efficiency at high frequencies and its relatively poor linearity. He pioneered the linear power operation of the modern microwave Doherty amplifiers, later adopted in the vast majority of base-station microwave amplifiers.

Earlier in his career, Prof. Kim already proposed and demonstrated the first microwave power amplification utilizing heterojunction bipolar transistor (HBT); nowadays, the HBT is the most popular device for microwave power amplifiers of mobile handsets. In addition, he demonstrated the first fully-integrated MMIC operation at mm-wave frequencies in 1984 and the first semiconductor-based oscillator operation over 100 GHz, making significant advancement of the MMIC technology toward mm-wave applications

As the 5G mobile communication system emerged in the early 2010's, his group developed a highly efficient linear power amplifier at Ka-band using 28-nm bulk CMOS technology, leveraging his earlier work on GaAs and CMOS PAs. The deep class-AB biased CMOS PA with appropriate harmonic control circuits provided a linear operation close to the saturated power realizing high efficiency and high linearity. This CMOS power amplifier delivered the performance required by the 5G system specification for the first time.

Prof. Kim holds a B.Sc. from Seoul National University, an M.Sc. from the University of Texas at Austin, and a Ph.D. in Electrical Engineering from Carnegie Mellon University, Pittsburgh, PA. He worked in industrial roles, for Texas Instruments as Senior Member of Technical Staff and POSTECH at Korea as a professor, a position which lasted 28 years, supervising 58 Ph.D. students. His efforts in mentoring students and young engineers are widely praised. Apart from his employment record, he was active in the Korean academic institutions, notably in the Korean Academy of Science and Technology and in the National Academy of Engineering of Korea, and the international microwave scene, including the Adcom of MTT society, the EuMA General Assembly, and the APMC Assembly.

His career spans four decades of outstanding achievements on the intersection between microwave technology and microwave applications. His contributions to microwave power amplifiers have changed the course of technology, and were clearly not lucky shots, as they were successively based on different circuit concepts and involving multiple technologies, showing time and time again the road ahead to the entire community.

Tom Brazil Fellowship Award Student Essay Competition (by the GAAS® Association) Microwaves in Supporting Global Challenges

In the framework of the EuMIC 2024, the Tom Brazil Fellowship Award Student Essay Competition was organized to promote the ideas of students in the area of microwave engineering. The participating students were requested to summarize their view on "Microwaves in supporting global challenges". Over 100 working groups were contacted directly by email and informed about the possibilities of the prize. In 2024 a two-stage submission/review process was introduced with oral presentations by the 3 finalists during the conference to the selection committee. In this essay

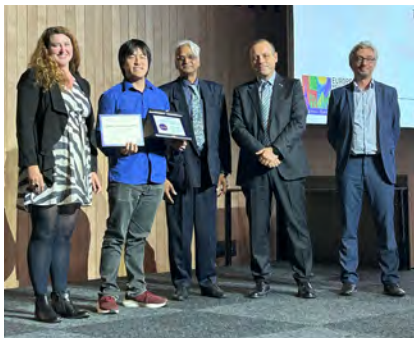
competition, we remind that we are looking for a summary of the role of RF/Microwaves/mmWave in telecommunications and other fields which have contributed to remote working (especially during the COVID pandemic) and reducing travel/commuting. Also, for enabling developing countries to build sustainable agricultural and other industries that require good communications infrastructure. The use of THz for forecasting catastrophic weather events has also been an essential and ongoing development. Microwave activity can help in reducing carbon footprint: for example,

high-efficiency power amplifiers and other components for base station applications, high-efficiency antenna beam steering architectures. We requested creative and original ideas and suggestions on how future microwave-related research work can be best directed in fulfilling actual and forthcoming global challenges. The 2024 winner essays are available on the EuMA website.

'As humans, we have limited time and energy; do something useful' – Prof. Tom Brazil

2024 Tom Brazil Prizes awardees

1ST PRIZE



Authors

Steven Cheng

University College of Cork (Ireland)

Title

Joint Remote Sensing through Bio-inspired Internet of Fish Towards a Climate Resilient Future

Sponsors - GAAS

(Silver plaque + € 2500)

2ND PRIZE



Authors

Moritz Kalhert

Brandenburg University of Technology (Germany)

Title

Microwave Integrated Circuits in Automotive Sensing and Vehicular Communication for Safer Roads and Efficient Traffic

Sponsors - GAAS

(certificate + 1500 €)

3RD PRIZE



Authors

Kamran Davoodi

University of Rome tor Vergata (Italy)

Title

Enhancing Microwave/mm-Wave Power Amplifier Efficiency: A Key Solution to Global Energy Shortage Challenges

Sponsors - GAAS

(certificate + 1000 €)



International Journal of Microwave and Wireless Technologies: Former Best Paper Prize

The International Journal of Microwave and Wireless Technologies selects one paper per year for the Best Paper Award of the Journal and announces it in the next year. EuMA grants an amount of 1,000 Euro for this award. In the following, the list of the former recipients of the prizes:

1. **Marco Dietz, Andreas Bauch, Klaus Aufinger, Robert Weigel, and Amelie Hagelauer**, "A 1 to 32 GHz broadband multi-octave receiver for monolithic integrated vector network analyzers in SiGe technology," *International Journal of Microwave and Wireless Technologies*, 2018, 10 (5/6), 717-728.
2. **Golzar Alavi, Sefa Özbek, Mahsa Rasteh, Markus Grözing, Manfred Berroth, Jan Hesselbarth, and Joachim N. Burghartz**, "Toward a flexible and adaptive wireless hub by embedding power amplifier thinned silicon chip and antenna in a polymer foil," *International Journal of Microwave and Wireless Technologies*, 2019, 11 (5/6), 864-871.
3. **Iulia Dan, Guillaume Ducournau, Shintaro Hisatake, Pascal Szriftgiser, Ralf-Peter Braun, and Ingmar Kalfass**, "A superheterodyne 300 GHz wireless link for ultra-fast terahertz communication systems," *International Journal of Microwave and Wireless Technologies*, 2020, 12 (7), 578-587.
4. **Philipp Ritter**, "Toward a fully integrated automotive radar system-on-chip in 22 nm FD-SOI CMOS," *International Journal of Microwave and Wireless Technologies*, 2021, 13 (6), 523-531.
5. **Sofian Hamid, Dirk Heberling, Manuela Junghähnel, Thomas Preussner, Patrick Grezki, Ludwig Pongratz, Cristian Hördemann, Arnold Gillner**, "Development of a millimeter-wave transparent antenna inside a headlamp for automotive radar application," *International Journal of Microwave and Wireless Technologies*. 2022, 14(6), 677-688.
6. **Petr Kadera, Jesús Sánchez-Pastor, Lisa Schmitt, Martin Schübler, Rolf Jakoby, Martin Hoffmann, Alejandro Jiménez-Sáez, and Jaroslav Lacik**, "Sub-THz Luneburg lens enabled wide-angle frequency-coded identification tag for passive indoor self-localization," *International Journal of Microwave and Wireless Technologies*. 2023, 15(1), 59-73.

2025 EuMA and EuMW Committees

EuMA GENERAL ASSEMBLY

Board of Directors: Frank van den Bogaart, Denis Barataud, A. Costanzo, Christian Fager, Renato Lombardi, Bart Nauwelaers, Nick Ridler, Danielle Vanhoenacker-Janvier, Frank van Vliet, Herbert Zirath, Volker Ziegler, Thomas Zwick.

EuMW Chairs: Guillaume Ducournau (EuMW 2024), Mark Bentum (EuMW 2025), Stephen Harman (EuMW 2026).

Ordinary Members: Group 1: Guillaume Ducournau, Group 2: Nils Pohl, Group 3: Micaela Liberti, Group 4: Xiadong Chen, Group 5: Mark Bentum, Group 6: Gregor Lasser, Group 7: Vacancy, Group 8: Zsolt Szabó, Group 9: Piotr Slobodzian, Group 10: Zoya Eremenko, Group 11: Shmuel Auster, Group 12: Vacancy, Group 13: Holger Arthaber, Group 14: Roberto Gomez-Carcia, Group 15: Raafat R. Mansour, Group 16: Kenjiro Nishikawa

Founder Members: Leo P. Lighthart, Asher Madjar, Holger Meinel, Steve J. Nightingale, Roberto Sorrentino (†), André Vander Vorst.

IJMWT Editor-in-Chief: Marco Pasian

EuMA Honorary Secretary: Andrew F. Wilson

By invitation: Paolo Colantonio, EuMW Officer; Wolfgang Heinrich, Past President; Ingmar Kallfass, Publication Officer; Nuno Borges Carvalho, MTT-S Observer; Marco Pasian, Editor-in-Chief; Luciano Tarricone, BEM; Jean Hardy, EuMA Consultant; Annemie Van Nieuwerburgh, HQ Assistant.

Countries Represented: Group 1: France, Monaco; Group 2: Germany; Group 3: Italy, San Marino, Vatican City; Group 4: United Kingdom, Ireland, Gibraltar, Malta; Group 5: Belgium, The Netherlands, Luxembourg; Group 6: Iceland, Norway, Sweden; Group 7: Denmark, Faroe Islands, Finland, Greenland; Group 8: Bulgaria, Czech Republic, Hungary, Romania, Slovakia; Group 9: Estonia, Latvia, Lithuania, Poland; Group 10: Armenia, Azerbaijan, Georgia, Moldova, Ukraine; Group 11: Albania, Bosnia and Herzegovina, Croatia, Cyprus, FYR Macedonia, Montenegro, Greece, Israel, Serbia, Slovenia, Türkiye; Group 13: Austria, Liechtenstein, Switzerland; Group 14: Andorra, Portugal, Spain; Group 15: North America; Group 16: Asia-Pacific; Group 17: Africa and Middle East countries; Group 18: Central & South America.

EuMW STEERING COMMITTEE

EuMA Board of Directors

EuMW Officer: Paolo Colantonio.

GAAS® Representative: Paolo Colantonio.

EuMW Chairs: Guillaume Ducournau (EuMW 2024), Mark Bentum (EuMW 2025), Stephan Harman (EuMW 2026), Paolo Colantonio (EuMW 2027), Christian Fager (EuMW 2028).

MTT-S Observer: Nuno Borges Carvalho.

Conference Software Officers: Marc van Heijningen, Cristina Andrei, Megha K. Rao.

APMC Delegate: Arokiaswami Alphones.

2024 Conference Chairs, TPC Chair and Treasurer: Aurelian Crunteanu (TPC Chair), Anthony Ghiotto (EuMC), Nathalie Deltimple (EuMIC), Guido Valerio (EuRAD), Mohammed Zakkoune (Treasurer).

2025 Conference Chairs, TPC Chair and Treasurer: Diego Caratelli (TPC Chair), Ioan Lager (EuMC), Marion Matters-Kammerer (EuMIC), Laura Anitori (EuRAD), Ulf Johannsen (Treasurer).

2026 Conference Chairs, TPC Chair and Treasurer: Xiaobang Shang (TPC Chair), Nick Ridler (EuMC), Tudor William (EuMIC), David Grieg (EuRAD), Noushin Karimian (Treasurer).

EuMW Operational Officers 2024–2027: François Danneville (2024), David Prinsloo, (2025), Dan Williamson (2026), Matteo Oldoni (2027).

HH Representatives: Ivar Bazzy, President; Michel Zoghob, Event Director.

By Invitation: Wolfgang Heinrich (Past President), André Vander Vorst (Secretary Emeritus/DPO), Andrew F. Wilson (Hon. Secretary), Ingmar Kallfass (Publ. Officer), Annemie Van Nieuwerburgh (HQ Assistant).

EuMW TECHNICAL PROGRAMME COMMITTEE

EuMC: Ozlem Aydin Civi, Alina-Mihaela Badescu, Denis Barataud, Mark Bentum, Akanksha Bhutani, Pierre Blondy, Nuno Borges Carvalho, Vicente Boria, Paolo Burghignoli, Wenquan Che, Zhining Chen, Nadine Collaert, Aurelian Crunteanu, Tom Dhaene, Guillaume Ducournau, Lars Foged, Ann Franchois, Maria Garcia Viguera, Anthony Ghiotto, Kamran Ghorbani, Gerald Gold, Roberto Gomez-Garcia, Katia Grenier, Jamin Grosinger, Amelie Hagelauer, Yang Hao, Jiro Hirokawa, Michael Hoft, Mark Ingels, Marianna Ivashina, Kamil Yavuz Kapusuz, Alexander Kolpin, Olivier Lafond, Ioan Lager, Giuseppe Macchiarella, Raafat Mansour, Mauro Marchetti, David Marpaung, Ferran Martin, Stefania Monni, Michal Mrozowski, Niko Munzenrieder, Adam Narbudowicz,

Andrea Neto, Joachim Oberhammer, Bertrand Parvais, Jose Carlos Pedro, Luca Perregrini, Zoya Popovic, Dimitra Psychogiou, Jean-Pierre Raskin, Jae-Sung Rieh, Ilona Rolfes, Jussi Saily, Kamal Samanta, Dominique Schreurs, Fabio Sebastiano, Padmanava Sen, Xiaobang Shang, Hjalti Sigmarsson, Almudena Suarez Rodriguez, Luciano Tarricone, Francesca Vipiana, Huib Visser, Nils Weimann, Withawat Withayachumnankul, Steve Hang Wong, Ke Wu, Jiafeng Zhou, Anding Zhu.

EuMIC: Shmuel Auster, Johan Bauwelinck, Alessandro Cidronali, Paolo Colantonio, Adam Cooman, Nathalie Deltimple, Rocco Giofre, Vadim Issakov, Ingmar Kallfass, Piyush Kaul, Chong Li, Ernesto Limiti, Teresa Martin-Guerrero,

Marion Matters-Kammerer, Kevin Morris, Nils Pohl, Patrick Reynaert, Benjamin Schoch, Frank van Vliet, Cicero Vaucher, Vojkan Vidojkovic, Lars-Erik Wernersson, Tudor Williams, Herbert Zirath.

EuRAD: Marc Bauduin, Andre Bourdoux, Philippe Brouard, Lorenzo Cifola, Carmine Clemente, Laurent Ferro-Famil, Alessio Filippi, Marina Gashinova, Elisa Giusti, Maria Gonzalez Huici, Sabrina Greco, David Greig, Kamel Haddadi, Stephen Harman, Marlene Harter, Mohammad Jahangir, Pierfrancesco Lombardo, Matthew Ritchie, Mayazzurra Ruggiano, Faruk Uysal, Rob van der Meer, Martin Vossiek, Felix Yanovsky, Alexander Yarovoy.

EUMW CONFERENCE PRIZE COMMITTEES

EUMC: Ioan Lager, Delft University of technology, Chair; Stefania Monni, TNO; Akanksha Bhutani, Karlsruhe Institute of Technology; Ilona Rolfes, Ruhr University Bochum; Roberto Gomez-Garcia, University of Alcalá; Kamil Yavuz Kapusuz, IMEC-Ghent University; Jiafeng Zhou, University of Liverpool; Denis Barataud, XLIM University of Limoges; Kamran Ghorbani, RMIT University.

EuRAD: Laura Anitori, CNIT, Chair; Carmine Clemente, University of Strathclyde; Christian Waldschmidt, Ulm University; Andre Bourdoux, IMEC; Maria Gonzalez, FHR; Krzysztof Kulpa, WUT; Guy Kouemou, Hensoldt; Marina Gashinova, University of Birmingham; Mayazzurra Ruggiano, Thales NL; Pierfrancesco Lombardo, Sapienza University of Rome.

EuMIC: Marion Matters, Eindhoven University of Technology, Chair; Benjamin Schoch, University of Stuttgart; Rocco Giofre, Università di Roma Tor Vergata; Nils Pohl, Ruhr-University Bochum; Alessandro Cidronali, Università di Firenze; Teresa Martin Guerrero, University of Málaga; Dusan Milosevic, Eindhoven University of Technology.

EuMW 2025 Reviewers

To our reviewers: Thank you for your great work!

EUMW REVIEWERS

A Sergei A. Tretyakov · Adam Abramowicz · Edward Ackerman · Giuseppe Addamo · Wael A. Ahmad · Bhaskar Ahuja · Janne P. Aikio · Beatriz Aja · Jabran Akhtar · Adnan Al Baba · Ahmad AL HAJJAR · Juha Ala-Laurinaho · Mohammad Alae-Kerahroodi · Catherine Algani · Federico Alimenti · Arokiaswami Alphones · Giandomenico Amendola · Stefan Andersson · Daniel Andre · Cristina Andrei · Joël Andrieu · Mykhaylo Andriychuk · Il'tcho Angelov · Laura Anitori · Giulio Antonini · Michael Antoniou · Fritz Arndt · Jean-Daniel Arnould · Manuel Arrebola · Iván Arregui · Hervé Aubert · Klaus Aufinger · Shmuel Auster · Özlem Aydin Civi

B Alina-Mihaela Badescu · Christoph Baer · Alessio Balleri · Denis Barataud · Paweł Barmuta · Jan Barowski · César Barquintero Gómez · Manuel J. Barragan · Taylor Barton · Marc Bauduin · Maris Bauer · Johan Bauwelinck · Leonid Belostotski · Brahim Benbakhti · Jessica Bénédicto · Olof Bengtsson · Mark Bentum · Tibor Berceci · Eric Bergeault · Manfred Berroth · Alexandre Bessemoulin · Akanksha Bhutani · Giulio Maria Bianco · Jan Geralt Bij de Vaate · Rodrigo Blázquez-García · Pierre Blondy · Luigi Boccia · Sylvain Bollaert · Fabrizio Bonani · Carlo Bongioanni · Nuno Borges Carvalho · Vicente E. Boria · Andre Bos · Detmer A. Bosma · Jonathan Bott · André Bourdoux · Wietse Bouwmeester · Christian Bredendiek · Sander Bronckers · Daniel Brooks · Philippe Brouard · Tim Brown · Jack Brunning · Alina-Cristina Bunea · Paolo Burghignoli · Ludovic Burgnies · Shah Nawaz Burokur

C Pedro Miguel Cabral · Vittorio Camarchia · Sultan Can · Juan Luis Cano · Giuseppe Cantarella · Diego Caratelli · Emanuele Cardillo · Guillermo Carpintero · Corrado Carta · Michele Caruso · Juan-Carlos Castelli · Robert Caverly · Jean-Louis Cazaux · Alexandre Chabory · Subhradeep Chakraborty · Sébastien Chartier · Girdhari Chaudhary · Wenquan Che · Zhi Ning Chen · Pedro Cheong · Pascal Chevalier · Heungjae Choi · Chenhao Chu · Gianluca Ciattaglia · Alessandro Cidronali · Lorenzo Cifola · Elisa Cipriani · Antonio Clemente · Carmine Clemente · Darren Coe · Paolo Colantonio · Nadine Collaert · Giovanni Collodi · Fabiola Colone · Matteo Conta · Adam Cooman · David Cordeau · Aitor Correias-Serrano · Alessandra Costanzo · Sandra Costanzo · Luís Cótimos Nunes · Mario Coutino · Angela Coves Soler · Pepijn Cox · Diego Cristallini · Lorenzo Crocco · Aurelian Crunteanu · Iñigo Cuiñas

D Gilles Dambrine · Patrik Dammert · François Danneville · Tworit Dash · Wim de Heij · Peter de Hek · Luisa de la Fuente · Gonzalo de Miguel Vela · Francesco de Paulis · Elly de Pelecijn · Jacco de Wit · Philipp del Hougne · Christophe Delaveaud · Sébastien Delcourt · Nicolas Delhote · Nicolò Delmonte · Nathalie Deltimple · Kristof Dens · Benoit Derat · Philippe Descamps · Tom Dhaene · Simona Di Meo · Marco Di Seglio · Aliou Diallo · Sebastian Diebold · Marco Dietz · Damla Dimlioglu · Jian Ding · Kaijie Ding · Yassen Dobrev · Ralf Doerner · Simona Donati Guerrieri · Alexandre Douyere · David Dubuc · Guillaume Ducournau · Cédric Durand · Yvan Duroc · Sebastian Durst · Laurent Dusopt · Claude Duvanaud

E Jens Engelmann · Jaap Essing

F Francisco Falcone · Michael Feiginov · Pieter-Antonio Fernandez · Mónica Fernández Barciela · Miguel Ferrando-Bataller · Miguel Ferrando-Rocher · Laurent Ferro-Famil · Pavel Fiala · Laila Fighera Marzall · Alessio Filippi · Francesco Fioranelli · Michele Fiorini · Georg Fischer · Didier Floriot · Lars Foged · Francesco Foglia Manzillo · Erwan Fourn · Ann Franchois · Laurent Francis · Marc Franco · Sébastien Fregonese · Thomas Fromentèze · Dominic Funke · Walter Fuscaldo

G Michael Ernst Gadringer · Davy Gaillot · Gaspare Galati · Alessandro Galli · Richard Xian-Ke Gao · Markus Gardill · Fred-eric Garet · Marina Gashinova · Mike Geen · Jean-Michel Geffrin · Matthias Geissler · Simone Genovesi · Apostolos Georgiadis · Bertrand Gerfault · Nima Ghalichechian · Paolo Ghelfi · Selenia Ghio · Giovanni Ghione · Anthony Ghiotto · Frédéric Giancesello · Giacomo Giannetti · Senne Gielen · Pere L. Gilabert · Raphaël Gillard · Rocco Giofrè · Alexandre Giry · Elisa Giusti · Daniela Godinho · Gerald Gold · Roberto Gómez-García · Xun Gong · Maria A. Gonzalez Huici · David González Ovejero · Jose Luis Gonzalez-Jimenez · Ramon Gonzalo · Jesús Grajal · Giuseppe Gramegna · David Greig · Katia Grenier · Ian Gresham · Jasmin Grosinger · Markus Grözing · Janusz Grzyb · Xiaoqiang Gu · Ronny Guendel · Marco Guglielmi · Gokhan Gultepe · Rutkay Guneri · Berke Gungor · Cheng Guo

H Kamel Haddadi · Amelie Hagelauer · Michael Haider · Mehrdad Hajivandi · Kawon Han · Yang Hao · Henri Happy · Stephen Harman · Marlene Harter · Mujtaba Hassan · Dirk Heberling · Martijn Heck · Wolfgang Heinrich · Jeffrey Hesler · Jan Heselbarth · Mohamed Himdi · Israel Hinostrroza Saenz · Jiro Hirokawa · Michael Hoft · Colin Horne · Rui Hou · Zhirun Hu · Gernot Hueber · Intikhab Hussain · Florin Doru Hutu · Isabelle Huynen

I Stavros Iezekiel · Mark Ingels · Michael Inggs · Vadim Issakov · Marianna Ivashina

J Mohammed Jahangir · Olivier Jardel · Bernard Jarry · Karan Jayachandra · John Jelonnek · Alan Jenkins · Ulf Johannsen

K Ingmar Kallfass · Despoina Kampouridou · Tomoya Kaneko · Kamil Yavuz Kapusuz · Mehmet Karaaslan · Camilla Kärnfelt · Franz Kartner · Piyush Kaul · Wouter Keijer · Nicolai Kern · Asim Ali Khan · Dmitry Kholodnyak · Bumman Kim · Justin King · Dietmar Kissinger · Tero Kiuru · Jens Klare · Thomas Kleine-Ostmann · Ludger Klinkenbusch · Peter Knott · Stefan Koch · Toshiro Kodera · Alexander Kölpin · Mohsen Koohestani · Stavros Koulouridis · Jerzy Kowalewski · Stephan Kruse · Andrzej Kucharski · Krzysztof Kulpa · Ajeet Kumar · Rupesh Kumar · George Kyriacou

L Ariana Lacorte Caniato Serrano · Olivier Lafond · Ioan E.

Lager · Jérôme Lanteri · Tuami Lasri · Gregor Lasser · Vincent Laur · David Lautru · Julien Le Kernec · Marc Le Roy · Philippe Le Thuc · Dimitri Lederer · Jae-Yeong Lee · Moon-Que Lee · Timothy Lee · Hervé Legay · Yoke Choy Leong · Ulrich Lewark · Chong Li · Ernesto Limiti · Fujiang Lin · Julien Lintignat · Matteo Bruno Lodi · Tian Hong Loh · Renaud Loison · Lai Bun Lok · Pierfrancesco Lombardo · Ignacio Esteban Lopez Delgado · Daniel Lopez-Diaz · Benedikt Lösch · Errikos Lourandakis · Ping Lu · Xun Luo · Fabian Lurz · Cyril Luxey

M Azar Maalouf · Giuseppe Macchiarella · Stefano Maddio · María J. Madero-Ayora · Asher Madjar · Simon J. Mahon · Nathalie Malbert · Robert Malmqvist · Giovanni Mangraviti · Raafat R. Mansour · Mauro Marchetti · Philipp Markiton · David Marpaung · Pascal Marquardt · Paulo Marques · Jon Martens · Audrey Martin · Ferran Martín · Teresa M. Martín-Guerrero · Baudouin Martineau · Jorge Daniel Martínez Pérez · Marta Martínez-Vázquez · Edson Martinod · Łukasz Maślikowski · Marion K. Matters-Kammerer · Holger Maune · Markus Mayer · Agnese Mazzinghi · Francisco Medina · Francisco Mesa · Elmine Meyer · Filipe Miguel Barradas · Filipe Miguel Barradas · Konstantinos Mimis · Dariush Mirshekar-Syahkal · Jozef Modelski · Carsten Monka-Ewe · Stefania Monni · Sébastien Mons · Giuseppina Monti · Gabriel Montoro · Jeong-Sun Moon · Dominique Morche · Mathieu Moreau · Antonio Morini · Kevin Morris · Michal Mrozowski · Steve Wai Yin Mung · Niko Münzenrieder · Hiroshi Murata

N Kevin Nadaud · Adam Narbudowicz · Nasrin Nasr Esfahani · Ilaria Nasso · Miguel Navarro-Cía · Irina Nefedova · Renato Negra · Andrea Neto · Herman Jalli Ng · Edouard Ngoya · Nhu-Huan Nguyen · Dirk Nüßler

O Joachim Oberhammer · Roland Oechslin · Dragan Olcan · Matteo Oldoni · Arnaldo Oliveira · Karl Erik Olsen · Troy Olsson · Danilo Orlando · Alicja Ossowska · Jeroen Overdeest

P Fabio Padovan · Luca Pallotta · Gustavo Pamplona Rehder · Giacomo Paolini · Apostolos Pappas · Youngjin Park · Bertrand Parvais · Olivier Pascal · Romain Pascaud · Marco Pasian · Daniel Pasquet · Marco Passafiume · Debora Pastina · Mario Pauli · José Carlos Pedro · Erika Pellegrino · Luca Pelliccia · Kang-Chun Peng · André Pérennec · Aurélien Périgaud · Luca Perregrini · Christian Person · Olivia Peytral-Rieu · Gia Ngoc Phung · Ilona Piekarz · Jean-Francois Pintos · Anum Pirkani · Marco Pirola · Davy Pissoort · Emmanuel Pistono · Emanuele Piuze · Florence Podevin · Martin Podt · Nils Pohl · Ramesh Kumar Pokharel · Zoya Popović · Emily Porter · Benjamin Potelon · Arnaud Pothier · David S. Prinsloo · Marina Proske · Dimitra Psychogiou · Vincent Puyal

Q Roberto Quaglia · Rüdiger Quay · Abdul Quddious · Cédric Quendo · Oscar Quevedo-Teruel · Valdrin Qunaj

R Antonio Raffo · Antti Räisänen · P. Vigneshwara Raja · Rodica Ramer · Franco Ramirez · Pekka Rantakari · Satish Ravindran · Anusha Ravish Suvarna · Torsten Reuschel · Patrick Reynaert · Elodie Richalot · Jae-Sung Rieh · Matthew Ritchie · Philipp Ritter ·

Eric Rius · Hendrik Rogier · Simon Rommel · Massimo Rosamilia · Luke Rosenberg · Uwe Rosenberg · Hélène Roussel · Mayazzurra Ruggiano · Jorge A. Ruiz-Cruz · Amelia Runio Bretones · Pedro Rynkiewicz

S Giulia Sacco · Amr Safwat · Kamal Samanta · Piotr Samczyński · Atsushi Sanada · David A. Sanchez-Hernandez · Miguel Sanchez-Soriano · Philip Sanders · Paul Sangare · Alberto Santarelli · Fabrizio Santi · Scott Schafer · Patrick Scheele · Johann Christoph Scheytt · Lorenz-Peter Schmidt · Benjamin Schoch · Dominique Schreurs · Alexander Schuchinsky · Patrick Schuh · Christian Schulz · Hermann Schumacher · Fabio Sebastiano · Daniel Segovia-Vargas · Padmanava Sen · Pascale Seigny · Xiaobang Shang · Hasan Sharifi · Darshan Shetty · Oksana Shramkova · Uwe Siart · Manuel Sierra Castañer · Hjalti H. Sigmarsson · Alexandre Siligaris · Lorenzo Silvestri · Yoke Leen Sit · Anja Skrivervik · Robin Sloan · Richard Snyder · Valentyn Solomko · Jacques Sombrin · Raphaël SOMMET · Ho-Jin Song · Vito Sorianello · Jakub Sorocki · Domenico Spina · Andreas Springer · Jan Stake · Andreas Stelzer · Almudena Suarez Rodriguez · Noriharu Suematsu · Erwin Suijker · Safumi Suzuki · Oleksiy Sydoruk · Sultan Abdul Kader Syed Mohamed

T Alexandru Takacs · Junwu Tao · Luciano Tarricone · Jean-Guy Tartarin · Noriaka Tawa · Manos M. Tentzeris · Guilherme Theis · Didier Théron · Arno Thielens · Reiner S. Thomä · Fabian Thome · Manfred Thumm · Jordi Verdú Tirado · Diane Titz · Vittorio Tornielli di Crestvolant · Éric Tournier · Ichihiko Toyoda · Nikolaos Tsitsas · Ingrid Ullmann

U Mehmet Ünlü

V Valeria Vadalà · Guido Valerio · Wim van Cappellen · Gijs van der Bent · Rob van der Meer · Marc van Heijningen · Wim van Rossum · Frank E. van Vliet · Guy Vandenbosch · André Vander Vorst · Benjamin Vanhouche · Giorgio Vannini · Andriy Vasylyev · Cicero S. Vaucher · Suresh Venkatesh · Giacomo Venturini · Luca Venturino · Serge Verdeyme · Vojkan Vidojkovic · Valérie Vignéras · Francesca Vipiana · Giuseppe Virone · Huib Visser · Akshay Visweswaran · Giorgio Matteo Vitetta · Michael Vogt · Martin Vossiek · Jan Vrba · Photos Vryonides · Tân-Phu Vuong

W Simon Wagner · Dingyang Wang · Huei Wang · Yi Wang · Gavin Watkins · Simon Watts · Robert Weigel · Nils Weimann · Matthias Weiss · Mareike Wendelmuth · Andreas Wentzel · Lars-Erik Wernersson · Jurjen Westra · Daniel White · Abdulrahman Widaa · Tudor Williams · Withawat Withayachumnankul · Sai-Wai Wong · Steve Hang Wong · Ke Wu

X Pascal Xavier

Y Hady Yacoub · Li Yang · Felix Yanovsky · Alexander Yarovoy · Cristina Yepes · Ming Yu · Sen Yuan · Okan Yurduseven

Z Lyubomir Zegov · Nicolas Zerounian · Jiafeng Zhou · Kang Zhou · Anding Zhu · Simin Zhu · Herbert Zirath · Peter Zwamborn · Thomas Zwick

Travel Information

GETTING TO UTRECHT JAARBEURS

The city of Utrecht is well connected to the European motorway, rail and flight networks. The Jaarbeurs Convention Centre can be accessed through a variety of transportation means. Additional information can be found here: <https://www.jaarbeurs.nl/en/bereikbaarheid>.

ADDRESS

Jaarbeurs
Jaarbeursplein
3521 AL Utrecht
The Netherlands

BY PLANE

Utrecht is located 40 km south-east of Amsterdam. From Amsterdam Airport Schiphol it can be reached in 30 minutes by a direct train.

BY TRAIN

Utrecht Central Station is the largest train station in The Netherlands. Most Dutch railroad lines have Utrecht as their central point; Utrecht Central Station has over 170,000 travellers daily. In addition, the following international direct trains depart and arrive at Utrecht Central Station:

- City Night Line, Nightjet (several cities in Europe)
- ICE International (Germany and Switzerland)
- Intercity Antwerp/Brussels
- 30 minutes to Amsterdam's Eurostar (Brussels, Paris, Cologne, London)

For more information visit <https://www.ns.nl/en> or <https://www.nsinternational.com/en>. The Jaarbeurs is easily accessible from the station by foot (500 meters/5 minutes).

BY CAR

Jaarbeursplein 6, 3521 AL, Utrecht, The Netherlands. Ample paid parking facilities available - please refer to the map at the back of this booklet.

Alternatively, one can park at 'Transferium Westraven' and travel by public transport for an attractive fee: <https://www.parkeren-utrecht.nl/pr/transferium-pr-westraven>.

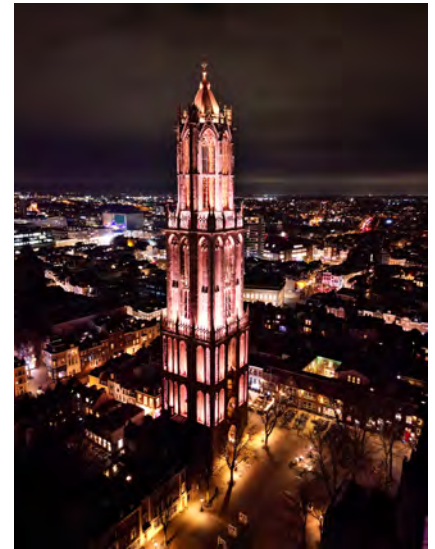
General information on the EuMW

European Microwave Week 2025 takes place in the beautiful city of Utrecht! Bringing industry and academia together, European Microwave Week 2025 is a SIX day event, including THREE cutting edge conferences and ONE exciting trade and technology exhibition featuring leading players from across the globe. EuMW 2025 provides access to the very latest products, research and initiatives in the microwave sector. It also offers you the opportunity for face-to-face discussions with key players of the microwave technology.

The 28th European Microwave Week combines:

- Three Major Conferences
- Workshops and Short courses, Design and radar schools for students
- Tailored Courses and Seminars for industrialists, academics and researchers
- Largest International Trade Show
- Career Platform, to link young professionals of our community and companies that are searching for talents!

In addition, Exhibitor Workshops and Seminars will be provided by several top organizations with superior expertise in Microwave, RF, Wireless or Radar.



Before the conference

CONFERENCES

Choose from three separate but complementary conferences. Spanning the length of the week, starting from Sunday 21st September, the conferences and workshops are scheduled as follows:

- European Microwave Integrated Circuits Conference (EuMIC): 22 – 23rd September, 2025
- European Microwave Conference (EuMC): 23 – 25th September, 2025
- European Radar Conference (EuRAD): 24 – 26th September, 2025
- The 6G Forum: 22nd September, 2025
- The Automotive Forum: 23rd September, 2025
- In addition, EuMW 2025 will include for the 16th year, the Defense, Security and Space Forum: 24th September, 2025

The conferences encompass a wide range of subject areas including:

- Microwave, Millimetre-wave, and Submillimetre-wave Systems
- Antennas and Propagation
- Wireless Technologies and Fronthaul/Backhaul Applications
- Telecommunication (RF, Microwave, and Optical)
- Integrated Circuits, Semiconductor Materials, and Packaging
- Radar Architectures, Systems, and Subsystems
- Sensors and Remote Sensing Applications
- Testing and Measurement Techniques
- Technologies for Space Applications
- Sustainable Engineering

REGISTRATION

Online registration

Online registration opens in June 2025 and remains open up to and during the event.

→ [visit Website](#)

One, two or three conferences?

Delegates can register for one, two or all three of the conferences. Registration at one conference does not allow any access to other conference sessions.

EUMA MEMBERSHIP

One can apply for EuMA membership by ticking the appropriate box during registration for EuMW. Membership is valid for 1 year, starting when the subscription is completed. The discount for the EuMW fees applies immediately. The EuMA membership fee is € 25 for Professionals and € 15 for Students. Members have full e-access to the International Journal of Microwave and Wireless Technologies. The printed version of the Journal is no longer available. EuMA offers a three-year free membership for people residing in NIS and some African countries.

PERSONAL INVITATION

A valid passport will be required for entry into the organising country, in this case the Netherlands. Since EuMW events are held in the European Union, no visa is usually required for travellers with passports from a number of countries, like for instance: European Union, Australia, Brazil, Canada, Japan, Singapore, South Korea or the United States. If you are registering as speaker, delegate or exhibitor and you need a visa, we recommend that you speak with the Dutch Consulate, in your own country. You should organise this at least 3 to 4 months prior to EuMW.

The organisers will be pleased to send a letter of invitation to any exhibitor, conference delegate or speaker requesting it. To request this letter of invitation, please visit <https://www.eumw.eu/general-information/passport-visa/>.

HOTEL RESERVATION

Horizon House has teamed up with Connex Hotels and Events, our official hotel booking supplier, to offer you the ability to book your accommodation for EuMW at the most competitive rates available. It is very easy to make an immediate hotel booking.

Simply visit their booking page <http://www.connexhotelsandevents.com/eumw.html> and make your booking, or email sally@connexhotelsandevents.com. You will find a wide range of accommodation to suit every budget. Alternatively, see the hotel booking pages within this programme.

INSURANCE

It is highly recommended that all participants carry the proper travel and health insurance, as the organiser cannot accept any liability for any accidents or injury that occur during or when travelling to the event. Please also insure that personal items are covered for loss, damage or theft either through a personal policy or by a corporate policy. We cannot accept any liability for personal items that are lost, damaged or stolen during or travelling to and from European Microwave Week 2025.

During the Conference

BADGES & DELEGATE BAG

Online registrants will automatically be e-mailed their badge barcode and an order confirmation receipt immediately after they pay. All those who have pre-registered should bring their badge barcode and confirmation with them to the conference where they can print out their badge by scanning their barcode at the Fast Track desk onsite. Once you have collected your badge, conference attendees can collect the delegate bag. Conference proceedings will be available with a download link.

Processing will be quick and easy but queues may form at busy times, so please arrange to collect your badge well in advance of your first conference session. The registration area will be located in Hall 8 of the Jaarbeurs Events & Exhibition Centre, as signposted. Those who have not pre-registered can do so on site. There will be onsite registration terminals located within the registration area, where delegates can enter their details and pay immediately by swiping their credit or debit cards through the card readers attached to the terminals.

Alternatively, you can pay at the Cashier desk if you require a printed receipt. If you have any questions regarding registration procedures and payment, please email: eumweek@mcon-mannheim.de

ELECTRICITY

Electricity is supplied at 230 V, 50 Hz.

CREDIT CARDS

All major hotels and most restaurants and shops will accept credit cards. It is advisable to carry other identification as well. Visa and MasterCard are the most widely accepted cards.

REGISTRATION

On-site registration

During the event, you can also register onsite in Hall 8 from Saturday 20th September 2025 (16:00 – 19:00) and from 08.00 each morning from Sunday 21st 2025 to Friday 26th September 2025.

ON-SITE INFORMATION

The conferences will be held in different rooms over the conference dates. Please refer to the [Conference Matrix at the back of this booklet](#) for a detailed overview.

PROCEEDINGS

All papers published for presentation at your chosen conference will be available on a download link. To reduce the carbon footprint, no hard copies of workshop slides will be provided. Slides or handouts will be provided in digital format to registered workshop and short course participants.

EXHIBITION HOURS

The exhibition area will be located in Hall 7 as shown on the Floor Plan in this booklet. As a registered delegate you will have full access to the exhibition area.

The exhibition opening hours are:

- Tuesday 24th September 9:30 – 18:00 (followed by the Welcome Reception)
- Wednesday 25th September 9:30 – 17:30
- Thursday 26th September 9:30 – 16:30

See the 'Exhibitor' page in this booklet for a full listing of the exhibitors (updated at the time this programme is compiled).

SOCIAL EVENTS & PARTNER PROGRAMME

Full details of the social events & dinners that are taking place during EuMW 2025 can be found in the 'Social Events & Partner Programme' section of this programme.

SHOPPING & SIGHTSEEING

Utrecht is a place where 2,000 years of history blend with a vibrant present. The city is home to museums, theaters, and cultural events that make it a lively and inspiring destination. A walk through the historic city streets or the Museum Quarter, with its canals, immediately reveals the charm that sets Utrecht apart.

But Utrecht is more than just a city. Just outside the city, you'll find tranquil nature, historic landmarks, and an open countryside that offers a welcome contrast to the energy of the urban center. Visit <https://www.discover-utrecht.com> for information on top attractions and tips for your stay.

Alternatively, see the 'Social Events & Partner Programme' section of this booklet for tours and excursions before, during and after EuMW 2025.

After the conference

EUMA KNOWLEDGE CENTRE

The EuMA website has its Knowledge Centre which presently contains over 20,000 papers published under the EuMA umbrella. Full texts are available to EuMA members only, who can make as many copies as they wish, at no extra-cost.

WI-FI

Wi-fi is available in the exhibition hall and conference area. Login details can be found within your delegate bag.

Hotel Booking Form

Rooms are held on a guaranteed basis. For this reason, you are asked to supply a credit card number and full company details. If your travel plans change and you wish to cancel your accommodation, please contact Sally Garland on +44 (0)7775 744193 or email sally@connexhotelsandevents.com to avoid any non-arrival or cancellation charges, as each hotel has a different cancellation policy, full cancellation details will be clearly marked on every booking confirmation. Prepay rates are non-refundable and non-cancelable.

FOR MORE HOTEL OPTIONS AND TO RESERVE YOUR ROOM ONLINE VISIT

<http://www.connexhotelsandevents.com/eumw.html>

Or complete the booking form below and email to sally@connexhotelsandevents.com

Contact Name

Company

Address

City

Post Code

Telephone

Fax

Email

Date of Arrival

Date of Departure

Number of rooms required

Single Room(s)

Twin Room(s)

Double Room(s)

First Choice Hotel

Second Choice Hotel

Guest Names

In order to guarantee the accommodation, please provide us with your credit card details:

Credit Card Number

Name on Card

Expiry Date /

I authorise that any no show or late cancellation charges, as stipulated in the Connex booking confirmation will be charged to this credit card.

Signed

Date



Tel: +44 (0)7775 744193

Email: sally@connexhotelsandevents.com

HOTEL	TO EuMW	RATES FROM*		
HQ HOTEL NH HOTEL UTRECHT Jaarbeursplein 24, 3521 AR Utrecht	3 minute walk	EuMW	€ 209.00	B&B
PARK PLAZA UTRECHT Westplein 50, 3531 BL Utrecht	5 minute walk	Prepay Flexible	€ 253.00 € 280.00	B&B B&B
INTEL HOTEL UTRECHT CENTRE Smakkelaarshoek 24, 3511 EC Utrecht	8 minute walk	EuMW	€ 229.00	B&B
HAMPTON BY HILTON UTRECHT CENTRAL STATION Boven Catharijnepoort 4, 3511 WN Utrecht	9 minute walk	EuMW	€ 195.00	B&B
THE ANTHONY HOTEL UTRECHT Kanaalstraat 197-199, 3531 CG Utrecht	9 minute walk	Prepay Flexible	€ 237.00 € 256.00	B&B B&B
CROWNE PLAZA UTRECHT - CENTRAL STATION Catharijne Esplanade 13, 3511WK Utrecht	11 minute walk	Prepay Flexible	€ 247.00 € 264.00	B&B B&B
LEONARDO HOTEL UTRECHT CITY CENTER Vredenburg 14, 3511 BA Utrecht	13 minute walk	EuMW	€ 189.00	B&B
BUNK HOTEL UTRECHT Catharijnekade 9, 3511 RT Utrecht	13 minute walk	Prepay Flexible	€ 262.00 € 275.00	B&B B&B
GRAND HOTEL KAREL V Geertebolwerk 1, 3511 XA Utrecht	15 minute walk	EuMW	€ 300.00	B&B
THE HUNFELD HOTEL Mariaplaats 4, 3511 LH Utrecht	15 minute walk	Prepay Flexible	€ 133.00 € 242.00	B&B B&B
HOTEL NH CENTRE UTRECHT Janskerkhof 10, 3512 BL Utrecht	19 minute walk	Prepay Flexible	€ 186.00 € 199.00	B&B B&B
IBIS UTRECHT Bizetlaan 1, 3533 KC Utrecht	20 minute walk	Prepay Flexible	€ 174.00 € 193.00	B&B B&B
MOXY UTRECHT Helling 1, 3523 CB Utrecht		Prepay Flexible	€ 193.00 € 234.00	B&B B&B

NOTES

Prepay: Room rate will be charged at the time of booking to the credit card used to guarantee the reservation, after this the room is non-refundable.

RO: Room rate does not include breakfast; however, breakfast is available at the hotel at an extra cost

Flexible: Flexible = Room can be cancelled or amended up until a few days before arrival, individual policy will be stated on the booking confirmation

B&B: Room rate includes breakfast.

All rates quoted are based on single occupancy and include VAT at the current rate.

8.5% City Tax is extra and will be charged directly by the hotel per night

***** **Special Event Rates are only bookable via this form or direct with sally@connexhotelsandevents.com** *****

INTERNSHIP AWARD

RESEARCH + INDUSTRY

EARN

4500 €

KICK-START YOUR MICROWAVE CAREER!

This November 2025, the EuMA Innovation Team is launching the eighth edition of the **EuMA Internship Award**. Every year up to **ten awards of 4500€** each will be given to selected **Master and PhD students** to spend a period of at least **3 months abroad** in one of the **leading European Microwave Industries, Universities, and Research Institutes** supporting this initiative.

In addition to promote the mobility of students that would like to work in the microwave field across European Institutions, the award will also attract new talents to the hosting organizations and will help creating a larger and stronger community of microwave young professionals.

Master's & PhD students in Engineering, Computer Science, Mathematics or Physics are eligible to apply. **Scan the QR code** to explore full award details and access the application link.

WHO

PhD and Master students with a background in Engineering, Computer Science, Mathematics or Physics

WHAT

Internship abroad of at least 3 Months within 1 year from acceptance notification

WHERE

In leading **European Microwave Industries, Universities and Research Institutes**

WHEN

Submission deadline

28.11.2025



APPLICATION PROCEDURE

- I. Choose your host & **submit the online form** - by 28.11.2025
- II. Hear from EuMA with **pre-acceptance** - 13.1.2026
- III. **Set up an interview** with your host - by 13.4.2026
- IV. Receive your **final acceptance notice** - by 30.4.2026

CONTACT & DETAILS



Web:
www.eumwa.org

Email:
internships@eumwa.org

PROMOTING EUROPEAN
MICROWAVES

EUMA
EUROPEAN MICROWAVE ASSOCIATION

> Innovation **TEAM**

Welcome to Utrecht!

Utrecht: A City of History and Innovation

Utrecht is a place where 2,000 years of history blend with a vibrant present. The city is home to museums, theaters, and cultural events that make it a lively and inspiring destination. A walk through the historic city streets or the Museum Quarter, with its canals, immediately reveals the charm that sets Utrecht apart. But Utrecht is more than just a city. Just outside the city, you'll find tranquil nature, historic landmarks, and an open countryside that offers a welcome contrast to the energy of the urban center.

Utrecht: Heart of Health

Utrecht region is the center for innovation in health and sustainability. Businesses, governments, and knowledge institutions work together to develop solutions that improve physical, mental, and social well-being. The focus is on creating an environment that supports a healthier way of living.

Sustainability is not just a goal but a necessity. That's why the region prioritizes nature, biodiversity, and climate-conscious choices. Through collaboration, Utrecht contributes to a healthier and more sustainable society, both locally and globally.

Discover Utrecht. Where history and innovation meet.

DOM TOWER



As the tallest church tower in the Netherlands, the Dom Tower is not only a striking landmark—it's a symbol of Utrecht's rich history and cultural heritage. Climb its 465 steps, and you'll be rewarded with a breathtaking panorama. From the top, take in the stunning views of Utrecht's historic skyline, winding canals, and lively squares. On a clear day, you can even spot Amsterdam in the distance.

Uncover the fascinating history of the Dom Tower with an expert guide. Learn about its Gothic architecture, the legends woven into its past, and its role in shaping Utrecht's identity. Explore hidden chambers, admire intricate stone carvings, and hear the stories of those who built this monumental structure.

→ [visit Website](#)

DOMUNDER



Beneath the historic Dom Square, 2,000 years of Dutch history await discovery. Right in the heart of Utrecht, an underground entrance leads you on a journey through time at DOMunder. You'll explore hidden archaeological treasures beneath the centuries-old square. Through interactive stories and animated films, history literally comes to life before your eyes. Travel back to 45 A.D., when the Romans built Castellum Trajectum, and uncover why Utrecht became the heart of the Netherlands during the Middle Ages. Witness the dramatic moment when a devastating tornado brought down the nave of the Dom Cathedral in 1674.

→ [visit Website](#)

MORE ...

If you would like more details and costs of the attractions or tours that are not linked directly, please contact Sally Garland at sally@connexhotelsandevents.com.

DOM CHURCH



Built as a cathedral for the Bishop of Utrecht and dedicated to St. Maarten, the Dom Church is one of the city's most iconic landmarks. With its Gothic architecture and richly decorated tombs, the church's interior leaves a lasting impression.

Whether you join a guided tour to explore its fascinating history or simply step inside for a moment of peace and reflection, the Dom Church welcomes visitors daily.

→ [visit Website](#)

DISCOVER THE CITY OF AMERSFOORT



Step back in time and explore the charming medieval city of Amersfoort with an expert guide. Wander through its historic streets, pass through the iconic Koppelpoort—a unique land and water gate—and admire the remarkable Wallhouses built into the old city walls.

Your journey continues at the Mondriaan House, the birthplace of world-renowned artist Piet Mondriaan. Here, you'll discover a permanent exhibition about his life and artistic evolution, along with a full-scale replica of his famous Paris studio.

After the tour, take some time to explore Amersfoort's vibrant shops and cozy restaurants at your own pace. When you're ready, hop on a train back to Utrecht—just a 15-minute ride, with departures six times per hour.

[→ visit Website](#)

MIFFY MUSEUM

The house of Miffy (Nijntje) is a museum for all ages where you can discover the world of Dick Bruna's world famous creation: Miffy. In the Atelier Dick Bruna you can find out how he worked.

[→ visit Website](#)

DE HAAR CASTLE



Just outside of Utrecht you can find the largest and most opulent castle in the Netherlands, De Haar Castle stands among Europe's finest historic estates. A visit to this breathtaking landmark transports you back to its glamorous past, when it was a playground for the international elite of the early 20th century. Step inside and experience the extraordinary luxury enjoyed by the Van Zuylen family and their illustrious guests, surrounded by priceless art and rich history.

With its majestic towers, ramparts, moats, gates, and drawbridges, De Haar embodies the perfect vision of a medieval fortress. Rising from lush parklands, it is framed by towering trees, historic gardens, and serene ponds—a truly enchanting sight.

[→ visit Website](#)

UTRECHT GUIDED TOURS

Utrecht and its surroundings are full of surprises and hidden gems. A city walk is a great way to uncover its secrets. Looking to explore beyond the city? Hop on a bike—the perfect way to get around!

Many different themed tours are offered; the professional guides have in-depth knowledge of the city and region and can share fascinating insights about Utrecht's history, architecture, and must-see spots.

[→ visit Website](#)

THE RIETVELD SCHRÖDER HOUSE



In 1924, furniture maker and architect Gerrit Rietveld (1888-1964) realized this unique building. It is the only building built according to the architectural principles of De Stijl. Utrecht is internationally known as the city where Rietveld lived and worked all his life.

[→ visit Website](#)

CHEESE EXPERIENCE WOERDEN



Immerse yourself in Dutch cheese heritage through an immersive experience at the Cheese Warehouse in Woerden. This center of taste and flavor is the place where everything about cheese comes together. Learn, watch, taste, and more! The cheese experience in Woerden is the closest you will get to the process of making and storing cheese.

[→ visit Website](#)

Thanks to Utrecht Marketing for these images.

Social Events

Welcome Reception

Date: Tuesday 23rd September
Time: 18:30 – 21:30

**Location: Beatrix Theater, Mies Bouwman Foyer.
Jaarbeursplein 6A, 3521AL Utrecht.**

Cost: Free to conference delegates & invited exhibitors.

All registered conference delegates, as well as invited representatives from companies participating in the exhibition are invited to the EuMW2025 Welcome Reception on Tuesday evening at the Jaarbeurs. Delegates will need to bring their badge and exhibitors their invite along with them to gain entrance. The evening will begin with drinks, followed by the General Chairs' handover from EuMW2025, Utrecht, to EuMW2026, London, as well as an address from the Platinum Sponsor, Keysight Technologies. Complimentary umbrellas generously provided by Keysight Technologies will be available in your delegate bag for your walk to the Beatrix Theatre



EuMIC 'Get-Together' Dinner

Date: Monday 22nd Sept.
Time: 18:30-21:30

**Location: Paushuize.
Kromme Nieuwegracht 49, 3512 HN Utrecht**
Cost: Free to EuMIC delegates, get your ticket at the reception

Following the tradition of the European Microwave Integrated Circuits Conference, delegates are invited to enjoy a walking dinner on Monday evening in the charming sixteenth century "Paushuize" (Pope's house) in the historic city centre of Utrecht.

EuMW Delegates Lunch

Date: Monday 22nd - Friday 26th
September
Time: 12:30 - 13:50

Location: TransitZone
Cost: Free to EuMW delegates, forums, and WS/SC registered attendees

Enjoy the daily lunches at the conference! During exhibition days (Tuesday-Thursday) dessert and coffee will be served in the exhibition hall.

AperiRadar [NEW]

Date: Thursday 25th September
Time: 18.00 – 20:30

Location: TransitZone, Jaarbeurs (on-site)
Cost: Free to all EuRAD delegates

Join us for this new event at EuMW2025! An evening aperitivo held at the Jaarbeurs for the delegates of the EuRAD conference. This event is sponsored by Robin Radar.

6G Forum Networking Dinner [NEW]

Date: Monday 22nd September
Time: 17:30-20:00

Location: Barzone, Jaarbeurs (on-site)
Cost: Free to 6G Forum registered delegates.

Join us for this interactive walking dinner at the barzone! We will start with drinks at 17:30, and continue with dinner until 20:00.

Automotive Forum Networking Dinner

Date: Tuesday 23rd September
Time: 18:30 - 23:00

Location: Museum Speelklok. Steenweg 6, 3511JP Utrecht
Cost: Free to Automotive Forum registered delegates

Join us for this unique event, which includes a welcome reception and a seated dinner. You will have plenty of time to network and discuss Automotive Forum topics with other attendees in an open setting.

Young Professionals Get-Together

Date: Sunday 21st September
Time: 18:30 - 23:00

Location: The Boules Club Utrecht. Oudegracht aan de Werf 83, 3511 AL Utrecht
Cost: Free for young professionals and student school participants, ticket required!

We welcome you to our young professionals evening get-together in Utrecht's The Boules Club, where you can try your hand at Jue de Boules while enjoying dinner and drinks with fellow students and young professionals. Doors will open at 18:00. Entry is free, but a ticket is required; tickets (limited number) will be handed out at the registration desk on Sunday. The YP get-together is co-sponsored by IEEE YP Benelux, IEEE AP-S YP, IEEE MTT-S/AP-S YP Benelux, and EuMA!

EuMW Experience [Gala Dinner]

Date: Wednesday 24th September
Time: 18:30-23:00

Location: Utrecht Railway Museum - TRAINS LEAVE FROM CENTRAL STATION!
Cost: €60 (get your ticket at registration)

Hop on the EuMW train at Utrecht Central station at 18:30 and join us for an evening event, including dinner, in the Utrecht Railway Museum. The EuMW Experience intends to foster a lively and friendly interaction between as many as possible of the week's participants against the backdrop of beautiful railway travelling landmarks. Opening, at the Railway Museum will be at 19:00, closing at 23:00 - including a train back to Utrecht Central station. There will be guidance to get from the conference venue to the correct train.

Young Professionals' Company Visit: Qorvo Excursion

Monday, 22nd September

Group 1: 13:50 - 14:35; Group 2: 14:50 - 15:35

Location: Qorvo, Leidseveer 10, 3511 SB Utrecht, Netherlands

Cost: Free to conference delegates, ticket (available during registration) required!

Join us for an exclusive company visit to Qorvo, organized specifically for Young Professionals and scheduled in two groups to provide a more engaging experience. Participants will gather at the exhibition venue and walk together (approximately 10 minutes) to Qorvo.

Entrepreneurship in RF

A joint Young Professionals and Women in Microwaves event

Date: Wednesday September 24

Time: 12:30 - 17:00

Location: Various, transport is arranged.

Cost: Free to EuMW delegates, registration required.

This unique event will be focused on the challenges and opportunities of starting a company in RF, to inspire you to do the same or to take their learnings to apply them to your current position! Part 1 (inside conference venue, room Polar): Lunch (12:30-13:00) with panel with four RF entrepreneurs with various stories and backgrounds (13:00-14:30). Part 2 (off site): Boat tour through Utrecht (leaves from the boat ramp underneath the Hoog Catharijne mall). You will get off at 'De Werfkelder' for networking and a presentation by an RF venture capitalist/investor (14:30-17:00). After registering, make sure to pick up your proof of entry at the main registration desk.

There are only limited spots available so make sure to register as soon as possible! Participation is free for all EUMW delegated, but registration is needed. We are looking forward to seeing you there!

This event is sponsored by EuMA, Eindhoven University of Technology, IMST, IEEE Women in Microwaves, IEEE MTT-S and IEEE Young Professionals.

Microwave Nightfever

Date: Thursday 25th September

Time: 20:30 - 00:00

Location: Jaarbeurs (on-site)

Cost: Free for microwave students and young professionals, ticket required!

Join us in the Jaarbeurs for Microwave Nightfever (20:30 - 00:00), the ultimate conference party, where RF and microwave engineers and industry partners come together for a high-energy night of music and networking.

ASML



robin
radar systems

qorvo

EuMA
EUROPEAN MICROWAVE ASSOCIATION

esa
THE EUROPEAN SPACE AGENCY

KEYSIGHT
TECHNOLOGIES

THALES

Workshops and Short Courses

Despite the organiser's best efforts to ensure the availability of all listed workshops and short courses, the list below may be subject to change. Also workshop numbering is subject to change. Please refer to www.eumw.eu at the time of registration for final workshop availability and numbering.

Code	Time	Conf.	Title
Sunday 21 September 2025			
SS-01	Full day	EuMIC	Fundamentals of Microwave PA Design
SS-02	Half-day	EuMC	Wearable Antenna Systems for Joint Body-Centric Communication, Powering and Sensing
WS-01	Full day	EuMC/EuMIC	Advancements in Technologies and Circuits Leading to 6G
WS-02	Full day	EuMC	Polymer Microwave Fiber (PMF) Communication for Sub-THz, Low-Cost High Data Rate Short-Range Systems
WS-03	Full day	EuMC	Acoustic Wave Filters for Space Applications
WS-04	Full day	EuMC	Additive Manufacturing for Microwave Components and Systems
WS-05	Full day	EuMC/EuMIC	Opportunities and Challenges for the Cryogenic Microwave Control of Quantum Processors
WS-06	Full day	EuMC/EuMIC	RFIC Design, Packaging and Antenna Solutions for mm-Wave and Sub-THz Communication and Radar
WS-07	Full day	EuMC	Integrated Microwave Photonics
WS-08	Full day	EuMIC	Thermal Effects and Heat Management in Active Phased Arrays: Chip, Package and Antenna Level Concepts
WS-09	Full day	EuMC/EuMIC	Innovations in Load-Pull Techniques for Wideband and High-Frequency Applications
WS-10	Full day	EuMC/EuMIC	Advanced mm-Wave IC Design: A Step Ahead
WS-11	Half-day	EuMC/EuMIC	The Path to 2030: Joint Communication and Sensing in the 6G Internet-of-Everything Era
WS-12	Half-day	EuMC/EuMIC	AI and Data-Driven Modeling for RF/MW Design
WS-13	Half-day	EuMC	Microwave Carbon Footprint of Wireless Communications – From Energy Efficiency to Embedded Emissions
Monday 22 September 2025			
SM-01	Half-day	EuMC	Architecture and Applications for Emerging SATCOM and NTN Communication Networks
SM-02	Half-day	EuMC	Radiative Wireless Power Transfer Basics and Implementation
WM-01	Full day	EuMC	Photonic Technologies and Systems for RF Applications
WM-02	Full day	EuMC	Latest Advancements in Microwave Measurement Techniques for Future Communications and Quantum Applications
WM-03	Half-day	EuMC/EuRAD	Standard, Prototype, and Measurement for Integrated Sensing and Communications in the COST Action INTERACT

Code	Time	Conf.	Title
Wednesday 24 September 2025			
SW-01	Full day	EuMC/EuMIC	Embedding Sustainability into RF Technologies
WW-01	Half-day	EuMC	Innovative Semiconductor Device Architectures and Accurate Modeling for Emerging Applications - Bridging the Gap Between Circuit Design Challenges and Practical Commercialization
WW-02	Half-day	EuMC/EuRAD	High Resolution Radar Technologies for Future Automotive Systems
WW-03	Half-day	EuMC/EuMIC	RF & Sub-THz Heterogeneous Integration
WW-04	Half-day	EuMC	Recent Progress in Compact, Ultra-Low Phase Noise Microwave-Photonic Frequency Synthesis
Thursday 25 September 2025			
STh-01	Full day	EuMC/EuRAD	Basics of Systems Engineering for the Microwave Engineering Community
STh-02	Half-day	EuRAD	Synchronization in Distributed Radar - Prospective and Problems
WTh-01	Full day	EuRAD	Automotive Radar Research Trends
WTh-02	Half-day	EuRAD	Multistatic/Distributed Radar Systems
Friday 26 September 2025			
SF-01	Half-day	EuRAD	Integrated Sensing and Communications: Fundamentals, State-of-the-Art and the Road Ahead
SF-02	Half-day	EuRAD	Nonlinear Radar: From Concepts to Applications

Registration Information

CONFERENCE REGISTRATION DETAILS

Join the global microwave and RF community at EuMW 2025. Register today and be part of the conversation shaping the future of our industry. For pricing, please see the following page.

ONLINE REGISTRATION

- All online registrations should be made at www.eumw.eu
- Registrations completed up to and including 22nd August 2025 will be charged at the 'Advance Discounted Rate' and those from 23rd August 2025 will be charged at the 'Standard Rate'.
- Online registration is open from mid June 2025 up to and during the event until 26th September 2025.

ONSITE REGISTRATION

Onsite registration is available during the following timeslots:

- Saturday 20 September 2025 (16:00 – 19:00)
- Sunday 21 – Thursday 25 September 2025 (08:00 – 17:00)
- Friday 26 September 2025 (08:00 – 10:00)

Onsite registration will be charged at the Standard Rates.

HOW TO REGISTER

If you have any questions regarding registration procedures and payment, please email:

- Conference Registration questions: eumweek@mcon-mannheim.de
- Exhibition Registration questions: exhibitionreg@eumweek.com

REGISTER ONLINE AT WWW.EUMW.EU

- Delegates can register for one, two or all three of the conferences.
- Discounts will be given to those registering for two or more conferences.
- Payment can be made online using Amex, Visa, Mastercard or Bank Transfer.
- Registrants paying by Credit Card will be sent an automatic email confirmation, with a receipt and badge barcode.
- Registrants choosing to pay by Bank Transfer will receive their confirmation, but their receipt and badge barcode will be sent only once payment has been received and cleared by Horizon House.
- Bring your receipt, barcode and photo ID with you to the event.
- Go to the Fast Track Check In Desk and print out your badge.

ONSITE REGISTRATION

- The registration area will be as signposted.
- There will be Self Service terminals in the registration area where delegates can enter their details and pay immediately by swiping their credit cards through the readers attached to the terminals.
- Delegates can also choose to 'Pay at Cashier' and then proceed to the Cashier Point and pay using credit cards or cash. Receipts will be given accordingly.



For any questions,
please email:
eumweek@mcon-mannheim.de
(conference) or
exhibitionreg@eumweek.com
(exhibition)

Registration Fees

Get the most out of this year's Microwave Week with a Full Week ticket. Combine all three conferences with additional access to the Defence, Security and Space and the 5G to 6G Forum (the Automotive Forum and the Schools are not included) as well as all the Workshops and Short Courses.

Registration at one conference does not allow access to the sessions of the other conferences.

The fees shown below are invoiced in the name and on behalf of the European Microwave Association. All payments must be in € Euros – cards will be debited in Euros.

Reduced rates are offered if you have society membership to any of the following: EuMA, GAAS*, IET or IEEE. Reduced rates for the conferences are also offered if you are a Student/Senior (Full-time students 30 years or younger and Seniors 65 or older as of 23rd September 2025).

One can apply for EuMA membership by ticking the appropriate box during registration for EuMW. Membership is valid for one year, starting when the subscription is completed. The discount for the EuMW fees applies immediately.

Members have full e-access to the International Journal of Microwave and Wireless Technologies. The printed version of the journal is no longer available.

EUMA KNOWLEDGE CENTRE

The EuMA website has its Knowledge Centre which presently contains over 22,000 papers published under the EuMA umbrella. Full texts are available to EuMA members only, who can make as many copies as they wish, at no extra-cost.



**BECOME
A MEMBER –
NOW!**

**EuMA membership fees:
Professional € 25 / year,
Student € 15 / year.**

Conferences

	ADVANCE DISCOUNTED RATE (From now up to & including 22 August 2025)				STANDARD RATE (From 23 August 2025 & Onsite)			
	Society Member [⊕]		Non-Member		Society Member [⊕]		Non-Member	
	Standard	Student/Sr.	Standard	Student/Sr.	Standard	Student/Sr.	Standard	Student/Sr.
1 Conference								
EuMC	€ 710	€ 200	€ 1,000	€ 280	€ 1,000	€ 280	€ 1,400	€ 400
EuMIC	€ 540	€ 180	€ 760	€ 250	€ 760	€ 250	€ 1,060	€ 350
EuRAD	€ 490	€ 170	€ 680	€ 240	€ 680	€ 240	€ 950	€ 330
2 Conferences								
EuMC + EuMIC	€ 1,000	€ 250	€ 1,400	€ 350	€ 1,400	€ 350	€ 1,970	€ 450
EuMC + EuRAD	€ 960	€ 250	€ 1,340	€ 350	€ 1,340	€ 350	€ 1,900	€ 450
EuMIC + EuRAD	€ 820	€ 250	€ 1,150	€ 350	€ 1,150	€ 350	€ 1,610	€ 450
3 Conferences								
EuMC + EuMIC + EuRAD	€ 1,220	€ 300	€ 1,710	€ 400	€ 1,710	€ 400	€ 2,390	€ 500
Full Week Ticket	€ 2,070	€ 500	€ 2,680	€ 600	€ 2,680	€ 600	€ 3,510	€ 700

Special Forums And Sessions Registration

	Date	ADVANCED DISCOUNTED RATE (Up to & including 22 August 2025)		STANDARD RATE (From 23 August 2025 & Onsite)	
		Delegates*	All Others**	Delegates*	All Others**
Automotive Forum	23 September 2025	€ 365	€ 515	€ 510	€ 720
Defence, Security & Space Forum	24 September 2025	€ 180	€ 250	€ 250	€ 350
6G Forum	22 September 2025	€ 365	€ 515	€ 510	€ 720
Tom Brazil Doctoral School	21 September 2025	€ 40	€ 40	€ 55	€ 55
European Microwave School in Radars	22 September 2025	€ 40	€ 40	€ 55	€ 55
EuMW Experience	24 September 2025	€ 60	€ 60	€ 60	€ 60

*those registered for EuMC, EuMIC or EuRAD

**those not registered for a conference

Workshops And Short Courses

	IN COMBINATION WITH CONFERENCE REGISTRATION				WITHOUT CONFERENCE REGISTRATION			
	Society Member [☺]		Non-Member		Society Member [☺]		Non-Member	
	Standard	Student/Sr.	Standard	Student/Sr.	Standard	Student/Sr.	Standard	Student/Sr.
Half Day	€ 120	€ 90	€ 170	€ 120	€ 170	€ 120	€ 220	€ 170
Full Day	€ 180	€ 130	€ 240	€ 180	€ 240	€ 180	€ 320	€ 240

Sunday: lunch boxes provided to delegates

Monday – Friday: delegates receive a seated lunch

14th Tom Brazil Doctoral School of Microwaves: Co-design and heterogeneous integration for Future Electronic Systems

Date: Sunday 21st September

Location: Juliana CZ1

Spots: 50 participants

Modern electronic systems demand unprecedented levels of performance, compactness, and functionality. Achieving this requires not only technological advances in circuits and components, but also a paradigm shift toward co-design and heterogeneous integration. This one-day course is designed to introduce students, PhD researchers, and young professionals to the principles, challenges, and cutting-edge solutions in the co-development of RF circuits, antennas, packaging, and system-level architectures.

Co-design refers to the concurrent development of multiple system domains—from circuit and antenna to packaging and interconnects—while heterogeneous integration addresses the physical and functional merging of disparate technologies, such as Si CMOS, III-V semiconductors, and waveguide structures. Together, these approaches are key to enabling high-frequency systems for next-generation wireless communication, sensing, and radar applications.

The course is structured in three parts: Co-design principles and use cases, Advanced packaging and integration, and Integration of photonic and electronic components. The course features technical presentations from leading universities, research institutions and companies.

This course is ideal for graduate students, PhD candidates, and early-career engineers working in RF/microwave design, electronics packaging, antennas, or systems engineering. It will benefit anyone seeking to understand how to approach system design holistically, across domains and technologies. Students are required to bring their laptops.

Part 1: Co-design principles and use cases

Presenters TBD

Part 2: Advanced Packaging and integration

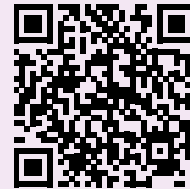
Presenters TBD

Part 3: Integration of photonic and electronic components

Presenters TBD

Registration

Please visit (click or scan)



Further information

Fee: € 40

Only 50 places, save your ticket in advance

European Microwave School in Radars

Build a 1GHz FMCW Radar in a day

Date: Monday 22nd September

Location: Spark

Time: 08:30 – 17:50

Chair: Shian Su, North Carolina State University, USA

This hands-on short course provides participants with a practical introduction to Frequency Modulated Continuous Wave (FMCW) radar design. The workshop begins with a foundational lecture covering radar system theory and signal processing principles. Attendees will then collaborate in teams to design, fabricate, and assemble a fully functional 1 GHz FMCW radar system. First, each team will build a connectorized radar system to understand the principle of operation. Then each participant will focus on designing and building a specific microwave component, including a power amplifier, low-noise amplifier, rat-race coupler, and mixer, with baseband signal components provided. No prior radar experience is required—only a general understanding of microwave engineering. By the end of the session, participants will have gained hands-on experience in radar system integration, component testing, and real-world applications.

Material will be provided, students are required to bring their own laptops.

Schedule

08:30 **Welcome**

08:40

08:40 **Introduction to FMCW Theory and Demo**

10:10

10:10 Coffee break

10:40

10:40 **Design and Fabricate Radio Components**

12:30

10:10 Lunch Time

10:40

13:50 **Performance Measurement for Hand-Build Components**

15:30

15:30 Coffee break

16:10

16:10 **Assembling/Testing Prototypes and Conclusion**

17:50

Registration

Please visit (click or scan)



Further information

Sponsored by Thales

Only 50 participants, get your ticket in advance!

Student Design Competition

Crack the Codes!

We are excited to offer a student design competition taking place at EuMW2025 in Utrecht! The winning team will receive a prize.

Whether you are visiting the integrated circuits conference, are here for the radar systems, or whether you are a big fan of microwave-based devices does not make a difference this week; we are all inventors at heart. This competition will be centred around codes and inventions. A number of code words have been hidden around the area. Hints to where to look for can be found all around the place. Think for example about a secret radio transmission that spells out a code, or an RFID tag with a hidden message. The goal is simple: crack as many of the codes as possible. If all codes are found, the first team to do so wins.

You will receive a Joy-Pi kit which includes a breadboard and a number of sensors and two programmable ESP-32 chips to aid in your quest. Hence, you can build circuits and write software to aid in your quest. You are free to build whatever you deem necessary.

The competition is open to all students. If the competition is not full, ex-students who are interested in cracking a code are free to join. Only student teams are eligible for the awards, though. Furthermore, a representative of the design team must be present at the competition day. For more information and questions, please contact Elles Raaijmakers (e.a.l.raaijmakers@tue.nl).

How to Participate

1. Request the entry form (by e-mail to be sent to Elles Raaijmakers - e.a.l.raaijmakers@tue.nl).
2. Submit the entry form before September 11th, 2025 (a confirmation letter will be sent).
3. Students are encouraged to install Arduino supporting software before the competition begins.
4. Students should bring their own laptops to participate in the competition.

Entrepreneurship in RF

A joint Young Professionals and Women in Microwaves event

Date: Wednesday September 24th

Room/Location: Polar/Off-site

Time: 12:30 – 17:00

Chair: Anouk Hubrechs, Antennex

Co-chairs: Pilar Castillo-Tapia, KTH Royal Institute of Technology; Ana Inês Inácio, TNO

This unique event will be focused on the challenges and opportunities of starting a company in RF, to inspire you to do the same or to take their learnings to apply them to your current position! We have two parts: a panel session at the conference venue, followed by a boat tour and off-site networking with a presentation.

There are only limited spots available, so make sure to register as soon as possible! Participation is free for all EUMW delegates, but registration is needed. We are looking forward to seeing you there!

Lunch

Room: Barzone

Time: 12:30 - 13:00

Part 1: Panel Discussion

Room: Polar

Time: 13:00 – 14:30

A panel discussion consisting of four RF entrepreneurs with various stories and backgrounds.

Panelists:

- Anouk Hubrechs, CEO Antennex (moderator and panelist)
- Tanja Claasen-Vujcic, CTO Robin Radar Systems
- Michael McLaughlin, CTO Decawave (now Qorvo)
- Pepe Rico, CEO Northern Waves

Registration & Cost

Free to EuMW delegates, registration is required. Limited places available, so register early! **After registering, make sure to pick up your proof of entry at the main registration desk.**

This event is organized by IEEE MTT-S Women in Microwaves and IEEE Region 8 Young Professionals, and sponsored by EuMA, Eindhoven University of Technology, IMST, IEEE Women in Microwaves, IEEE MTT-S and IEEE Young Professionals.



Part 2: Excursion

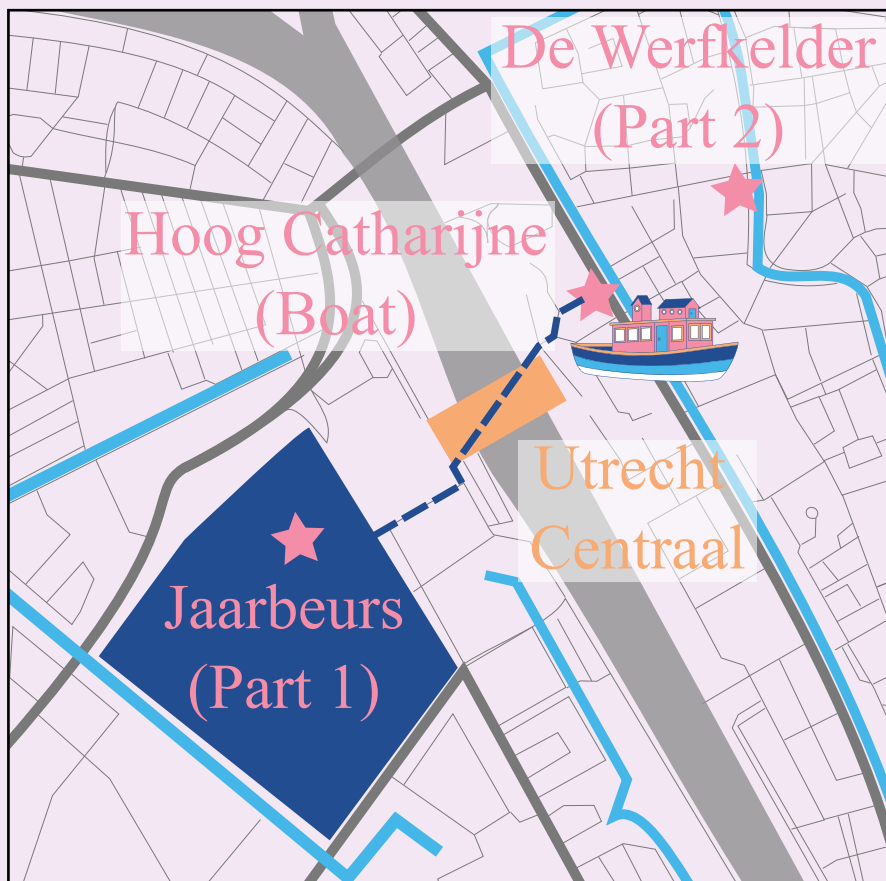
Location: off site

Time: 14:30 - 17:00

We will walk together from Room Polar (Jaarbeurs) to the Boat Ramp in the basement of the Hoogh Catharijne mall (see map). The boat travels 30min through the city canals and will bring us to 'De Werfkelder' in the Utrecht city center. There, we will meet an RF venture capitalist who will present on what makes an investable startup. After the event, it is a 5min walk to the station where you can go immediately to the gala dinner, or a 15min walk back to the Conference Venue. The number of tickets for Part 2 is limited, so make sure to register for this part.

Speaker:

Ronald Wissink, Managing Partner Value Creation Capital



Student Career Event

Connect with Leading Technology Companies!

Date: Thursday September 25th

Room: Polar + Flame Foyer

Time: 11:30 – 16:10

Chair: Paola Escobari Vargas, Eindhoven University of Technology

The Student Career Event at EuMW 2025 returns with an expanded format, offering more ways for students and young professionals to engage with leading technological companies. Building on last year's edition, this year introduces a series of events designed to foster meaningful connections, provide career insights, and support your next professional step.

Whether you're exploring internships, graduate roles, or simply looking to expand your network, the Student Career Event offers valuable opportunities to connect and grow.

Career-Focused Activities

Join us for a dedicated day of student-industry interaction

11:30 12:30	Polar: Company Pitches Get to know the companies through short presentations introducing their work and what they're looking for.
12:30 13:50	Flame Foyer: Company Booths Meet company representatives in an informal setting, ask questions, and explore available opportunities.
13:50 16:10	Flame Foyer: One-on-One Speed Interviews Engage in short, focused conversations with recruiters. Students are encouraged to bring printed copies of their CVs.

Job Wall

Date: Starting Sunday September 21st

Location: Near the registration area

The Job Wall will feature posters from participating companies highlighting job openings, internship opportunities, and company information. Visit anytime during the week to explore your options and identify companies of interest.

Sponsors

ASML



Leibniz Institute
for High
Performance
Microelectronics

robin
radar systems

QORVO

EUWA
EUROPEAN MICROWAVE ASSOCIATION

esa

→ THE EUROPEAN SPACE AGENCY

KEYSIGHT
TECHNOLOGIES

THALES

The Automotive Forum

Innovations and Technology Trends for High-Performance Automotive Radars and Their Advanced Testing Capabilities



Date: Tuesday 23rd September 2025

Room: Progress

Time: 08:30 – 18:00

Chair: Benjamin Nuss, Karlsruhe Institute of Technology, Germany

Co-Chairs: Martin Kunert, Radar Expert, Germany & Kostas Doris, NXP Semiconductors, The Netherlands & Thomas Zwick, Karlsruhe Institute of Technology, Germany

Applications like keyless entry or tire pressure monitoring systems, mobile communications and, more recently, automotive radar systems made microwave technologies a strong pillar inside the automotive world.

The first 77 GHz automotive radar sensors entered the European vehicle market in 1999. In 2019, the European Microwave Association (EuMA) for the first time organized the Automotive Forum to provide an open platform for industrial experts to discuss technical aspects, concepts and radar architectures as well as market issues in the area of microwaves in the automotive industry.

The forum consists of a good mix of technical talks and poster presentations, a keynote speech, a panel discussion, and plenty of time for networking. This year's event will focus on the following topics:

1. Enabling technologies and chip design
2. AI and future market outlook
3. Imaging radars
4. Radar testing

The forum is mainly devoted to technical experts from automotive industry throughout the whole supply chain. Keynote speakers will present their views on special technical solutions as well as regulatory or strategic issues. Early registration is recommended.

Registration and Programme Updates

Please visit (click or scan)



Automotive Forum Networking Dinner

Tuesday 23rd September 2025
18:30 – 23:00

Cost: Dinner is already included in the Automotive Forum registration fee (Please bring your badge to gain admission.)

Location off-site: Museum Speelklok, Steenweg 6, 3511 JP Utrecht

Join us for this unique event, which includes a welcome reception and a seated dinner. You will have plenty of time to network and discuss Automotive Forum topics with other attendees in an open setting.

The Automotive Forum Programme

Session 1: Opening & Enabling Technologies

Chair: Benjamin Nuss, Karlsruhe Institute of Technology

-
- 08:30**
08:55 **Facing Challenges: Advancing Radar for Next-Gen ADAS and Autonomous Driving**
Maximilian Steiner, Mercedes-Benz, Germany
-
- 08:55**
09:20 **High Performance Interference Mitigation Edge DSP Solutions for Automotive Radars**
Ryan Wu, NXP, United States
-
- 09:20**
09:45 **Enabling the Future of High-Channel Count Imaging Radars**
Farzad Inanlou, GlobalFoundries, USA
-
- 09:45**
10:10 **A Comparative Case Study of In-Cabin Sensing: Child Presence Detection (CPD) with 60 GHz Radar and Emerging UWB Technologies**
Yaohui Liu, Calterah, China

Session 2: AI & Future Market Outlook

Chair: Martin Kunert, Radar Expert

-
- 10:50**
11:15 **The Challenge of Large Scatterers: Ensuring Accurate Scene Reconstruction for L3/L4 Autonomous Driving Systems**
Tim Campbell, Wayve, United Kingdom
-
- 11:15**
11:40 **Model-Based Learning for DOA Estimation and Radar Imaging in Autonomous Vehicles**
Shunqiao Sun, The University of Alabama, USA
-
- 11:40**
12:05 **140 GHz Automotive Radar as the Enabler for New System Design Approaches**
Christian Sturm, Valeo, Germany
-
- 12:05**
12:30 **Automotive Radar 2025–2030: Technology Trends and Market Outlook**
Hassan Saleh, Yole, France

Poster Presentations

Efficiently Measuring 360° RCS Profiles for Accurate Automotive Radar Simulations
Resmi Johnson, Maximilian Schmid, Maximilian Steiner, Mercedes Benz, Germany

Empowering ADAS: Flexible, Hardware-Agnostic Radar Software for Monostatic and Distributed Aperture Architectures
Jake Dehm, Srikant Vasudevan, Michael McKinney, Christopher F. Barnes, Allyson McKinney, Robert Jennings, SoloPulse, USA

Calterah Lancang SoC for High Performance In-Cabin Radar Solution
Yaohui Liu, Calterah Semiconductor, China

Lens Integrated Radome for Modular Sensing Performance
Coen van de Ven, Gapwaves, Sweden

Improving In-Cabin Safety: UWB Automotive-Radar Applications for Child Presence Detection
Sevda Abadpour, Qorvo, Germany

Contactless Air Integrated Waveguides in FR4 for 140 GHz Automotive Radar
Simona Bruni, Nataliia Lupyna, Andreas Bettray, Markus Krengel, Aline Friedrich, Lila Stavrou, Marta Arias, Oliver Litschke, IMST, Germany

Optimized 77 GHz Radar Solution via Waveguide Antenna-Welding Co-Design
Haoyu Wan, Pan-yoo ZH-R&D Office Hangzhou, China

Advantages of a Radar-Centric Approach for ADAS
Andreas vom Felde, ZENDAR, Germany | Holger Meinel, Automotive Radar Expert, Germany

Research Advances in Digital Radar Transceivers, RF-Chiplets, and Novel System Approaches
Tobias T. Braun, Ruhr University Bochum, Germany

Robotic-Assisted Radar Transmission Measurements of Painted Bumper Samples to Validate TLM Simulations
Mehdi Khlif, Florian Pfeiffer, perisens, Germany

Session 3: Poster Presentations & Imaging Radar Progress

Chair: Kostas Doris, NXP Semiconductors

13:50 **Poster Presentations**
14:15

14:15 **Resolving the Most Challenging Use Cases with Radar**
14:40 Matan Nurick, Shlomit Hacoheh, arbe, Israel

14:40 **Imaging Radar Enables Eyes off on the Highway**
15:05 Yaniv Avital, Ophir Shabtay, Ilia Yoffe, Ofer Markish, Mobileye, Israel

15:05 **Digital Radar in Software-Defined Vehicles**
15:30 Jungah Lee, Aura Intelligent Systems, USA

Poster Presentations

Cooperative SDR Evaluation Platform for Digital Automotive Radar and ISAC

Lukas Witte, Andre Scheder, Tobias Kögel, Jonas Rottinghaus, Christian Karle, Benjamin Nuss, COMSENTRY, Germany

A Centralized Radar Architecture for Next-Generation Software Defined Vehicles

Andre Giere, Stefan Brisken, Cruise Munich, Germany

Session 4: Radar Testing

Chair: Thomas Zwick, Karlsruhe Institute of Technology

16:10 **How Hyper-Realistic Radar Simulation Can Revolutionize AI for Automotive Radars**
16:35 Marcel Hoffmann, Christian Schüßler, Eva Dorschky, Tim Pfahler, Michael Stelzig, fiveD, Germany

16:35 **Effectiveness Testing of ADAS in the PTI**
17:00 Andreas Himmler, dSPACE, Germany | Peter Geigle, MAHA, Germany

17:00 **Refined Ray Patterns and Propagation for Automotive Radar Applications**
17:25 Nikola Caric, Basim Alabd, IPG, Germany

17:25 **Panel Discussion**
18:00

The Defence, Security and Space Forum

Space Weather and its Effects on Critical Infrastructures Here on Earth



Date: Wednesday 24th September 2025
Room: Auditorium

Organizer: André Bos, NEST Group

Space Weather: Terrestrial weather is not the only type of weather we are experiencing. The other type of weather is Space Weather. Space Weather originates from the high energy processes that take place at our Sun causing a solar wind -- stream of charged particles released from the upper atmosphere of the Sun, called the corona. The most well-known observation that results from Space Weather are the Northern and Southern Lights (Aurora Borealis and Aurora Australis, respectively), but we also experience changes in long distance radio propagation, and disturbances in radio reception due to eruptions at the Sun.

Space Weather can be dangerous: Space Weather can also be dangerous for life here at Earth. In the year 1859 (Sept 1st and 2nd) we have witnessed how a violent Sun can have serious effects on our electrical systems. At that time our Sun did generate an intense geomagnetic storm that generated sparking and even firing in telegraph systems. The storm, later known as the Carrington Event after the British astronomer that studied the event, generated several solar flares and a Coronal Mass Ejection (CME). And although in the last decades our society has been increasingly dependent on advanced electronic systems, we haven't felt the impact of violent space weather yet as the Sun has been rather quiet. But nothing guarantees that remains at these calm levels. The 11 year cycle may indicate an increase in activity for the coming years, but no one yet can tell. All of that extra radiation can damage the satellites we use for communications and navigation, or disturb their signals. It can disrupt power grids that provide our electricity. The radiation from solar storms can also be dangerous for astronauts in space.

Defense has a special interest in Space Weather. Key technologies used by Defense are vulnerable to disruption from the effects of severe space weather on technology and the near-Earth space environment:

- Improved understanding of how space weather affects military systems increases our ability to manage disruptions and outages
- Maintaining technological diversity and designing robust systems are vital to building Defense resilience to severe space weather.

The US military is operating a large observation system network, the Solar Electro-Optical Network (SEON), which is a real-time solar optical and radio observing and analysis network.

Attending this forum will increase your understanding of most aspects of space weather. During the forum you will:

- Increase the understanding of the basic physics underlying Space Weather
- How Space Weather affects military operations and critical infrastructure, and what the societal impact will be on Earth
- What current and future systems do monitor Space Weather
- How Space Weather affects GPS and other GNSS navigation and timing.
- How Space Weather affects communications on Earth
- How to obtain Space Weather open-source data, and how to do research.

“Space Weather and How it Affects Systems on Earth”

Please visit (click or scan)



- **2024 – Paris**
How Future Defence Strategies are Driving Technological Advancements from Devices to Systems
- **2023 – Berlin**
Boosting Connectivity for Moving Platforms
- **2022 – Milano**
Modern Defence Systems: Key Technologies and Future Challenges
- **2021 – London**
RF Sensing from Space: Modern Trends and Challenges
- **2020 – Utrecht**
Space Situational Awareness
- **2019 – Paris**
New Radio Architectures: The Evolution for Satellite Constellations
- **2018 – Madrid**
Integrating Unmanned Systems in Defence and Security Scenario's

The Defence, Security and Space Forum Programme

10:40	General SPW introduction
11:20	US Space Force (USSF) Stephen White
11:20	SPW Products and services
12:00	Solar-Terrestrial Centre of Excellence (STCE) Petra VanLommel
12:00	SPW impact on military operations
12:30	Dutch MoD Major WP van der Laan
12:30	Lunch
13:50	
13:50	(GNSS) Signal disturbances due to SPW
14:30	ESA/ESTEC Raul Orus Perez
14:30	Building Resilient RF Electronics: Mitigating Interference from Space Weather and Other Sources
14:50	Spectrum Control Jeff Miner
14:50	SPW Monitoring systems with DISTURB as a prime example
15:30	ASTRON NL Michiel Brentjes
15:30	Coffee / Tea
16:10	
16:10	Supporting Space Domain Awareness with the SMART-L MM radar
16:40	Thales Nederland B.V. Erwin van der Poel
16:40	Developing Robust and Economical RF Solutions for Next Generation Defense and Commercial Space Platforms
17:00	Qorvo Dean White
17:00	All -- Round table
17:50	

2017 – Nuremberg

The Internet of Space: Technologies and Applications

2016 – London

Challenges and Opportunities for Indoor/Enclosed and Urban Communications and Sensing Technologies

2015 – Paris

RF Payloads for Unmanned Aerial Vehicles

2014 – Rome

Protection and Security of our Infrastructure and Home Land

2013 – Nuremberg

Military Radar vs. Automotive Radar

2012 – Amsterdam

Defence and Security including Space

2011 – Manchester

MMW Imaging Systems

2010 – Paris

The Defence, Security and Space Forum

6G Forum



Date: Monday 22nd September 2025
Room: Auditorium

Chair: Prof. Bart Smolders (Eindhoven University of Technology)
Organizing committee: Ulf Gustavsson (Ericsson), John Gajadharsing (Ampleon), Jos Berière (TNO/FNS-6G) and Bart Smolders (Eindhoven University of Technology)

The 6G forum is a dynamic and interactive industrial-oriented event to bring you up to date with the latest developments in wireless communications. There will be several exclusive keynote presentations from experts on applications, standardization, spectrum management and advanced microwave and antenna technologies. We will address the ongoing discussions on which frequency bands will be most successful from a commercial point of view. In addition, there will be several live demos showing recent technological developments on the road to 6G. In addition, there will be plenty of room for discussion and networking. The event includes a networking lunch and dinner, sponsored by the Dutch FNS-6G program.

Including networking
dinner sponsored by
FNS-6G

Registration and
Programme Updates

Please visit (click or scan)



Programme

6G Leading applications

09:00 - 09:30	Business First only by clean Technology Second implementation Jacob Groote, KPN
09:30 - 10:00	5G/6G for medical equipment used during minimally invasive surgery Danny Ruijters, Philips
10:00 - 10:30	How to kill your colleagues and get away with it, or why safety systems are important Peter Burman, Boliden
10:30 - 11:00	Coffee break and networking

Physical Layer Overview, Standardization & Regulation (incl. deployment)

11:00 - 11:30	Fundamental 6G physical layer properties Robert Baldemair, Ericsson
11:30 - 12:00	The mid-band spectrum (FR3) for 6G: Opportunities, challenges and technological advancements. Stefan Wesemann, Nokia

Sponsors from
industries
participating in the
forum



12:00 **Spectrum for 6G: where technology and policy meet**
12:30 Pieter Nooren, TNO, The Netherlands

12:30 **When and How AI Meets 6G - Innovations, Challenges, and Future Directions**
13:00 Giovanni D'amore, Keysight

13:00 Lunch and demo
 14:20 Walking lunch including live Demo's from Keysight, Rohde&Schwarz and Antenex

6G technologies, Sub-6 towards 7-24 GHz, (FR1, FR3)

14:20 **Future basestation architectures**
14:50 Ulf Gustavsson, Ericsson Research

14:50 **New semiconductor technologies for improved power efficiency**
15:20 Fred van Rijs, Ampleon

15:20 **Analog Fronthaul for 6G**
15:50 Simon Rommel, Eindhoven University of Technology

15:50 Coffee/Tea break
 16:30 Drinks and Networking

6G technologies, 24-300 GHz (FR2, FR4)

16:30 **Full Antenna in Package Solution for 100GHz 6G infrastructure, in 140nm SiGe BiCMOS Technology**
17:00 Mustafa Acar, NXP Semiconductors

17:00 **Development of InP-on-Si for high-speed communications**
17:30 Bertrand Pervaes, IMEC

17:30 Networking dinner
 20:00 Walking dinner at Barzone. Starts with drinks at 17:30

The generations of wireless networks

6G **Enabling a smart sustainable society ~2030**

- Extension to (sub) mmWave frequencies
- Real-time cloud computing

1 Tbps

5G **Embracing a networked society ~2020**

- 1000 × increase in capacity
- Support for 100+ billion connections
- Below 1 ms latency

10 Gbps

4G **Mobile broadband enhanced ~2010**

- Designed primarily for data
- IP based protocol
- True mobile broadband

100 Mbps

3G **The foundation of mobile broadband ~2000**

- Designed for voice and data
- First mobile broadband
- Voice through circuit & Data-Packet Switching

2 Mbps

1G
The foundation of mobile telephony ~1980

- Basic voice service
- Analog based protocols

2.4 Kbps

2G
Mobile telephony for everyone ~1990

- Designed for voice
- First digital standards (GSM, CDMA)

64 Kbps

MONDAY 08:30 – 10:10

ROOM Polar

EuMIC01

EuMIC Opening

Chair: Marion K. Matters-Kammerer¹

Co-Chair: Cicero S. Vaucher²

¹Eindhoven University of Technology - TU/e, ²NXP / TU Delft

08:30 – 08:50 Welcome Address: Opening of the European Microwave Integrated Circuits Conference 2025

Marion K. Matters-Kammerer¹

¹Eindhoven University of Technology - TU/e

08:50 – 09:35 mm-Wave Radar and Beyond: An Automotive Sensing Perspective

Kostas Doris¹

¹NXP Semiconductors

The recent evolution of automotive radar sensors operating in the 76–81 GHz band has enabled advanced safety features in modern vehicles. To achieve higher levels of autonomous driving, future sensors must support high-resolution applications such as precise environmental mapping, accurate localization, and enhanced classification of small objects and vulnerable road users.

Meeting these demands requires radar systems with significantly higher resolution, robust perception capabilities, and rich point cloud generation across wide fields of view and extended ranges. These systems must also integrate seamlessly into vehicle chassis and networks. This raises a critical question: will mm-wave radar eventually run out of steam? This talk will explore innovations in waveform design, antenna systems, and circuit architectures that push the performance boundaries of large-scale MIMO radar within the 76–81 GHz band. It will also examine the challenges and opportunities of extending beyond 100 GHz and adopting hybrid sensing approaches that bridge the gap between millimeter and optical wavelengths.

09:35 – 10:10 Next-Gen Terahertz SoCs: Light-Field Imaging and Scalable Incoherent Architectures

Ullrich R. Pfeiffer¹

¹University of Wuppertal

Bridging the Terahertz (THz) gap remains one of the toughest challenges in circuit design. As frequencies rise, key circuit parameters such as gain, bandwidth, and noise performance degrade rapidly. Maintaining coherence becomes increasingly inefficient and blocks the path to large-scale, practical system integration.

This keynote explores a new direction: scalable, incoherent THz system-on-chip

(SoC) architectures that offer a fundamentally different approach to overcoming traditional limitations. Recent demonstrations from our laboratory highlight both sides of the technology landscape. A 6G MIMO transceiver operating

at 300 GHz showcases the strengths of coherent communication systems, pushing the boundaries of data throughput and integration. THz light-field imaging and 2D near-field cameras, in contrast, illustrate the potential of incoherent architectures, enabled by spatio-directional THz sources and detectors that capture rich spatial information without requiring phase coherence.

The advantages and trade-offs between coherent and incoherent techniques will be analyzed, offering a roadmap for future THz SoC designs. These emerging architectures are poised to open new domains across communications, imaging, and sensing, driving the next generation of high-performance, accessible THz systems.

MONDAY 10:50 - 12:30

ROOM

Mission 1

EuMIC02

Doherty Amplifiers and Linearizers for Communication Systems

Chair: Kevin Morris¹

Co-Chair: Chiara Ramella²

¹University of Leeds, ²Politecnico di Torino

10:50
-
11:10

EuMIC02-1

An Integrated GaAs HBT Doherty Power Amplifier for Wi-Fi 6

Francesco Manni¹, Rocco Giorè¹, Corrado Florian², Alberto Maria Angelotti², Gian Piero Gibino², Marco Pirola², Chiara Ramella², Paolo Colantonio¹

¹University of Rome Tor Vergata, ²University of Bologna, ³Politecnico di Torino

11:10
-
11:30

EuMIC02-2

An Ultra-Compact Ku-Band Doherty Power Amplifier with a Single-Footprint Triple Two-Turn Asymmetric Combiner for 6G FR3

Jinglong Xu¹, Edward Liu¹, Mohamed Eleraky¹, Tzu-Yuan Huang¹, Chenhao Chu¹, Hua Wang¹

EuMIC YEP nominee

¹ETH Zurich, Switzerland

11:30
-
11:50

EuMIC02-3

Design of a 5 W, 28-32 GHz Doherty Power Amplifier using 150-nm GaN Technology for 5G NR FR2 mmWave Communications

Haftu Hiluf Kahsay¹, Pierre Medrel¹, Mohammed Ayad¹, Denis Barataud¹

¹XLIM Laboratory, UMR CNRS n°7252, University of Limoges, ²United Monolithic Semiconductors SAS

11:50
-
12:10

EuMIC02-4

Analog Predistorter for Millimeter-Wave Integrated Transmitters Implemented Using 22nm FDSOI

Sauli Haukka¹, Jere Rusanen¹, Mikko Hietanen¹, Timo Rahkonen¹, Aarno Pärssinen¹, Janne P. Aikio¹

¹University of Oulu (UOULU)

12:10
-
12:30

EuMIC02-5

A Ka-Band SATCOM Analog Linearizer with IMD Self-Alignment on Rad-Hard SiGe-BiCMOS

Stefan Koch¹, Michael Schick², Andreas Fischer¹, Christian Bohn¹, Michael Jutzi¹, Lars Baumgärtner¹, Alexander Scharpf¹, Johannes S. Reckter¹, Jon Schlipf¹, Björn Klingenberg¹

¹Tesat-Spacecom GmbH & Co. KG, ²Michael Schick SiGe mmic Design

Mission 2

EuMIC03

High-Performance Integrated LNAs

Chair: Vojkan Vidokovic²

Co-Chair: Ulrich Lewark¹

¹IMST GmbH, ²Eindhoven University of Technology

EuMIC03-1

Broadband LNA MMIC with Enhanced Selectivity Using an Optimized Coupled-Line Matching Network for Efficient Out-of-Band Rejection

Sunghyuk Kim¹, Songjune Lee¹, Dabin Kim¹, Min-Su Kim¹, Junghyun Kim¹

EuMIC CP&YEP nominee

¹Hanyang University ERICA Campus, ²Mokpo National University

EuMIC03-2

Linearity Enhancement of GaN LNA MMIC Using RF-based Approach of Derivative Superposition

Sanaul Haque¹, Ralf Doerner¹, Serguei A. Chevtchenko¹, Matthias Rudolph¹

¹Brandenburg University of Technology, ²Ferdinand Braun Institut (FBH)

EuMIC03-3

Switch-Integrated GaN LNAs: A Technology-focused Analysis

Megha Krishnaji Rao¹, Petros Beleniotis², Thomas Hoffmann¹, Hossein Yazdani¹, Andreas Wentzel¹, Matthias Rudolph²

¹Ferdinand-Braun-Institut (FBH), Berlin, Germany, ²Brandenburg University of Technology (BTU), Cottbus, Germany, ³Paul Drude Institute for Solid State Electronics (PDI), Berlin, Germany

EuMIC03-4

High Performance 6-18 GHz Broadband LNA Design Using Self-Bias Network Optimization

Songjune Lee¹, Sunghyuk Kim¹, Wonwoo Seo¹, Dabin Kim¹, Min-Su Kim¹, Junghyun Kim¹

¹Hanyang University ERICA Campus, ²Mokpo National University

EuMIC03-5

A 121-141 GHz 6.3 dB NF D-Band Low Noise Amplifier in 22-nm FDSOI

Samir Aziri¹, Waseem Abbas¹, Christoph Wagner¹, Hao Gao¹, Peter Baltus²

¹Silicon Austria Labs GmbH, ²TU Eindhoven

Quest

EuMIC04

Technologies for mm-Wave Transmitters and Receivers

Chair: Frank E. van Vliet¹

Co-Chair: Herbert Zirath²

¹TNO Defense, Safety and Security, ²Chalmers University of Technology

EuMIC04-1

A Superheterodyne 300 GHz InGaAs Receiver and Transmitter Chipset for 6G and Beyond Applications

Lukas Gebert¹, Benjamin Schoch¹, Thomas Ufshlag¹, Dominik Wrana¹, Simon Hausmann¹, Laurenz John¹, Sandrine Wagner¹, Ingmar Kallfass¹

¹Institute of Robust Power Semiconductor Systems (ILH), University of Stuttgart, Germany, ²Fraunhofer Institute for Applied Solid State Physics (IAF), Germany

EuMIC04-2

D-Band DPDT Switch with Reverse Saturated SiGe HBTs for Squint-Free Communication Systems

Nicolò Moroni¹, Andrea Malignaggi¹, Corrado Carta¹

¹IHP GmbH

EuMIC04-3

A 276-GHz Beamforming Transmitter in 16nm FinFET for Phased-Array Applications

Runzhou Chen¹, Boxun Yan¹, Hao-Yu Chien¹, Mau-Chung Frank Chang¹

EuMIC CP nominee

¹University of California Los Angeles (UCLA)

EuMIC04-4

A 25 Gbps SiGe BiCMOS Quasi-Coherent Receiver Chip with Chromatic Dispersion Compensation for 5G and Beyond 5G Fronthaul

Tom Keinicke Johansen¹, Michele Squartecchia², Guillermo Silva Valdecaza¹, Jose Altabas¹, Omar Gallardo¹, Jesper Bevensee Jensen¹

¹Technical University of Denmark, ²Bifrost Communications Aps.

EuMIC04-5

Resistive D-Band Mixers with Monolithic Integrated Broadband IF Balun and LO Amplifier

Patrick Umbach¹, Fabian Thome¹, Arnulf Leuther¹, Rüdiger Quay¹

EuMIC YEP nominee

¹Fraunhofer Institute for Applied Solid State Physics IAF

Expedition

EuMIC05

Integrated Circuits for Emerging Applications

Chair: Nathalie Deltimple¹

Co-Chair: Alessandro Cidronali²

¹Bordeaux INP, IMS Laboratory, ²University of Florence

EuMIC05-1

A 320 GHz 32x32 Pixel Near-Field Sensor SoC for Real-Time Imaging in 130-nm SiGe BiCMOS

Hamadi Sadkaoui¹, Ulrich R. Pfeiffer¹, Xinpeng Du¹, Marcel Andree¹, Holger Rucker¹

EuMIC CP nominee

¹University of Wuppertal, ²IHP - Leibniz-Institut für innovative Mikroelektronik

EuMIC05-2

Differential 45° Phase-shifted LO Signal Generation to Enable Subharmonic IQ Modulation for Broadband 6G Communication in the D-Band

Jan Schöpfel¹, Tobias T. Braun², Marcel van Delden², Nils Pohl¹

¹Fraunhofer FHR, ²Ruhr University Bochum, ³Ruhr University Bochum / Fraunhofer FHR

EuMIC05-3

Analysis and Development of a K-band GaAs MMIC Voltage Controlled Reflection Amplifier Suitable for Active Reconfigurable Intelligent Surfaces

Giovanni Lasagni¹, Marco Badii¹, Giovanni Collodi¹, Stefano Maddio¹, Monica Righini¹, Alessandro Cidronali¹

¹Università degli Studi di Firenze

EuMIC05-4

Design and Wireless Characterisation of Cryogenic RF Oscillators

Faedra Webers¹, Filip Tavernier¹, Patrick Reynaert¹

¹KU Leuven MICAS

EuMIC05-5

A 0.003-mm² 42.6-dB Gain Ultrawideband Inductor-Less LNA in 28-nm CMOS for Quantum Computing Readout Applications

Mahesh Kumar Chaubey¹, Yin-Cheng Chang², Po-Chang Wu¹, Hann-Huei Tsai², Shawn S.H. Hsu¹

¹National Tsing Hua University, ²Taiwan Semiconductor Research Institute, National Applied Research Laboratories, Taiwan

MONDAY 13:50 - 15:30

ROOM

Mission 1

EuMIC06

Microwave and mm-Wave Integrated Power Amplifiers

Chair: Nathalie Deltimple¹

Co-Chair: Piyush Kaul²

¹Bordeaux INP, IMS Laboratory, ²Eindhoven University of Technology - TU/e

Mission 2

EuMIC07

RF Building Blocks in CMOS and BiCMOS Technologies

Chair: Aleks Dyskin¹

Co-Chair: Johan Bauwelinck²

¹Nvidia, ²Ghent University - imec

Quest

EuMIC08

mmWave Frequency Generation and Translation

Chair: Ingmar Kallfass¹

Co-Chair: Frank E. van Vliet²

¹University of Stuttgart, ²TNO Defense, Safety and Security

Expedition

EuMIC09

Emerging Architectures for Communications

Chair: Cicero S. Vaucher¹

Co-Chair: Nils Pohl²

¹NXP / TU Delft, ²Ruhr University Bochum

13:50
-
14:10

EuMIC06-1

A Ku-Band CMOS Power Amplifier with Common-Mode Suppression Using Inter-Stage Transformer

Donghwan Seo¹, Jaeyong Lee², Jinho Yoo², Changkun Park²

¹Agency for Defense Development, Republic of Korea, ²Intelligent Microwave Systems Lab., Soongsil University, Republic of Korea

EuMIC07-1

A 5-7 GHz BiCMOS Front-End Module for WiFi 6e with 2.2 dB NF and 16 dBm PAVG at -40 dB EVM

Davide Pecile¹, Andrea Pollin¹, Daniele Dal Maestro¹, Alberto Gambarucci¹, Giuseppe De Astis¹, Andrea Bevilacqua¹

¹University of Padova, ²Infinion Technologies

EuMIC08-1

A 114-169 GHz Compact, Power Efficient x8 Frequency Multiplier in 40-nm CMOS

DONG YEOL YANG¹, Jae-Hyun Park², SEUK WON KANG¹, Sungho Lee², Byung-Sung Kim¹

¹Sungkyunkwan University, ²Samsung Electronics, ³Korea Electronics Technology Institute

EuMIC09-1

Ultra-Wideband as The Next Ubiquitous Radio

Mousumi Roy¹

SESSION KEYNOTE

¹Qorvo

14:10
-
14:30

EuMIC06-2

A Dual-Drive Power Amplifier in 130 nm CMOS for Ku-Band Applications

Arya Moradinia¹, Kshitij Mohan Krishnan¹, Ed Balboni¹, Edgar Garay¹

¹Falcomm

EuMIC07-2

X-Band CMOS Variable Gain Amplifier Using Mixed Structure of Variable Attenuation and Gain Stages with Impedance Buffer to Suppress Phase Variations for 6G Applications

Yejin Kim¹, Dongin Min¹, Jaeyong Lee¹, Changkun Park¹

¹Intelligent Microwave Systems Lab., Soongsil University, Republic of Korea

EuMIC08-2

Ultra-Broadband Frequency Multiplier (x8) Chain in 90-nm SiGe BiCMOS Technology at H-band

Frida Strömbeck¹, Herbert Zirath¹, Klaus Aufinger²

¹Chalmers University of Technology, ²Infinion Technologies AG

EuMIC09-2

An Analog Frontend for an Ultra Low Power Wakeup Receiver for On-Off Keying at 434 MHz with -94 dBm Input Sensitivity and 28 nW DC Power Consumption at 10 kbps

Georg Meller¹, Michael Methfessel², Florian Protze¹, Maximilian Fritzscheim¹, Jens Wagner¹, Gunter Fischer², Frank Ellinger¹

¹Technical University Dresden, ²IHP

14:30
-
14:50

EuMIC06-3

76 - 81 GHz Automotive Radar Power Amplifiers with High-Power High-Efficiency in 22-nm FD-SOI

Liyou Lu¹, Chi Zhang¹, Nourhan Elsayed¹, Abdellatif Bellaouar¹

¹Global Foundries

EuMIC07-3

19-31GHz Wideband Electrical Balance Duplexer For In-Band Full Duplex Communication

Armen Harutyunyan¹, Padmanava Sen¹

¹Barkhausen Institut gGmbH

EuMIC08-3

An H-band sub-harmonically pumped up-converter mixer in 250 nm InP DHBT technology

Yu Yan¹, Vessen Vassilev¹, Herbert Zirath¹

¹Chalmers University of Technology

EuMIC09-3

Enabling 2-D Beamforming for 6G Communication in the D-Band With a Scalable Transmitter MMIC Utilizing On-Chip Antennas

Lasse Cordes¹, Jan Schöpfel², Hendrik Richter², Jonathan Bott¹, Nils Pohl¹, Tobias T. Braun¹

¹Ruhr-Universität Bochum, ²Fraunhofer Inst. High Freq. Phys. Radar Tech., ³Ruhr Universität Bochum

14:50
-
15:10

EuMIC06-4

A 200mW, high-gain GaN-based D-Band Power Amplifier for 6G Communication Applications

Thomas Zieciak¹, Philipp Neininger¹, Christian Friesicke¹, Peter Brückner¹, Rüdiger Quay¹

EuMIC CP nominee

¹Fraunhofer IAF, Fraunhofer Institute for Applied Solid State Physics

EuMIC07-4

A Cryogenic 30 Gb/s PAM3 BiCMOS Serializer for Josephson Arbitrary Waveform Synthesizer

Yerzhan Kudabay¹, Paul Julius Ritter¹, Vadim Issakov¹

¹Technische Universität Braunschweig

EuMIC08-4

A Fully Integrated 100 GHz Phase-Locked Loop With 12% Tuning Range, 180-fs RMS Jitter in 22nm FDSOI Technology

Nazmus Saquib¹, Mona M. Hella¹

¹Rensselaer Polytechnic Institute

EuMIC09-4

Multichannel LO Generation for Frequency-Interleaving Systems

Christoph Herold¹, Andrea Malignaggi¹, Corrado Carta¹

¹IHP - Leibniz-Institut für innovative Mikroelektronik

15:10
-
15:30

EuMIC06-5

A 15-dB Dynamic Range 110-170 GHz AGC Loop for BIST Transmitter Power Monitoring

Alper Güner¹, Batuhan Sutbas¹, Alper Karakuzulu¹, Corrado Carta¹, Mohamed Hussein Elssa¹

¹IHP Microelectronics, Frankfurt Oder, Germany

EuMIC07-5

A 2-to-1 PAM-4 Analog Multiplexer with Integrated Equalizer in 22nm FDSOI CMOS

Khaled Matloub¹, Sorin P. Voinescu¹

¹University of Toronto

EuMIC08-5

A Fundamental D-Band VCO in SiGe:C HBT Technology for Next-Generation Automotive Applications

Ahmad Zaben¹, Christian Bredendiek², Stephan Hauptmeier¹, Klaus Aufinger¹, Nils Pohl¹

¹Ruhr University Bochum, ²Fraunhofer FHR, ³Infinion Technologies AG, ⁴Ruhr University Bochum / Fraunhofer FHR

EuMIC09-5

Impact of Modulation Signals on Digital Self-Interference Cancellation in Amplitude Modulation Systems

Alexander Ruderer¹, Fabian Lurz¹, Thomas Ussmueller²

¹Otto von Guericke University Magdeburg, ²B & E antec Nachrichtentechnik GmbH

MONDAY 16:10 – 17:50

ROOM	Progress	Breakout Room 2
	<p>EuMIC10 EuMIC Foundry Panel</p> <hr/> <p>Chair: Patrick Reynaert¹ Co-Chair: Piyush Kaul²</p> <p>¹KU Leuven ESAT-MICAS ²Eindhoven University of Technology</p>	
16:10	Session Welcome	17:00 IEEE P1765 - Modulated - Signal Measurement 18:00 Uncertainty Working Group Meeting
16:20	<p>Introductory Presentations by the Panel Members</p> <ul style="list-style-type: none"> - Christof Heer, TSMC Europe - Patricie Merkert, Fraunhofer Institute for Applied Solid State Physics IAF - Nadine Collaert, IMEC Leuven - Alireze Shamsafar, Smart Photonics - Pascal Oberndorff, NXP - Gergory Clark, Qorvo 	
17:00	Panel Discussion	

TUESDAY 08:30 - 10:10

ROOM

Auditorium

EuMC01

Advances in Passive Components and Structures

Chair: Anthony Ghiotto¹

Co-Chair: Ke Wu²

¹University of Bordeaux, ²Polytechnique Montreal

08:30
-
08:50

EuMC01-1

Study and design of a dual-cavity differential resonant sensor for small liquid samples

Houssein Eddine Rouached¹, Julien Swifka², Josephine Pichereau², Saber Dakhlil², Fethi Choubani¹, Elodie Richalot¹

¹Laboratoire Innov/Com (LR11TIC03), ²LABORATOIRE ESYCOM, ³CentraleSupélec, Université Paris-Saclay, ⁴Laboratoire ESYCOM (UMR-9007)

08:50
-
09:10

EuMC01-2

Miniaturized 1-to-4 In-Phase/ Out-of-Phase Power Splitter Using Fully-Packaged Hybrid SIDGS/ CPWG Scheme With Wide Isolation Bandwidth

Qiqi Luo¹, Jie Zhou¹, Xun Luo¹

¹University of Electronic Science and Technology of China

09:10
-
09:30

EuMC01-3

Enhanced Robustness in Wide-band Rectangular Waveguide-to-Substrate-Integrated Waveguide Transition Using Dielectric Superstrate

Samuel Rimbaut¹, Kamil Yavuz Kapusuz¹, Hendrik Rogier¹, Sam Lemeux¹

¹Ghent University -imec, IDLab - Electromagnetics Research Group

09:30
-
09:50

EuMC01-4

A Compact Digitally Tuned Capacitor with Improved Tuning Range for mmWave applications

Arul Balasubramanian¹, Miguel Meza Campos¹, Abdellatif Bellaouar¹

¹Global Foundries, USA

09:50
-
10:10

EuMC01-5

Frequency Tunable Circulator Using Spatiotemporal Modulation of Mixed Static and Time-Modulated Resonators

Girdhari Chaudhary¹, Palaystint Thong¹, Suyeon Kim¹, Yongchae Jeong¹

¹Jeonbuk National University, South Korea

Spark

EuMC02

Novel Antenna Solutions for Wireless Communications

Chair: Gabriele Federico¹

Co-Chair: Francesco Caminita²

¹Eindhoven University of Technology, ²Wave Up s.r.l.

EuMC02-1

SatCom terminal based on rotating Metascreens with extreme control of grating lobes

Francesco Caminita¹, Cristian Della Giovampaola¹, Massimo Nannetti¹, Gabriele Minatti¹, Nicola Bartolomei¹, Enrica Martini², Benedikt Byrne², Giovanni Toso², Stefano Maci²

¹Wave Up s.r.l., ²University of Siena, ³ESTEC (European Space Agency)

EuMC02-2

The Implementation and Measurement of A mm-wave 60 GHz LCP Short Range Communication Module

Wei-Ting Lee¹, Chih-Yang Lou¹, Sin-Siang Wang¹, Chu-Yu Chen¹

¹QuantumZ Inc., ²National University of Tainan

EuMC02-3

Fluidically Tunable Liquid Metal Antenna for Small Satellite Communication Applications

Hao Huang¹, Jian Wang¹, Xin Zhao¹, Bin Yan¹, Ling Meng¹, Ming Tang¹, Lu Cao¹

¹Academy of Military Sciences

EuMC02-4

X-Band Power Divider Based Phase Shifter

Zehan Guo¹, Padraig Fitzgerald², Dimitra Psychogiou²

¹Tyndall National Institute, ²Analog Devices, Inc., ³University College Cork

EuMC02-5

SAID Fiber-Antenna Radio Head at 50 GHz

Sara Vega¹, Maria C. Santos¹, Youssra Sadki¹, Sebastian Lauck¹, Garrit Schwanke¹, Simon Nellen¹, Robert B. Kohlhaas², Lluís Jofre-Roca¹

¹Universitat Politècnica de Catalunya (UPC), ²Fraunhofer Heinrich Hertz Institute

Flash

EuMC03

Sub-THz Antennas, Systems, and Measurements

Chair: Joachim Oberhammer¹

Co-Chair: David Marpaung²

¹KTH Royal Institute of Technology, ²University of Twente

EuMC03-1

A 58 Gb/s D-band NLOS link enabled by active RIS

Jose Luis Gonzalez-Jimenez¹, Alexandre Siligaris¹, Abdelaziz Hamani¹, Antonio Clemente¹, Francesco Foglia Manzillo¹, Cédric Dehos¹, Jean-Baptiste Doré¹, Nicolas Cassiau¹

EuMC CP nominee

¹CEA Leti, Univ. Grenoble Alpes, F 38000 Grenoble, France

EuMC03-2

140 GHz Wide Scan Lens Antenna Design

Jinglin Geng¹, Nuria LLombart Juan¹, Waqas Syed¹, Giorgio Carluccio¹, Harish Nandagopal¹, Maria Alonso del Pino¹, Kostas Doris¹, Daniele Cavallo¹

¹Delft University of Technology, ²NXP Semiconductors

EuMC03-3

Design and Optimization of a Conformal Lens for a sub-THz Leaky-Wave Antenna

Akanksha Bhutani¹, Joel Dittmer¹, Georg Gramlich¹, Luca Valenziano¹, Sebastian Randel¹, Thomas Zwick¹

¹Karlsruhe Institute of Technology (KIT)

EuMC03-4

Miniaturized Orthomode Transducer with Layered Structure for D-band

Klas Eriksson¹

¹Ericsson Research, Ericsson AB

EuMC03-5

D-Band Wideband Phase Noise Reduction Utilizing Multiple Receivers with LO Delay Difference

Dedar Rashid¹, Bilal Khan¹, Marko E. Leinonen¹, Aarno Pärssinen¹, Nuutti Tervo¹

¹Centre for Wireless Communications - Radio Technologies (CWC-RT), University of Oulu

Glow

EuMC04

Advanced Interconnects and Packaging Technologies for Applications Beyond 100 GHz

Chair: Aurelian Crunteanu¹

Co-Chair: Nadine Collaert²

¹Xlim - UMR 7252 - CNRS- University of Limoges, ²imec

EuMC04-1

Wafer-scale RF Silicon Interposer Packaging Technology for mm-Wave and Sub-THz Applications

Siddhartha Sinha¹

INDUSTRIAL KEYNOTE

¹IMEC

EuMC04-2

An Ultra-Broadband Flip-Chip Interconnect Based on Flexible Polymer Foil from DC up to 240 GHz

Johannes Fleischmann¹, Andre Scheder¹, Stefan Sohr², Anna Bridier¹, Doris Aigner¹, Martin Vossiek¹

EuMC CP nominee

¹Friedrich-Alexander Universität Erlangen-Nürnberg, ²Rohde und Schwarz GmbH

EuMC04-3

Dielectric Waveguide-Based Interconnects for Integrated mm-Wave and Terahertz Systems

Ashish Kumar¹, Muhsin Ali², Daniel Headland¹, Alejandro Rivera¹, Guillermo Carpintero¹

¹Universidad Carlos III de Madrid, ²Leapwave Technologies SL, ³The University of Adelaide, Adelaide

EuMC04-4

A 300 GHz Bond-Wire Interconnect Solution for Heterogeneous System Integration

Luca Valenziano¹, Joachim Hebel², Yiyang Bao¹, Christian Koos¹, Thomas Zwick¹, Akanksha Bhutani¹

¹Karlsruhe Institute of Technology, ²Rohde & Schwarz GmbH

EuMC04-5

Design of D-Band MMIC-WG Contactless Transition Based on Silicon Process

Haojie Chang¹, Vessen Vassilev¹, Omid Habibpour¹, Herbert Zirath¹

¹Chalmers University of Technology

TUESDAY 08:30 - 10:10

ROOM

Mission 1

EuMIC/EuMC01

Load-Modulated High-Efficiency Power Amplifiers

Chair: José Carlos Pedro¹

Co-Chair: Mark Ingels²

¹Instituto de telecomunicações, University of Aveiro, ²imec, Leuven

08:30
-
08:50

EuMIC/EuMC01-1

RF-Input Sequential Circulator Load Modulated Amplifier with Back-Off Efficiency Enhancement

Han Zhou¹, Haojie Chang¹, Christian Fager²

¹Chalmers University of Technology

08:50
-
09:10

EuMIC/EuMC01-2

A Single-Driver Doherty Power Amplifier Module with Harmonic Load Insensitivity

Ioannis Peppas¹, Mustazar Iqbal¹, Marco Pitton², Peter Singerl²

¹Graz University of Technology/ IHF- TU Graz, ²Infinion Technologies Austria AG, Villach, Austria

09:10
-
09:30

EuMIC/EuMC01-3

GaN-Based Digital Class-E Doherty Power Amplifier for 5G FR1 Frequency Band

Giulia Bartolotti¹, Anna Piacibello¹, Vittorio Camarchia¹, Deguang Sun², Thomas Hoffmann², Andreas Wentzel²

¹Politecnico di Torino, ²Ferdinand-Braun-Institut (FBH)

09:30
-
09:50

EuMIC/EuMC01-4

High Efficiency 2-Stage MMIC GaN Doherty Power Amplifiers with more than 38 % Fractional Bandwidth in C Band

Victor Dufrene¹, Wilfried Dementitroux¹, Michel Campovecchio¹, Denis Barataud¹, Julien Ceugnard¹, Pablo Rochas¹, Olivier Jarde¹, Pierre-Yves Mailloux¹, Nicolas Berthou¹

¹Thales SIX GTS, ²XLIM Laboratory, UMR CNRS n°7252, ³Thales Alenia Space

09:50
-
10:10

EuMIC/EuMC01-5

Design of a Fast-Switchable Three-Stage GaN Doherty PA for High DC-to-RF Efficiency

Maximilian Gottfried Becker¹, Robert Krämer¹, Marco Gunia¹, Frank Ellinger¹

¹TU Dresden

Mission 2

EuMIC11

GaN Amplifiers from VHF to V-band

Chair: Rocco Giofrè¹

Co-Chair: Konstantinos Mimis²

¹Università di Roma Tor Vergata, ²Sony Europe B V

EuMIC11-1

100W and 80% Efficiency GaN PA for VHF Space-Borne Earth Sensing Applications

Francesco Manni¹, Paolo Colantonio¹, Gianni Bosi², Francisco de Arriba³, Lorena Cabria³, Reinell Marante⁴, Antonio Raffo⁴, Giorgio Vannini⁴, Rocco Giofrè¹

¹Electronic Engineering Department, University of Rome "Tor Vergata", Rome-Italy, ²University of Milano-Bicocca, ³TTI Norte, Santander, ⁴University of Ferrara

EuMIC11-2

S-band 600 W Power Amplifier MMIC in 0.5 μ m GaN High Voltage Technology

Gijs van der Bent¹, Marc van Heijningen¹, Sebastian Krause², Peter de Hek¹, Frank E. van Vliet¹

¹TNO, ²Fraunhofer Institute for Applied Solid State Physics IAF, Germany

EuMIC11-3

A 4-18 GHz Non-uniform Distributed Power Amplifier in Leonardo's 150-nm GaN-on-SiC Process Technology

Alfonso Ferreras¹, Marta Ferreras², Alvaro Prieto¹, Javier Montero-de-Paz¹, Jesús Grajal¹, Juan José Sánchez-Martínez¹

¹Indra Sistemas S.A., ²Universidad Politécnica de Madrid

EuMIC11-4

Gallium Nitride switchless PALNA MMIC operating at Ka-band showing typical 31 dBm output power and 4.5 dB noise figure

Patrick Ettore Longhi¹, Walter Ciccognani², Sergio Colangeli², Antonio Serino², Ernesto Limiti²

¹University of Roma Tor Vergata, ²Università di Roma "Tor Vergata"

EuMIC11-5

A V-Band (61-72 GHz) GaN HEMT High-Power Amplifier

Moise Safari Mugisho¹, Christian Friesicke¹, Sandrine Wagner¹, Rüdiger Quay¹

¹Fraunhofer IAF

Quest

EuMIC12

mmWave Amplifiers and Components

Chair: Piyush Kaul¹

Co-Chair: Benjamin Schoch²

¹Eindhoven University of Technology - TU/e, ²University of Stuttgart, Institute of Robust Power Semiconductor Systems

EuMIC12-1

A 35-170 GHz Ultrawideband Distributed Power Amplifier with >16% Peak PAE and 14 dBm Peak Output Power in InP DHBT Technology

Tanjil Shivan¹, Maruf Hossain¹, Tom Keinicke Johansen², Ralf Doerner², Hady Yacoub², Wolfgang Heinrich², Viktor Krozer²

¹FBH, Leibniz Institut für Höchstfrequenztechnik, ²Technical University of Denmark

EuMIC12-2

Current/Voltage Mode VCSEL Drivers with Tunable Pre-emphasis for Large Temperature Range

Stavros Giannakopoulos¹, Siavash Mowlavi², Lars Svensson²

¹SINIX GROUP AB, ²Chalmers University of Technology

EuMIC12-3

105 GHz Triple-Stack Distributed Amplifier in a 0.1 μ m Commercial GaAs process

Jakov Mihaljevic¹, Andrew Jones¹, Evan Shelley¹, Simon J. Mahon¹, Melissa Gorman¹

¹Macquarie University

EuMIC12-4

Influence of Phased Array Antenna Impedance on a 40-100 GHz Active Circulator in Commercial GaAs

Simon J. Mahon¹, Andrew Jones¹, Melissa Gorman¹

¹Macquarie University

EuMIC12-5

D-Band High-Gain Low-Power Phase Shifter for Transmitarray

Drity Parveg¹, Jaakko Haarla¹, Arto Rantala¹, Antti Lamminen¹, Mikko Kantanen¹, Mikko Varonen¹

¹VTT Technical Research Centre of Finland

Expedition

EuMIC13

RF and Millimeter-Wave Devices

Chair: Dusan Milosevic¹

Co-Chair: Aleksander Bogusz²

¹Eindhoven University of Technology, ²Cardiff University

EuMIC13-1

RF Performance of CMOS Technology Passive Devices using 3D Hybrid Bonding Interconnections at mm-Wave Frequencies

Mohammad Alsukour¹, Olivier Valorge¹, Margot Faure¹, Loic Sanchez², Cédric Durand², Victor Milon², Loic Vincent², Daniel Gloria², Pascal Chevalier², Emmanuel Pistono², Jean-Daniel Arnould², Christophe Dubarry²

¹CEA - LETI, ²ST Microelectronics, ³STMicroelectronics, ⁴Grenoble-inp/University Grenoble Alpes, ⁵University of Grenoble Alpes (UGA)

EuMIC13-2

A Digitally Reconfigurable Shunt Capacitance in RF GaN Technology Based on Inter-Finger Capacitors

Alessandro Chillico¹, Sophie Paul¹, Bernd Janke¹, Serguei A. Chevtchenko¹, Wolfgang Heinrich¹, Patrick Scheele¹, Olof Bengtsson¹

¹Ferdinand Braun Institut gGmbH (FBH), Leibniz Institut für Höchstfrequenztechnik

EuMIC13-3

A Highly Compact and Broadband Wilkinson Combiner for Automotive Radar

Bas van de Ven - van der Zanden¹, Marion K. Matters-Kammerer¹

¹Eindhoven University of Technology (TU/e)

EuMIC13-4

80 GHz Stable Amplifier utilizing the Standing-Wave Controlled Gate Structure

Shinji Hara¹, Keiichi Sakuno¹

¹Nagoya University

EuMIC13-5

Low Phase-Noise THz-Generation using SiN Kerr Microrings and MUTC-Photomixers

Marcel Grzeslo¹, Jonas Tebart², Yilmaz Ucar¹, Shuya Iwamatsu¹, Thomas Haddad¹, Sumer Makhlouf², Andrej Lavric², Andreas Stöhr²

¹Microwave Photonics GmbH, ²Department of Optoelectronics, University of Duisburg-Essen, Duisburg, Germany, ³University of Ljubljana

TUESDAY 09:30 – 10:10

ROOM Media Arena**EuMIC/EuMC-PP**

1-Minute Poster Pitch:

EuMIC/EuMC

Chair: Mark S. Oude Alink¹Co-Chair: Piyush Kaul²¹University of Twente, ²Eindhoven
University of Technology - TU/e**09:30
–
10:10****1-Minute Poster Pitch: Eu-
MIC/EuMC**

NEW at EuMW: 1-Minute Poster Pitches! Join us for this exciting and fast-paced new format in which posters are pitched in a maximum of one minute. In this session, the posters of EuMIC/EuMC03 will be pitched.

TUESDAY 10:50 – 12:30

ROOM **Beatrix Theatre**

EuMW01

EuMW/EuMC Opening

Chair: Mark Bentum¹

Co-Chair: Ioan E. Lager²

¹Eindhoven University of Technology (TU/e), ²Delft University of Technology

10:50
–
10:55 Welcome Address: Opening of the European Microwave Week 2025

Mark Bentum¹

¹Eindhoven University of Technology (TU/e)

10:55
–
11:05 EuMA Welcome Address

Frank van den Bogaart¹

¹EuMA President

11:05
–
11:10 Greetings from the IEEE MTT-S

Goutam Chattopadhyay¹

¹NASA-Jet Propulsion Laboratory, California Institute of Technology

11:10
–
11:15 Greetings from the EuMW 2025 Platinum Sponsor

Thierry Locquette¹

¹Keysight EMEA VP and GM at Keysight

11:15
–
11:20 Technical Program of EuMW 2025

Diego Caratelli¹

¹Eindhoven University of Technology (TU/e)

11:20
–
11:35 Surprise Act

11:35
–
12:20 Antenna and Over-The-Air Measurement Innovation Enabling Next-Gen Wireless Systems – Our Journey in the Last Decade and the Road Ahead

Benoit Derat¹

¹Rohde & Schwarz GmbH & Co. KG

In today's hyper-connected world—shaped by 5G / 6G, connected cars, Internet of Things (IoT), and other Non-Terrestrial Networks (NTN)—wireless communication is no longer a convenience but a fundamental enabler of our daily lives. As everything becomes increasingly wireless and over-the-air (OTA), the demand for accurate and comprehensive testing of wireless systems has never been greater.

The ongoing trend toward higher density electronic and mechanical integration has driven a paradigm shift in testing methodologies. Traditional conducted measurements are

giving way to OTA testing, which provides a holistic view of the full transceiver system performance in realistic operational conditions. This shift has required significant innovation in antenna design, measurement techniques, and test environments to capture the complex behavior of wireless devices—while controlling test system cost and size.

In this keynote, we will explore the recent technological advances and inventions that have made modern OTA measurements both possible and indispensable. We will also discuss how evolving measurement instrumentation and antenna test technologies are paving the way for new testing principles, enabling more efficient and insightful validation processes.

Furthermore, the increasing demand for earlier (“shift-left”) testing in more realistic scenarios is driving the convergence of measurement and environment emulation / simulation technologies.

Looking ahead, what is the next frontier in OTA testing? How can we innovate to keep pace with evolving wireless standards, diverse use cases, and stringent performance demands? This talk will highlight emerging trends and research directions poised to extend OTA measurement capabilities—accelerating time-to-market, boosting performance, and expanding test coverage for wireless components and systems.

12:20
–
12:30 Awards Ceremony

Frank E. van Vliet¹

¹TNO Defense, Safety and Security

TUESDAY 13:50 – 15:30

ROOM

Spark

EuMC05

Special Session: Antenna Challenges and Solutions for 6G Mobile Connectivity

Chair: Yvonne Weitsch¹

Co-Chair: Matthias Geissler²

¹Rohde & Schwarz International GmbH, ²IMST GmbH

13:50
–
14:10

EuMC05-1

Link Budget for Direct to Cell

Georg Strauß¹

¹Munich University of Applied Sciences

14:10
–
14:30

EuMC05-2

Automotive Connectivity in the 3D Network of 6G

Matthias Geissler¹

¹IMST GmbH

14:30
–
14:50

EuMC05-3

Comparative Analysis of Antenna Technologies for High Data Rate CubeSat Communication

Hans Adel¹, Armin Fischer¹, Noah Sielck¹, Christian Steinmetz¹, Frank Mayer¹

¹Fraunhofer IIS/EAS

14:50
–
15:10

EuMC05-4

Reducing Cost and Complexity of User Terminal Antennas for Satcom-on-the-Move Applications

Stefano Caizzone¹, Aparna P.T. Adithyababu¹, Simon P. Hehenberger¹

¹German Aerospace Center (DLR), Oberpfaffenhofen, Germany.

15:10
–
15:30

EuMC05-5

Advancing Connectivity: Testing and Technologies for Electronically Steered Array Antennas in Future 3D Networks

Yvonne Weitsch¹

¹Rohde & Schwarz International GmbH

Flash

EuMC06

Cryogenic Applications of RF Technologies

Chair: Fabio Sebastiano¹

Co-Chair: Marco Spirito¹

¹Delft University of Technology

EuMC06-1

Low-Temperature Superconducting MMIC Diplexers for RF Quantum AC-Voltage Standards

Abdulrahman Widaa¹, Oliver Kieler¹, Frauke Gellersen¹, Michael Haas¹, Johannes Kohlmann¹, Mark Bieler¹

¹Physikalisch-Technische Bundesanstalt

EuMC06-2

Model Parameter Estimation of Passive Components at Millikelvin Temperatures for Cryogenic Microwave Circuit Design

Nicole Zocher¹, Martin Vossiek¹, Christian Carlowitz¹

¹Friedrich-Alexander Universität Erlangen-Nürnberg

EuMC06-3

A 45.4-dB Gain Gm-Boosting Triple Noise-Canceling LNA in 28-nm CMOS for Spin Qubit Readout

Mahesh Kumar Chaubey¹, Yin-Cheng Chang², Po-Chang Wu¹, Hann-Huei Tsai¹, Shawn S.H. Hsu¹

EuMC YEP nominee

¹National Tsing Hua University, ²Taiwan Semiconductor Research Institute, National Applied Research Laboratories, Taiwan

EuMC06-4

Enhanced Multi-Band Reception with MGT-based PAM4 All-Digital Receivers

Jose Domingues¹, Samuel Pereira¹, Luis Almeida¹, Hug-erles Silva¹, Arnaldo Oliveira¹, Nuno Borges Carvalho¹

¹Instituto de Telecomunicacoes - Universidade de Aveiro

EuMC06-5

Simulation-Based Verification of Radiometer Measurements for Human Subjects

Lukas Furtmüller¹, Michael Winkler¹, Florian Lehner¹, Stefan Schuster¹, Stefan Scheibhofer¹, Andreas Stelzer¹, Reinhard Feger¹

¹Institute for Communications Engineering and RF-Systems / Johannes Kepler University Linz, ²voestalpine Stahl GmbH

Mission 2

EuMIC14

mm-Wave GaN Technology

Chair: Chong Li¹

Co-Chair: Jan Grahn²

¹University of Glasgow, ²Chalmers University of Technology

EuMIC14-1

High-Power and Low-Noise AlN/GaN/AlGaIn-on-Si HEMT Technology for Low-Voltage mm-Wave Monolithically Integrated ...

Yitao Zhang¹, Hanchao Li¹, Qingyun Xie¹, Siyu Liu¹, Zhongzhiang Lu¹, Pengju Cui¹, Hanlin Xie¹, Ameera Nur¹, Xavier Teo Leng Seah¹, Stefan Degroote², Marianne Germain³, Yuanjin Zheng⁴, Geok Ing Ng⁵

¹Nanyang Technological University, ²Agency for Science, Technology and Research (A*STAR), ³Soitec

EuMIC14-2

High efficiency and high linearity 70 nm GaN technology for future SatCom applications

Philipp Döring¹, Peter Brückner¹, Sebastian Krause¹, Thomas Maier¹, Rüdiger Quay¹

¹Fraunhofer IAF, Fraunhofer Institute for Applied Solid State Physics

EuMIC14-3

GH10-UMS 100 nm GaN Technology

Samira Driadi¹, Manfred Madel¹, Linh Trinh-Xuan³, Pierre Denis², Alexandre Bessemoulin², Gregory D. U'Ren¹, R. Pecheux², R. Arouri¹, Jonathan Leroy¹, Valeria Di Giacomo-Brunel¹, Hermann Stieglauer², Hervé Blanck²

¹United Monolithic Semiconductor, ²United Monolithic Semiconductors GmbH, ³United Monolithic Semiconductor, ⁴United Monolithic Semiconductors, ⁵UMS GmbH

EuMIC14-4

Large-signal Performance Comparison of Ion Implant and Mesa Etch Isolated AlGaIn/GaN HEMT Switches on Silicon

Arthur Collier¹, Abdalla Eblabla¹, Wesley Sampson¹, Daniel Sheppard¹, Alan Harvey¹, Roberto Quaglia¹, Khaled Elgaïd¹

¹Cardiff University, ²Leonardo UK

EuMIC14-5

Characterization and Modeling of the 3D Integration Effects on GaIn-on-Si-Based HEMTs for ...

Mohammed Medbouhi¹, G. Palomino-Marcelo², D. Valorge³, C. Dubarry³, M.-L. CALVO-MUNOZ², R. FRANTATTE⁴, D. MERMIN⁵, R. VELARD⁶, Y. Gobil⁷, F. Morisot⁸, A. L. C. Serrano⁹, R. G. Pamplona⁹, E. Morvan⁹, J. Lugo-Alvarez⁹, P. Ferrari⁹

¹CEA-LETI UGA, ²TIMA Laboratory, Grenoble INP, CNRS, University of Grenoble Alpes, ³CEA - LETI, ⁴Universidade de Sao Paulo

Quest

EuMIC15

Characterization, Modelling, and Simulation of Devices and Circuits

Chair: Teresa M. Martín-Guerrero¹

Co-Chair: Ernesto Limiti²

¹Universidad de Málaga, ²University of Rome Tor Vergata

EuMIC15-1

Development of a GaAs Stacked Cells based on Common-Gate Model Extraction Procedure

Negar Choupan¹, Valeria Vadalà¹, Gianni Bosi¹, Marco Pirola¹, Chiara Ramella²

¹University of Milano-Bicocca, ²Politecnico di Torino

EuMIC15-2

Error Term Analysis in 16-Term Calibration: Enhancing SiGe HBT S-Parameter Accuracy up to 330 GHz

Tarek Bouzar¹

¹Laboratoire IMS, CNRS UMR, 5218, Université de Bordeaux, Bordeaux INP, Talence Cedex, France

EuMIC15-3

Measured and Simulated Linearity Metrics Comparison of a Pre-Matched AlGaIn/GaN HEMT at 29 GHz

José Anderson Silva Dos Santos¹, Julien allemann¹, Margot LEVENTOUX¹, Pierre Medrel¹, Christophe Chang¹, Raphaël SOMMET¹, Fabien COURREGES¹, Jean-Christophe Nallatamby¹

¹XLIM - Campus Universitaire de Brive, ²XLIM - Université de Limoges, ³United Monolithic Semiconductors SAS

EuMIC15-4

Field Plate Engineering for FETs using 1-D Model

Ahmad Shafiei Alavijeh¹, Kenji Vitória Morimoto¹, Luis Côtimos Nunes¹, José Carlos Pedro¹

¹Instituto de Telecomunicações

EuMIC15-5

Stability Envelope Using Nodal Transfer Functions

Thomas Winslow¹

¹MACOM

Hall 7

EuMIC/EuMC03

EuMIC/EuMC Interactive Poster Session

Chair: Piyush Kaul¹Co-Chair: Mark S. Oude Alink²¹Eindhoven University of Technology - TU/e, ²University of Twente

These posters will have
1-minute pitches in EuMIC/
EuMC-PP on Tuesday morning!

EuMIC/EuMC03-1

X-Band GaN Low Noise Amplifier with Oscillation Suppression Techniques

Bohyeon Kim¹, Hyojin Yoon¹, Jaeyong Lee¹, Changkun Park¹¹Intelligent Microwave Systems Lab., Soongsil University, Republic of Korea

EuMIC/EuMC03-5

Design of High-Power Harmonic Controlled Doherty Power Amplifier Using Internally Matched 350-W GaN HEMT for RF Plasma Source

Jisu Park¹, Minjae Ahn¹, Dongsu Kim², Yunsik Park², Hyunchul Ku¹¹Konkuk University, Republic of Korea, ²Korea Electronics Technology Institute, Republic of Korea

EuMIC/EuMC03-9

A 9 W Low-Cost GaAs MMIC Power Amplifier for X-Band Communications

Carlo Poledrelli¹, Michael Ciardullo¹, Joseph Merenda¹¹Mini-Circuits

EuMIC/EuMC03-13

Machine Learning Assisted Design of Frequency Variants of Low-Noise Amplifiers Using Hybrid of NN with Bayesian Optimization

Mikko Kaiikkonen¹, Sumra Batool¹, Muditha Ranaweera¹, Janne P. Aikio¹, Timo Rahkonen¹, Mikko Hietanen¹, Olli Kursu¹, Olli Silven¹, Aarno Pärssinen¹¹University of Oulu

EuMIC/EuMC03-2

Interference and Blockage Mitigation Through Direct RF System-on-Chip Receiver

Francesco Raimondo¹, Xiaoliang Gu¹, Mark Beach¹¹University of Bristol

EuMIC/EuMC03-6

Active RIS Element in Ka-band Based on Slot Antennas and 1-bit Digital Phase Shifter: a Novel Dual Input SiGe BiCMOS Low Noise Amplifier Implementation

Roberto Vincenti Gatti¹, Giulio Brancali¹, Ethan Bernardini¹, Guendalina Simoncini¹, Giacomo Schiavolini¹, Giulia Orecchini¹, Federico Alimenti¹¹University of Perugia

EuMIC/EuMC03-10

A 0.4-2 GHz MMIC LNA with Integrated Limiter

Sergio Colangeli¹, Antonio Serino¹, Patrick Ettore Longhi¹, Walter Ciccognani¹, Francesco Vitulli², David Cuadrado-Calle², Valerie Dutto², Ernesto Limiti¹¹University of Roma Tor Vergata, ²Thales Alenia Space Italia, ³European Space Agency, European Space Research and Technology Centre

EuMIC/EuMC03-14

mm-Wave CMOS Layout Optimization and Accurate Noise Deembedding for Super-300GHz fMAX and Minimum Noise

Jyh-Chyurn Guo¹, Adhi Cahyo Wijaya¹, Jinq-Min Lin¹¹National Yang Ming Chiao Tung University

EuMIC/EuMC03-3

An Integrated W-Band Dual-Polarization Receiver Front-End Featuring Ultra-Low Noise Figure

Philipp Neininger¹, Fabian Thome¹, Sébastien Chartier¹, Ralf Henneberger¹, Bertrand Thomas¹, Ollid Bouzekri¹, Elodie Richard¹¹Fraunhofer Institute for Applied Solid State Physics IAF, ²RPG Radiometer Physics GmbH, ³ESA ESTEC

EuMIC/EuMC03-7

Frequency-Dependent Power Consumption Modeling of CMOS Transmitters for WNoC Architectures

Mohammad Shahmoradi¹, Korkut Kaan Tokgöz², Eduard Alarcón¹, Sergi Abadal¹¹Universitat Politècnica de Catalunya UPC-Barcelona Tech., ²Sabancı University

EuMIC/EuMC03-11

X-Band Asymmetric GaN HEMT SPDT Switch Using LC Resonator and Quarter-wave Stub for High Power Handling Capability and High Isolation

Seungjong Moon¹, Jaehyun Kwon¹, Jaeyong Lee¹, Changkun Park¹¹Intelligent Microwave Systems Lab., Soongsil University, Republic of Korea

EuMIC/EuMC03-15

50 nm InP HEMTs with Tgates Fabricated by Single-Step Electron Beam Lithography for High-Frequency Application

Huihua Cheng¹, Long Jiang², Afesomesh Ofiare¹, Jichun Shi¹, Taiyu Ju¹, William McGinn², Danielle George², Chong Li¹¹University of Glasgow, ²University of Manchester

EuMIC/EuMC03-4

GaN/Si 26-30 GHz T/R Chip MMIC for 5G Communications

Ahmad AL HAJJAR¹, Valentin Deremaux¹, Majid Elkamouchi²¹MACOM Technology Solutions, ²Macom

EuMIC/EuMC03-8

An Iterative Electro-Thermal Model for An Active Antenna Element and Its Application to Arrays

Feza Turgay Celik¹, Christian Fager², Alexander Yarovoy¹, Yanki Aslan¹¹TU Delft, MS3, ²Chalmers University of Technology, Sweden

EuMIC/EuMC03-12

Thermal Resistance Estimation for AlGaN/GaN HEMTs with Trapping Effects

Zhijian Yu¹, Amir Mirza Gheytaghi¹¹Ampleon

EuMIC/EuMC03-16

Ka-Band True Time Delay in a 130-nm SiGe-BiCMOS Technology for Phased-Array Applications

Lukas Schmitz¹, Olaf Saalmann²¹Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR), ²Fraunhofer FHR, Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR

These posters will have
1-minute pitches in EuMIC/
EuMC-PP on Tuesday morning!

EuMIC/EuMC03-17

A 28-nm CMOS D-Band Passive Modulator Achieving 43-dB Image Rejection Ratio

Tian-Wei Huang¹, Kai-Jie Chuang¹, Kin-Ping Tang¹, Yi-Wen Wang¹, Ting-Yu Chang¹, Jeng-Han Tsai²

¹National Taiwan University, ²National Taiwan Normal University

EuMIC/EuMC03-21

Dual-Band Techniques in A 79/135 GHz Power Amplifier in 28nm Bulk CMOS

Yiqin Hou¹, Alexander Rainier van Dommele¹, Evangelos Zaoutis¹, Dusan Milosevic¹, Vojkan Vidojkovic¹

¹Eindhoven University of Technology

EuMIC/EuMC03-18

A Millimeter-Wave Ultralow-Power Injection-Locked Frequency Divider with Dual-Mixing Technique in 90-nm CMOS Process

Sheng-Chun Chen¹, Chau-Ching Chiong², Yunshan Wang¹, Hwei Wang¹

¹National Taiwan University, ²Institute of Astronomy and Astrophysics, Academia Sinica, Taiwan

EuMIC/EuMC03-22

Integrated Time Domain Multiplexer for Superconducting Qubit Control at Millikelvin Temperatures

Vanessa Wirth¹, Sascha Breun¹, Jens Löffler¹, Manuel Koch¹, Michael Loose¹, Marco Dietz¹, Christian Carlowitz¹, Robert Weigel¹, Norman Franchi¹

¹Friedrich-Alexander Universität Erlangen-Nürnberg

EuMIC/EuMC03-19

Design of an X-Band Low Noise Amplifier with Integrated Limiter for Front-End Modules

Tan Do¹

¹Viettel

EuMIC/EuMC03-20

A DC to 17 GHz Area-Efficient VGA with 20 dB Linear dB Tuning Range in 22 nm FDSOI

Kai Scheller¹, Andre Engelmann¹, Philip Hetterle¹, Jens Löffler¹, Robert Weigel¹, Albert-Marcel Schrotz¹, Norman Franchi¹

¹Friedrich-Alexander Universität Erlangen-Nürnberg

TUESDAY 13:50 - 15:30

ROOM

Expedition

EuMIC16

Wideband and mm-Wave Building Blocks

Chair: Vojkan Vidojkovic¹

Co-Chair: Vadim Issakov²

¹Eindhoven University of Technology,

²Institute for CMOS Design, Technical University Braunschweig

13:50 - 14:10

EuMIC16-1
V-Band InAlN/GaN/SiC MMIC Amplifier Embedded by Fan Out Wafer Level Packaging Technology

Stéphane Piotrowicz¹, Mohamed Bouslama¹, Sébastien Aroulanda¹, Linh Trinh-Xuan², Louiza Hamidouche¹, Jean-Claude Jacquet¹, Anass Jakani¹, Quentin Lévesque¹, Romain Mathieu², Mourad Oualli¹, Jesse Riedl¹, Benoit Lambert², Gildas Gauthier¹

¹III-V Lab, ²UMS - United Monolithic Semiconductors

14:10 - 14:30

EuMIC16-2
RF Front-End Building Blocks for 6G cmWave Radio Base Station in 300 nm GaN-on-Si Technology

Örjan Renström¹, Olle Axelsson¹, Olov Haapalahti¹, Henrik Felding¹, David Gustafsson¹, Kristoffer Andersson², Jag Rangaswamy², Marko Radosavljevic², Han Wui Then¹

¹Ericsson AB, ²SAAB Surveillance AB, ³Intel Corporation

14:30 - 14:50

EuMIC16-3
A 60 GHz LNA with Variable Transmission Characteristics Using Q-Enhancement

Helmuth Morath¹, Jens Wagner¹, Frank Ellinger¹

¹TU Dresden, Germany

14:50 - 15:10

EuMIC16-4
A Tunable True Time Delay up to 50 GHz Based on HBT Pairs in Stacked Common Base Topology with Incorporated Delay Lines

Janis Nikolai Wörmann¹, Burak Güven Özat¹, Mathias Plus Scharpf¹, Mark Johannes Neff¹, Benjamin Schoch¹, Ingmar Kallfass¹

¹Institute of Robust Power Semiconductor Systems (ILH) - University of Stuttgart

15:10 - 15:30

EuMIC16-5
2.5 to 64 GHz Nonuniform Distributed Power Detector in 130 nm SiGe BiCMOS

Mark Johannes Neff¹, Burak Güven Özat¹, Janis Nikolai Wörmann¹, Prakhar Singhal¹, Benjamin Schoch¹, Ingmar Kallfass¹

¹Institute of Robust Power Semiconductor Systems (ILH), University of Stuttgart

Mission 1

EuMW02

EuMC/APMC Special Session: mm-Wave and THz Circuits and Systems

Chair: Hunchul Ku¹

Co-Chair: Diego Caratelli²

¹Konkuk University, Republic of Korea,

²Eindhoven University of Technology (TU/e)

EuMW02-1
CMOS Compact Concurrent Transceiver Pixel Arrays for Terahertz Imaging Applications

Wooyeol Choi¹, Kenneth O²

¹Seoul National University, ²The University of Texas at Dallas

EuMW02-2
Silicon-based Scalable Active Phased Arrays above 100GHz

Yi Hu¹, Xiangao Meng¹, Bingli Dai¹, Yan Li¹, Zhi Chen¹, Bo Zhang¹, Cheng Wang¹

¹University of Electronic Science and Technology of China, Chengdu, China

EuMW02-3
THz Antenna Designs and Measurements

Yu-Hsiang Cheng¹

¹National Taiwan University

EuMW02-4
Compound Semiconductor Technologies for mm-wave and sub-THz applications

Nadine Collaert¹

¹imec

EuMW02-5
Quasi-Optical Antenna Systems: From Space to Widespread Sub-THz Applications

Nuria LLombart Juan¹

¹TU Delft

Juliana CZ1

URSI Benelux Forum

13:50 - 16:30 URSI Benelux Forum

Auditorium

EuMIC/EuMC02

Panel Session: On-going R&D and Industrial Projects Towards More Sustainable Microwave Engineering

Chair: Ann Franchois¹

Co-Chair: Jean-Pierre Raskin²

¹Ghent University

²Université catholique de Louvain

13:50 - 15:30 Panel Session: On-going R&D and Industrial Projects Towards More Sustainable Microwave Engineering

Future RF, mm-wave, photonics, and IC technologies must align with the UN Sustainable Development Goals (SDGs), promoting harmony with nature and society. Key SDG themes include climate action, waste reduction, and responsible production. The EU's Ecodesign for Sustainable Products Regulation (ESPR), effective since July 2024, drives this shift toward greener, circular products. In this panel session, representatives from the EIC, industry and RTOs will share visions and engage with the audience in an open discussion.

13:50 - 14:10 EIC Engagement with the European Sustainable Electronics Ecosystems.

Isabel Obieta, European Innovation Council

14:10 - 14:40 Pitches by Panelists from Industry and RTOs

Bertrand Parvais, imec, Belgium;

Gregory Clark, Qorvo, USA

Duncan Platt, RISE, Sweden

Moritz Schlagmann, Infineon Technologies AG, Germany

Hugues Ferreboeuf, The Shift Project, France

14:40 - 15:30 Panel Discussion
Moderator: Jean-Pierre Raskin, UCLouvain

TUESDAY 16:10 - 17:50

ROOM

Mission 2

EuMC07

Materials and Packaging Concepts for Microwave and mm-Wave Applications

Chair: Amelie Hagelauer¹

Co-Chair: Holger Maune²

¹Technical University of Munich & Fraunhofer EMFT, ²Otto von Guericke University Magdeburg

16:10
-
16:30

EuMC07-1

Enhanced QFN Package Design Utilizing HTCC-Based GCPW Structures and Air Cavities for V-Band Applications

Jin-Young Jeong¹, Juwan Kim¹, Wonshil Kang¹, Hyunchul Ku²

¹RF Materials Co., Ltd., ²Konkuk University, Republic of Korea

16:30
-
16:50

EuMC07-2

Evaluation of CPW Transmission Lines on 3D Printed Alumina in D-band

Elizabeth Bekker¹, Till Glage¹, Alexander Quint¹, Luca Valenziano¹, Thomas Zwick¹, Akanksha Bhutani¹

¹Karlsruhe Institut of Technology (KIT)/ Institute of Radio Frequency Engineering and Electronics (IHE)

16:50
-
17:10

EuMC07-3

A Wideband Waveguide Launcher in the Interposer for 79GHz Automotive Radar eWLB Package

Rasoul Ebrahimzadehchani¹, Abdellatif Zanati², Mohammad-Reza Nezhad Ahmadi¹

¹mmSense Technologies Inc., ²NXP Semiconductor Inc

17:10
-
17:30

EuMC07-4

Electrooptical Integration of an Electronic Photonic Integrated Circuit into Plastic Substrates using MID-Technology

Stephan Kruse¹, Jabil Diri¹, Thomas Mager¹, Christian Kress¹, J. Christoph Scheytt¹

¹Paderborn University, Department of Electrical Engineering, Heinz Nixdorf Institute, ²Product Engineering, Fraunhofer Research Institute for Mechatronic Systems Design IEM

17:30
-
17:50

EuMC07-5

Electrical Extraction of Amor-phization Ratio in Phase Change Material (PCM) RF Switches

Lucas Henrique de Araujo¹, Nicolas Le Gall¹, Julien Lintignat¹, Pierre Blondy¹

¹Xlim - UMR 7252 - CNRS- Limoges University, ²Thales Land & Air System

Quest

EuMC08

mm-Wave Antennas for Radar and Wireless Communications

Chair: Alexander Kölpin¹

Co-Chair: Akanksha Bhutani²

¹Hamburg University of Technology, ²Karlsruhe Institute of Technology (KIT)

EuMC08-1

A Wideband Glass Resonator Antenna as AiP Concept for Sub-THz Application

Mario Faliero¹, Alexander Quint¹, Luca Valenziano¹, Elizabeth Bekker¹, Thomas Zwick¹, Akanksha Bhutani¹

¹Karlsruhe Institute of Technology (KIT)

EuMC08-2

Steerable High Gain E-Band Antenna

Marcello Salerno¹, Luigi Cervi¹

¹Greenwaves srl

EuMC08-3

2&4 -Cascade Imaging Radar Antennas using Waffle-iron Ridge Guide

Yutaka AOKI¹, Naoki Ise², Hiroyuki Kamo², Hitoshi Tanaka², Takashi Shimizu²

¹TAIYO YUDEN CO., LTD., ²TAIYO YUDEN CO., LTD., ³Utsunomiya University

EuMC08-4

A Scalable, Low-Cost, V-Band Bulls Eye Antenna

Frederike Bartels¹, Dominik Langer¹, Alexander Kölpin¹

¹Hamburg University of Technology (TUHH)

EuMC08-5

2D Leaky-Wave Antenna with All-Dielectric Partially Reflecting Surface at mm-Wave Frequencies

Guillaume François¹, Henrik Jansen¹, Amar Al-Bassam¹, Suramate Chalermwisutkul¹, Dirk Heberling¹

¹RWTH Aachen University, Germany, ²TGGs, KMUTNB

Expedition

EuMC09

RF Engineering - An Educational Perspective

Chair: Alessandro Galli¹

Co-Chair: Guy Vandenbosch²

¹Sapienza University of Rome, ²KU Leuven

EuMC09-1

VO2-switchable microwave components in planar technology for at home hands-on teaching deposition techniques and microwave devices characterization

Baptiste Henriot¹, Manon Gireau², Olivier Tantot¹, Fred-eric Dumas-Bouchiat¹, Corinne Champeaux¹, Aurélien Périgaud¹, Damien Passerieux¹, Serge Verdeyme¹

¹Xlim - UMR 7252 - CNRS- Université De Limoges, ²IRCEM UMR CNRS 7315 - University of Limoges

EuMC09-2

Near-Field Visualization of Antennas' Radiated Electric Field by Infrared Thermography as a Supplement Tool for RF Engineering Education

Ricardo Carrizales Juarez¹, Adrien Laffont¹, Stéphane Faure¹

¹ANYFIELDS

EuMC09-3

Integrating Research into Undergraduate EE Education: An MMIC RF Power Amplifier Design

Laura Margot van Vliet¹, David Niven¹, Ilke Ercan¹, Simon J. Mahon¹

¹TU Delft, ²Macquarie University

EuMC09-4

Transmitter Education Based on the Mixerless Architecture

Lukas Hüssen¹, Muh-Dey Wei¹, Renato Negra¹

¹HFE RWTH Aachen

EuMC09-5

Building a Low-Cost Solar Radio Telescope: an Effective Approach for Teaching Microwave Electronics, Antennas and Noise

Giacomo Schiavolini¹, Francesco Alunni¹, Giulio Brancali¹, Giulia Orecchini¹, Valentina Palazzi¹, Camille C.A. Westerhof¹, Timo S. Prinz², Anna Engler², Martin Hübner², Sebastian Lange², Maurizio Burla¹, Federico Alimenti¹

¹University of Perugia, Italy, ²Technische Universität Berlin, Germany

Auditorium

EuMC10

Special Session: Can Truly Environmentally Friendly ICT Become a Reality?

Chair: Jean-Pierre Raskin¹

Co-Chair: Ann Franchois²

¹Université catholique de Louvain, ²Ghent University

16:10
-
16:35

16:10-16:35:

EuMC10-1

Circular and Environmentally Friendly ICT: A Distant Dream?

Karel Van Acker¹

¹KU Leuven

16:35
-
17:00

16:35-17:00:

EuMC10-2

Beyond the Quest for Performance in Power Electronics

Jean-Christophe CREBIER¹, Tugce TURKBAY ROMANO¹

¹G2ELab, Université Grenoble Alpes, Grenoble INP, CNRS

17:00
-
17:25

17:00-17:25:

EuMC10-3

Eco-Reliability in Electronic Design: A Methodological Approach for Sustainable Technology Selection

Léo Saillenfest¹, Marina Proske¹, Daniel Hahn¹

¹Fraunhofer IZM, Berlin

17:25
-
17:50

17:25-17:50:

EuMC10-4

Sustainable ICT: Measuring is Knowing

Koen De Bosschere¹

¹Ghent University

TUESDAY 16:10 – 17:50

ROOM

Spark

EuMC11

Advancements in Active Antennas and Arrays

Chair: Alessandra Costanzo¹

Co-Chair: Alessandro Garufo²

¹Università di Bologna, ²TNO Defense, Safety and Security

16:10
–
16:30

EuMC11-1 Waveform Synthesis for Active Loadpulling Mitigation in Multi-user MIMO Transmitters

Jiayu Hou¹, Yuan Ding², George Goussetis², Symon K. Podilchak³

¹Heriot-Watt University and the University of Edinburgh, ²Heriot Watt University, UK, ³University of Edinburgh

16:30
–
16:50

EuMC11-2 Improved Hybrid Numerical Methodology for Fast Design of Reconfigurable Transmit-Arrays Antenna

Alessandro Henrique De Oliveira Cabral Junior¹, André Barka¹, Hamza Kaouach²

¹ONERA, ²LAPLACE, Université de Toulouse, CNRS

16:50
–
17:10

EuMC11-3 Active Transmitarray with End-Fire Dipole Elements for E-band

Antti Lamminen¹, Jehki Pusa¹, Arto Rantala¹, Mikko Kaunisto¹, Mikko Varonen¹, Mikko Kantanen¹, Jussi Säily¹, Dristy Parveg², Hans Toivanen¹

¹VTT Technical Research Centre of Finland

17:10
–
17:30

EuMC11-4 Hybrid Simulation-Measurement Characterization Method for Active Phased-Array Transmitters

Alberto Maria Angelotti¹, Francesca Benassi¹, Mattia Mengozzi¹, Gian Piero Gibiino¹, Alberto Santarelli¹, Alessandra Costanzo¹

¹University of Bologna

17:30
–
17:50

EuMC11-5 A Single Element Antenna with Continuous Beam Steering using a Versatile AMC

Shahinshah Ali¹, Farhan Abdul Ghaffar¹

¹Lakehead University

Hall 7

URSI Benelux Poster Session

Chair: TBD

Co-Chair: TBD

16:10
–
17:50

URSI Benelux Poster Session

TUESDAY 16:10 – 17:50

ROOM **Polar**

EuMIC17

EuMIC Closing

Chair: Marion K. Matters-Kammerer¹

Co-Chair: Patrick Reynaert², Piyush Kaul¹

¹Eindhoven University of Technology - TU/e, ²KU Leuven ESAT-MICAS

16:10 Session Welcome

16:15 Marion K. Matters-Kammerer¹

¹Eindhoven University of Technology - TU/e

16:15 Progress in Design and Integration for Near-THz Wireless Communications Systems

17:00

Yves Baeyens¹

¹Nokia Bell Labs

In recent years, the proliferation of mm-Wave radios has been accelerated by the global drive toward ultra-high-capacity 5G systems and advanced imaging for security and radar for automotive applications. Realizing these capabilities relied not only on RFIC advancements, but also on innovations in packaging, materials engineering, and cross-domain co-design to enable scalable, manufacturable solutions.

As we look toward 6G, near-THz systems are emerging as key enablers of unprecedented peak data rates. This talk will detail the technological path toward scalable near-THz implementations, highlighting RFIC developments and Radio-on-Glass interposer platforms operating across E-Band, D-Band, and beyond. We will also examine the challenges in modeling, packaging, and characterizing sub-THz integrated systems, and present recent solutions that support multi-Gb/s data rates with high spectral utilization for wireless backhaul applications.

17:00 Awards ceremony

17:20 Andrea Neto¹, Marion K. Matters-Kammerer²

¹TU Delft, ²Eindhoven University of Technology - TU/e

EuMIC Prize

EuMIC Young Engineer Prizes

Tom Brazil Fellowship Award (by the GAAS® Association)

17:20 Closing Remarks

17:40 Marion K. Matters-Kammerer¹

¹Eindhoven University of Technology - TU/e

17:40 Invitation to EuMW 2026

17:50 Tudor Williams¹

¹Filtronix

WEDNESDAY 08:30 - 10:10

ROOM

Mission 1

EuMC12

Power Amplifier Design and Linearisation Techniques

Chair: Anding Zhu¹

Co-Chair: Anna Piacibello²

¹University College Dublin, ²Politecnico di Torino

08:30
-
08:50

EuMC12-1

Deep Learning Driven Design of Highly Efficient Harmonic-Tuned Class F-1 Power Amplifiers

Han Zhou¹, Haojie Chang¹, Christian Fager¹

¹Chalmers University of Technology

08:50
-
09:10

EuMC12-2

Phase-Controlled Matching Networks Using Quality Circles for Enhanced Efficiency in Wideband Power Amplifiers

Sergio Lopez de Pablo¹, Jordi Verdú¹, Pedro de Paco¹

¹Universitat Autònoma de Barcelona

09:10
-
09:30

EuMC12-3

A Compact GaN-Based D-Band High-Power Waveguide Amplifier Module

Nico Riedmann¹, Maciej Źwikliński¹, Dirk Schwantuschke¹, Peter Brückner¹

¹Rohde & Schwarz GmbH & Co. KG, ²Fraunhofer IAF, Fraunhofer Institute for Applied Solid State Physics

09:30
-
09:50

EuMC12-4

Joint Full-Band and Sub-Band Modeling for Digital Predistortion of Broadband Power Amplifiers

Lin Qi¹, Anding Zhu¹

¹University College Dublin

09:50
-
10:10

EuMC12-5

A Design of Self-Adaptive True-Time-Delay Alignment CMOS Module for Millimeter-Wave Power Amplifiers Linearization

Yaojia Fan¹, Fei You¹, Longhao Li¹, Yingjie Liu¹, Zehua Xiao¹, Yin Chen¹, Songbai He¹

¹The School of Electronic Engineering, University of Electronic Science and Technology of China

Mission 2

EuMC13

Special Session: Antenna Systems for Non-Terrestrial Networks

Chair: Giuseppe Virone¹

Co-Chair: Thomas Delamotte²

¹CNR-IEIT, ²University of the Bundeswehr Munich

EuMC13-1

Shared Aperture Full Duplex Phased Array User Terminals for Satellite-on-the-Move Applications

Teanette van der Spuy¹, Rob Maaskant¹, Marianna Ivashina¹, Thomas Eriksson², Henrik Holter³, Sten Gunnarsson⁴, Lukas Nyström⁵

¹Chalmers University of Technology, SATCUBE, ²Chalmers University of Technology, ³Ericsson AB, Sweden, ⁴SAAB AB, Sweden, ⁵SATCUBE

EuMC13-2

Active Antenna Array Experimental Platform

Jiayu Hou¹, Yuan Ding², George Goussetis²

¹Heriot-Watt University and the University of Edinburgh, ²Heriot-Watt University

EuMC13-3

Active Antennas Onboard LEO Satellites

Roger Montoya-Roca¹, Carlos Vazquez-Sogorb¹, Sören Harms², Ashifa M. Musthafa³

¹THALES ALENIA SPACE (ITALY), ²THALES ALENIA SPACE (FRANCE), ³Antenna Company

EuMC13-4

Millimeter Wave Antennas for Ground Terminals

Theodoros Pavlidis¹, Dijun Lin², Saba Aslam², Ramonika Sengupta³, Naila Rubab³

¹Satcube AB, ²Ericsson AB, ³ANTENNEX B.V.

EuMC13-5

Antenna technology for Low-Earth-Orbit Satellites

Adrian Martin¹

¹SWISSto12

Quest

EuMC14

Metasurfaces and Lenses

Chair: David González Ovejero¹

Co-Chair: Giampiero Gerini²

¹CNRS, ²Eindhoven University of Technology

EuMC14-1

Design and Implementation of Reconfigurable Metasurfaces for Mobile Communication Antennas

Francesco Caminita¹

INDUSTRIAL KEYNOTE

¹Wave Up s.r.l.

EuMC14-2

From Design to Manufacturing of a Metasurface Antenna System for LEO Satellite "..."

Abdel Hadi Hobballah¹, Cristian Della Giovampola², Gabriele Minatti³, Amaury Veille⁴, Maël Moguedet⁴, Jean Chazelas⁴, Charlotte Tripou-Cansellet⁴, Stefano Maci⁵

¹S2P-Smart Plastic Products, ²Wave Up Innovation in Electromagnetics, ³Ultimet, ⁴University of Siena

EuMC14-3

Design of a 2D beamforming network based on geodesic lenses with a physical optics tool

Pilar Castillo-Tapia¹, Sergio Garcia-Martinez², Francisco Mesa³, Jose Rico-Fernandez³, Oscar Quevedo-Teruel⁴

¹KTH - Royal Institute of Technology, ²Universidade Politécnica de Madrid, ³University of Sevilla, ⁴Northern Waves AB

EuMC14-4

Dual-Beam Planar D-Band Antenna Array: Filtering Patch Antennas and Dielectric Lens

Vitor Carvalho de Almeida¹, Mehmet Ahad Yurtoglu¹, Ramez Askar¹, Laurenz John¹, Jaehoon Chung², Arnulf Leuther³, Woochan Kim³, Chulkyu Mun³, Jeongin Kim³, Yonghak Suh³, Jongpil Lee³, Michael Peter⁴, Thomas Hausstein⁴, Wilhelm Keusgen⁴

¹Fraunhofer Heinrich Hertz Institute, ²Fraunhofer IAF, ³LG Electronics, Inc., ⁴Technical University Berlin

EuMC14-5

W-band Horn Beam-Forming Network Fed Wide-Angle Multibeam Metasurface Antenna Based on Through Glass Via Technology

Chun Geng¹, Ji-Wei Lian¹, Dazhi Ding¹

¹Nanjing University of Science and Technology

Expedition

EuMC15

Innovative Fabrication Techniques for Passive Components

Chair: Gerald Gold¹

Co-Chair: Hjalti H. Sigmarsson²

¹Friedrich-Alexander Universität Erlangen-Nürnberg, ²Oklahoma University

EuMC15-1

Micro Additively Manufactured Suspended Stripline for Sub-THz Applications

Hiba LAHLIMI ALAMI¹, Cyril Guines¹, Nicolas Delhote¹, Aurélien Périgaud¹, Sébastien Rougier¹, Damien Passerieux¹, Pedro Rynkiewicz², Stéphane Bila¹

¹Xlim - CNRS- Université De Limoges, ²Centre National d'Études Spatiales (CNES)

EuMC15-2

Fine Pitch Coplanar Waveguides on a 3D Printed Substrate using an Optimized Laser Structuring Process

Alexander Quint¹, Luca Valenziano¹, Marius Kretschmann¹, Pascal Maier¹, Patrick Schwaab¹, Georg Gramlich¹, Alexander Kotz¹, Christian Koos¹, Thomas Zwick¹, Akanksha Bhutani¹

¹Karlsruhe Institute of Technology (KIT)

EuMC15-3

Monolithically 3-D Printed E-Plane-Stub Waveguide Filters With Flexible Polarization Rotation and Allocation of Transmission Zeros

Zhihong Xu¹, Jin Li¹, Tao Yuan¹

¹Shenzhen University

EuMC15-4

Analog Phase Shifter with Substrate Integrated Electrodes in Dielectric Image Line Technology

Tobias Bader¹, Gerald Gold¹

¹Friedrich Alexander University of Erlangen-Nürnberg

EuMC15-5

Post-fab Local Porous Silicon Integration in Standard Resistivity Silicon Wafers for RF Applications

Romain Tuyaerts¹, Gilles Scheen¹, Martin Rack², Massinissa Nabet³, Arthur Vandroogenbroek³, Amin Rassekh⁴, Khaled Aouadi⁴, Jean-Pierre Raskin⁴

¹Inceze, ²UCLouvain

WEDNESDAY 08:30 - 10:10

ROOM	Auditorium	Spark	Flash	Glow
	EuMC16 Panel Session: EE Education in Paradigm-changing Times - Challenges & Opportunities Chair: Guy Vandenbosch KU Leuven	EuMC17 Material Characterisation Chair: Kamran Ghorbani ¹ Co-Chair: Nicolas Delhote ² ¹ RMIT University, ² XLIM Research Institute, University of Limoges	EuMC18 mm-Wave and THz Photonics: Devices, Systems, and Applications Chair: David Marpaung ¹ Co-Chair: Guillaume Ducournau ² ¹ University of Twente, ² University of Lille	EuMC19 Advanced Rectification Techniques for High-Efficiency Wireless Power Systems Chair: Nuno Borges Carvalho ¹ Co-Chair: Jiafeng Zhou ² ¹ University of Aveiro / Instituto de Telecomunicações, ² University of Liverpool
08:30 - 08:50	08:30 - 10:10 Panel Session: EE Education in Paradigm-changing Times Education in Microwave Engineering faces daunting challenges in an epoch of indiscriminate access to information and unprecedented technological progress. Supplementary pressure was recently added by the explosive impact of generative AI. Does academic education meet the demands of these times? Five educators with a best-practice track-record will frontally tackle these questions in a panel session, opened by a keynote address, followed by short pitches and an engaging, open debate.	EuMC17-1 Analysis of parameters impacting measurement uncertainties and implementation of the calibration protocol for permittivity extraction using a GSG probe Ikram Sbaï ¹ , Damien Passerieux ¹ , Nicolas Delhote ¹ , Olivier Tantot ¹ , Emmanuel Perrin ² ¹ XLIM - CNRS - Université de Limoges, ² CISTEME, FR	EuMC18-1 Beam Steering for Long-Distance Beam-THz Links Using a Lens-Integrated Leaky-Wave Antenna Joel Dittmer ¹ , Akanksha Bhutani ² , Luca Valenziano ² , Felix Beuthan ¹ , Sandrine Wagner ¹ , Axel Tessmann ¹ , Thomas Zwick ² , Christian Koos ¹ , Sebastian Randel ¹ ¹ Institute of Photonics and Quantum Electronics, Karlsruhe Institute of Technology, Germany, ² Institute of Radio Frequency Engineering and Electronics, Karlsruhe Institute of Technology, Germany, ³ Fraunhofer Institute for Applied Solid State Physics (IAF), Germany	EuMC19-1 Small High-Efficiency Broadband Rectifier Based on Compact Coupled Structure Haoming He ¹ , Kai Song ¹ , Zhongqi He ¹ , Liping Yan ¹ , Changjun Liu ¹ ¹ Sichuan University
08:50 - 09:10	08:30 - 09:10 Teaching Conceptual Electromagnetics: from Mathematics, over Physics, to Applications Guy Vandenbosch, KU Leuven	EuMC17-2 RF Characterization of New Generations of Bio-Based PCB Substrates in Harsh Environment Ferial GUIDOUM ¹ ¹ Centre de radiofréquences, optique et micronanoélectronique des Alpes (CROMA), UMR-CNRS 5130	EuMC18-2 Advanced Electro-Optic Comb Techniques for dynamic THz wave generation and MWP RF filtering Jean Berney ¹ , Ewelina Obrzud ¹ , Sanghoon Chin ¹ ¹ CSEM	EuMC19-2 High-Power Class-F GaN MMIC Rectifier for Space-Based Solar Power Applications Xiaoliang Gu ¹ , Jiteng Ma ¹ , Dongchi Zhang ¹ , Mark Beach ¹ ¹ University of Bristol
09:10 - 09:30	09:10 - 09:30 Pitches by European Educators Mark Bentum, Eindhoven University of Technology Alessandro Galli, Sapienza Università di Roma, Dirk Heberling, RWTH Aachen University Hendrik Rogier, Ghent University	EuMC17-3 Reflection TDS-THz characterization and Drude modelling of n-type doped c-Si from room temperature to 475 K Paolo Sberna ¹ , Laurens Beijnen ¹ , Martijn Huiskes ¹ , Andrea Neto ¹ ¹ Delft University of Technology	EuMC18-3 Heterogeneous InGaAs/SiC UTC-PDs with Array Antennas Enabling On-Chip THz Wireless Communication Ming Che ¹ , Yoshiki Kamiura ¹ , Yuanhao Li ¹ , Kazutoshi Kato ¹ ¹ Kyushu University	EuMC19-3 Watt-Level X-Band GaN Schottky Diode Rectifier Xiaochen Yu ¹ , Haoran Wang ¹ , Xiantao Yang ¹ , Shawn S.H. Hsu ² , Ta-jen Yen ² , Yejun He ¹ , Chaoyun Song ² , Yi Huang ¹ , Jiafeng Zhou ¹ ¹ University of Liverpool, ² National Tsing Hua University, ³ Shenzhen University
09:30 - 09:50	09:30 - 09:50 Panel Discussion S. Hossein Hosseini Buiki ¹ , Mehrdad Rezaei Golghand ¹ , Mohammad Memarian ² , Behzad Rejaei ² , Joachim Oberhammer ¹ ¹ KTH - Royal Institute of Technology, ² Sharif University of Technology	EuMC17-4 Non-Uniform Rectangular Waveguide Sensor for Measuring the Dielectric Constant of Vegetable Oils Paula Viudes-Pérez ¹ , Héctor García-Martínez ¹ , Germán Torregrosa-Penalva ¹ , Julia Arias-Rodríguez ¹ , Enrique Bronchalo ¹ , Ernesto Avila-Navarro ¹ , Ilona Piekarz ¹ , Jakub Sorocki ¹ ¹ Miguel Hernandez University of Elche, ² AGH University of Science and Technology	EuMC18-4 Fully Photonic Wireless Link Operating between 100 and 600 GHz with up to 90 Gbit/s Line Rate Milan Deumer ¹ , Oliver Stiewe ¹ , Simon Nellen ¹ , Robert Elschner ¹ , Ronald Freund ¹ , Martin Schell ¹ , Robert B. Kohlhaas ¹ ¹ Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute	EuMC19-4 Compact Broadband Voltage Doubler Rectifier with Nonuniform Transmission Line Based Input Matching Lukas Hüsen ¹ , Muh-Dey Wei ¹ , Renato Negra ¹ ¹ HFE RWTH Aachen
09:50 - 10:10		EuMC17-5 Waveguide-based Characterization of Magnetically-biased Soft Ferrites for Nonreciprocal Devices at Sub-THz Frequencies Adrian Ramos ¹ , Maria C. Santos ¹ , Victor Polo ¹ , Antoni Barlabé ¹ , Josep Prat ¹ ¹ Universitat Politècnica de Catalunya (UPC)	EuMC18-5 Compact Bidirectional Fiber-Antenna for Radio-over-Fiber Helena Ribeiro ¹ , Amit Baghel ¹ , Nuno Borges Carvalho ¹ ¹ Universidade de Aveiro - IT	EuMC19-5 Power Combining in Wireless Power Transfer Receivers Comparing RF and DC Combining Helena Ribeiro ¹ , Amit Baghel ¹ , Nuno Borges Carvalho ¹ ¹ Universidade de Aveiro - IT

WEDNESDAY 08:30 – 10:10

ROOM

Polar

EuRAD01

EuRAD Opening

Chair: Laura Anitori¹

Co-Chair: Kostas Doris²

¹CNIT RASS, ²NXP Semiconductors

08:30 Welcome Address: Opening of the European Radar Conference 2025

08:50 Laura Anitori¹
¹CNIT RASS

08:50 High resolution Radar for next level of autonomous Driving! Will AI at the edge change the way of thinking?

09:30 Mark Steigemann¹
¹NXP

09:30 Evolution of AESA technologies and trends in military phased array radar systems

10:10 Simon van den Berg¹
¹Thales Nederland B.V.

Media Arena

EuMC-PP1

1-Minute Poster Pitch: EuMC

Chair: Mark S. Oude Alink¹

Co-Chair: Kamil Yavuz Kapusuz²

¹University of Twente, ²IMEC-Ghent University/Belgium

09:30 1-Minute Poster Pitch: EuMC

10:10 NEW at EuMW: 1-Minute Poster Pitches! Join us for this exciting and fast-paced new format in which posters are pitched in a maximum of one minute. In this session, the posters of EuMC26 will be pitched.

WEDNESDAY 10:50 - 12:30

ROOM

Mission 1

EuMC20

Active Circuits and Modules

Chair: Kamal Samanta¹Co-Chair: Nils Weimann²¹AMWT Ltd UK, ²University of Duisburg Essen10:50
-
11:10

EuMC20-1

A Reconfigurable Modulator for All-Digital Multiphase Transmitters with Minimal Clock Complexity

Deguang Sun¹, Andreas Wentzel¹¹Ferdinand-Braun-Institut gGmbH, Leibniz-Institut für Höchstfrequenztechnik11:10
-
11:30

EuMC20-2

A Q Band MMIC Low Noise Amplifier Design Using 100 nm Gate Length GaAs pHEMT Technology

Long Jiang¹, William McGinn¹, Elle Franks¹, Brian Ellison¹, Gary Fuller¹, Danielle George¹¹The University of Manchester11:30
-
11:50

EuMC20-3

Robust Ku-Band Low-Noise Amplifier in GaN HEMT Technology

Luisa de la Fuente¹, Beatriz Aja¹, Enrique Villa¹, Eduardo Artal¹, Philipp Neininger², Christian Friesicke², Fabian Thome², Peter Brückner², Aintzane Lujambio², David Lobato², Mario Rueda², David Cuadrado-Calle², Valerie Dutto⁴¹Universidad de Cantabria, ²Fraunhofer IAF, Fraunhofer Institute for Applied Solid State Physics, ³ALTER Technology TÜV Nord, ⁴European Space Agency, European Space Research and Technology Centre11:50
-
12:10

EuMC20-4

Best-In-Class Phase Noise for Next Generation Connectivity by Super High Frequency Crystal Resonator

Tadayuki Nomura¹¹Murata Manufacturing Co., Ltd.12:10
-
12:30

EuMC20-5

A J-Band Low-Noise Amplifier with 100+ GHz 3-dB Bandwidth in a 130-nm SiGe BiCMOS Technology

Arijith Chandra-Prabhu¹, Janusz Grzyb¹, Marcel Andree¹, Zhichu Cao¹, Holger Rucker², Ullrich R. Pfeiffer¹**EuMC CP & YEP nominee**¹University of Wuppertal, Wuppertal, ²IHP - Leibniz-Institut für innovative Mikroelektronik

Mission 2

EuMC21

Tunable, Reconfigurable, and Acoustic-Wave Filters

Chair: Photos Vryonides¹Co-Chair: Nicolas Delhote²¹Frederick Research Center, Cyprus, ²XLIM Research Institute, University of Limoges

EuMC21-1

Re-imagining Acoustic Filters with Piezo-On-Insulator (POI) Technology

S. Ballandras¹, A. Clairet¹, E. Courjon¹, T. Makdissy¹, T. Laroche¹, F. Bernard¹, S. N'diaye¹, G. Aspar¹, L.R. du Roscoat², F. Allibert², J. Huyet², A. Drouin², L. Capello², M. Broekaart², M. Bousquet², A. Reinhardt², T. Baron², W. Daniau², R. Salut², G. Martin², A. Alami-Idrissi², C. Didier²**INDUSTRIAL KEYNOTE**¹SOITEC SA, Besançon site, ²SOITEC SA, ³CEA - LETI, ⁴FEMTO-ST

EuMC21-2

A Channelized RF Reconfigurable Filter MMIC utilizing Differential Synthesis Structure

Juncal Lv¹, Zhipeng Li², Tao Cao¹, Youjiang Liu², Li Gu¹¹Institute of Electronic Engineering of CAEP, ²China Academy of Engineering Physics

EuMC21-3

A Miniature Acoustic-Wave Band-stop Filter with a Broad Passband

Mehran Golcheshmeh¹, Matthew Ou¹, Raafat R. Mansour¹¹University of Waterloo

EuMC21-4

RF co-designed Single- and Multi-band Acoustic-Wave Filter-LNAs with Intrinsic Switching

Steven Matthew Cheng¹, Dimitra Psychogiou¹¹University College Cork & Tyndall National Institute

EuMC21-5

A Study on the Co-design of On-chip Varactor-based Gallium Nitride Microstrip Bandpass Filters

Andrés Fontana¹, Dimitra Psychogiou¹¹Tyndall National Institute

Quest

EuMC22

Microwave Antennas with Radiation Control

Chair: Marlene Harter¹Co-Chair: Jo Tamura²¹Offenburg University of Applied Sciences, ²Nihon University

EuMC22-1

A Compact Automotive Multi-Antenna Module with New Octagonal GNSS Scarabaeus Antenna

Maximilian Holzner¹, Josua Ephraim Immanuel Buschmann¹, Stefan Lindenmeier¹¹Universitaet der Bundeswehr Muenchen

EuMC22-2

A Trap-Loaded Tri-Band Antenna for Wi-Fi 7 (2.4/5/6 GHz) Applications

Jo Tamura¹, Hiroyasu Ishikawa¹, Hiroyuki Arai²¹Nihon University, ²Yokohama National University

EuMC22-3

Quasi-Absorptive Planar Monopole Antenna

Runze Li¹, Li Yang¹, Zekai Luo², Roberto Gómez-García¹¹University of Alcalá, ²Sun Yat-Sen University

EuMC22-4

Differentially-Fed High-Selectivity Filtering Antenna Array With Quasi-Reflectionless Behavior and High Common-Mode Suppression

Xi-Bei Zhao¹, Roberto Gómez-García²¹Harbin Engineering University, ²University of Alcalá

EuMC22-5

Enhanced Low Frequency GPR Measurement Using Optimized Vivaldi Antennas

Philip Arthur¹, Mathias Kromer¹, Marlene Harter¹¹Institute for Unmanned Aerial Systems, Offenburg University, Germany

Expedition

EuMC23

Printed Antennas and Lenses for Microwave and mm-Wave Frequencies

Chair: Hjalti H. Sigmarsson¹Co-Chair: Gerald Gold²¹University of Oklahoma, ²Friedrich-Alexander Universität Erlangen-Nürnberg

EuMC23-1

Inkjet-Printed Monolithically-Integrated Magneto-electric Dipole Antennas

Kevin Martin¹, Dimitra Psychogiou¹¹University College Cork and Tyndall National Institute

EuMC23-2

A 3D-Printed Multi-Material GRIN Lens with an Integrated Matching Layer at 20 GHz

Simon P. Hehenberger¹, Stefano Caizzone¹, Alexander Yarovoy²¹German Aerospace Center (DLR), Oberpfaffenhofen, Germany, ²TU Delft

EuMC23-3

3D-Printed Pickett-Potter Horn With a Sine-Squared Antenna Profile

Dominik Langer¹, Sarah Klass¹, Bartosz Tegowski¹, Frederike Bartels¹, Alexander Kölpin¹¹Hamburg University of Technology (TUHH), Institute of High-Frequency Technology

EuMC23-4

Effective Permittivity Determination Procedure for 3D-Printed Dielectric Lenses

Rasmus Mentzer¹, Frederike Bartels¹, Nico Weiss¹, Alexander Kölpin¹¹Hamburg University of Technology (TUHH), Institute of High-Frequency Technology

EuMC23-5

Compact Geodesic Lens Antenna with 220° Field-of-View: from the Concept to Additive Manufacturing

Aurélien Dorlé¹, Alessandro Henrique De Oliveira Cabral Junior¹¹ONERA

WEDNESDAY 10:50 - 12:30

ROOM

Flash

EuMC24

Special Session: Microwave Photonics: Enabling the Future of Wireless, Radar, and Space Systems

Chair: Xin (Scott) Yin¹

Co-Chair: Chris Roeloffzen²

¹IDLab, Ghent University - imec, ²LioniX International

10:50
-
11:10

EuMC24-1

Optical Frequency Combs for Enabling sub-THz 6G Communication System

Liam Barry¹, Alison Kearney², Amol Delmadede², Frank Smyth¹

¹Dublin City University, ²Pilot Photonics

11:10
-
11:30

EuMC24-2

Demonstration of a widely distributed multistatic multiband coherent photonics-based MIMO radar in a coastal surveillance scenario

Mirco Scaffardi¹, Filippo Scotti¹, Antonio Malacarne¹, Luca Rinaldi¹, Federico Camponeschi¹, Malik Muhammad Haris Amir², Salvatore Maresca³, Paolo Ghelfi¹, Antonella Bogoni¹

¹CNIT, ²Scuola Superiore Sant'Anna, ³CNR

11:30
-
11:50

EuMC24-3

Astro-FG: Agile Optical Frequency Generators for Space Applications

Amol Delmadede¹, Alison Kearney¹, Gaurav Jain¹, Liam Barry², John Donegan³, Frank Smyth¹

¹Pilot Photonics, ²Dublin City University, ³Trinity College Dublin

11:50
-
12:10

EuMC24-4

Microwave Photonics Empowered Integrated Sensing and Communication for 6G

Shilong Pan¹, Lihan Wang¹

¹National Key Laboratory of Microwave Photonics

12:10
-
12:30

EuMC24-5

High-speed electronics for microwave photonics

Xin (Scott) Yin¹

¹Imec - Ghent University

Glow

EuMC25

Advanced Wireless Sensing and Communication Technologies: Systems, Sensors, and Security

Chair: Jasmin Grosinger¹

Co-Chair: Huib Visser²

¹Graz University of Technology, ²imec, The Netherlands

EuMC25-1

Wireless Lab-on-Chip: Inkjet Printed Flexible mm-Wave RFID Module with Integrated Embedded Fluidic Sensors for Salinity Monitoring

Theodore Callis¹, Marvin Joshi¹, Manos M. Tentzeris¹

¹Georgia Institute of Technology

EuMC25-2

CASSIOPeiA Solar Power Satellite Antenna Array - Final Breadboard Results

Neil Buchanan¹, Hossein Mardani², Yat Hin Chan¹

¹Queen's University Belfast, ²Queen's University Belfast

EuMC25-3

Lens-Based High-Sensitivity 5G mm-Wave Electromagnetic Field Sensors

Leila Gottmer¹, Huasheng Zhang¹, Nuria LLombard Juan¹, Marco Spirito¹

¹Delft University of Technology

EuMC25-4

A New Genetic Algorithm Approach for Hybrid-Domain Spectral Signature Design

Nathalia Duque-Madrid¹, Miguel Ángel Gómez Laso¹, Francisco Luna², Alejandro Pons-Abenza³, Txema Lopetegui⁴, Iván Arregui⁵, Israel Arnedo⁶, Arancha Sánchez⁷, Silvia Zabala⁸, Eduardo Trébol⁹, Germán Andrés Álvarez-Botero¹

¹Universidad Pública de Navarra, ²Universidad de Málaga, ³Centro Stirling S. Coop. (MC3), ⁴Embega S.Coop.

EuMC25-5

A Novel Dual-Key Authentication via Wireless Power Transfer for Secure SWIPT-Based IoT Systems

Taki Eddine Djidjekh¹, Gaël Loubet¹, Daniela Dragomirescu², Alexandru Takacs³

¹LAAS - CNRS

Polar

ARFTG 22nd

On-Wafer Forum

Chair: Gia Ngoc Phung¹

¹PTB

On-Wafer Forum

For those of you who are new to us, we are an informal discussion group devoted to sharing information and issues related to the on-wafer measurement and calibration practices. The Forum is also a platform to define workgroups and gather experts in the field to progress the field of on-wafer measurements and calibrations. Forum principles:

- Facilitate discussion with like-minded engineers
- Open exchange of experience, ideas, discussion of problems
- Informal atmosphere

10:50 - 11:20 **Matador - Autonomous characterization and optimization of μ W transistors based on machine learning**

Olof Bengtsson (FBH)

11:20 - 11:40 **Discussion**

11:40 - 12:05 **Linear Propagation of Uncertainty in Probe Position Compensated Multiline-TRL**

Robin Schmidt (Keysight)

12:05 - 12:25 **Discussion**

12:30 **Closing**

WEDNESDAY 10:50 - 12:30

Hall 7

EuMC26

EuMC Interactive Poster Session 1

Chair: Kamil Yavuz Kapusuz¹

Co-Chair: Mark S. Oude Alink²

¹IMEC-Ghent University/Belgium, ²University of Twente

These posters will have
1-minute pitches in EuMC-PP1
on Wednesday morning!

EuMC26-1

An Analysis to Predict the Optimal Physical Length of the Coupled Lines of a Transformer Balun

Nethini Thilanga Weerathunge¹, Sudipta Chakraborty¹, Simon J. Mahon¹, Melissa Gorman¹

¹Macquarie University

EuMC26-4

A High-Isolation Dual-Frequency Co-Polarized Ku/Ka Array Antenna

Bo Fu¹

¹University of Electronic Science and Technology of China

EuMC26-7

Digital-Twin Technology Solutions for Chip-Package-PCB-Antenna Systems: Correlation-aware Equivalent Circuit Representation Using Eigen-State Formulation

Sidina Wane¹

¹eV-Technologies

EuMC26-11

Fabrication and Characterization of Eco-Friendly Non-Isocyanate Polyurethane Nanocomposites for Electromagnetic Shielding by Absorption

Ahmad KHAMIS¹, Laetitia Urbanczyk², Christophe Detrembleur², Isabelle Huynen¹

¹Université catholique de Louvain, ²University of Liege

EuMC26-2

Loss Analysis of PCB-Based mm-Wave Air-Filled Substrate Integrated Waveguides

Bram Hoflack¹, Kamil Yavuz Kapusuz¹, Samuel Rimbaut¹, Victor Van der Elst¹, Sam Lemey¹, Hendrik Rogier¹

¹Ghent University -imec, IDLab - Electromagnetics Research Group

EuMC26-5

CPWG-to-Waveguide Transition-Integrated 8×1 Slot Array Antenna with Low Sidelobe Level for W-band

Deokjin Seo¹, Seokyeon Hong¹, Seungwoo Nam¹, Yunsik Park¹, Jong-In Ryu¹

¹KETI (Korea Electronics Technology Institute)

EuMC26-8

Compact and Robust Low-Power Termination for Ridge-Waveguides

Gian Marco Zampa¹, Maurizio Cirillo², Antonio Morini¹

¹Università Politecnica delle Marche, ²Rheinmetall Italia SpA

EuMC26-12

Design, Realization and Screwless Assembly of a Hybrid PCB-Waveguide Module Using Additive Manufacturing

Odette Denis¹, Romain Ammar¹, Benjamin Potelon², Cédric Quendo¹, Julien Haumant¹, Kyrian Mear¹, Dylia Bechiti¹, Julien Deza³, Romain Hubert³, Thomas Merlet³, Christophe Goujon⁴, Rachid Jaoui⁵

¹University of Brest, Lab-STICC, ²Lab-STICC, IMT-Atlantique, Brest, France, ³Elliptika (GTID), ⁴Protecno (GTID), ⁵THALES LAS, Elancourt, France, ⁶DGA / AID

EuMC26-3

Ultra-wideband Common-Mode Rejection Filter Using Mode Conversion Technique

Dong Jae Go¹, Byungcheol Min¹, Mun Ju Kim¹, Hyun Chul Choi¹, Kang Wook Kim¹

¹Kyungpook National University

EuMC26-6

Impact of Duty Cycle on Dynamic Frequency Selection Capabilities of WLAN Equipment During In-Service Monitoring According to ETSI EN 301 893 V2.1.1

Zsolt Gulácsi¹

¹National Media and Infocommunications Authority

EuMC26-9

90° H-Plane Transition Design from Standard Waveguide to Half-Mode Groove Gap Waveguide in E-Band

Wasim Alshrafi¹, Felix Kaltwasser¹, Carlos Galvis Salzburg¹, Thomas Bertuch¹

¹Fraunhofer FHR

EuMC26-13

Fabrication of Cavity-backed Serial-fed Microstrip Patch Antenna Array for D-band (140 GHz) using Quartz Glass on Silicon Hybrid Bonded Wafer

Kentaro Tani¹, Naotake Okada¹, Masato Tokai¹, Shoichiro Yamaguchi¹, Jungo Kondo¹, Makoto Iwai², Uwe Maaß³, Alexander Gäbler³, Wojciech Partyka³, Ivan Ndiip³

¹NGK Insulators Ltd, ²NGK Europe GmbH, ³Fraunhofer Institut für Zuverlässigkeit und Mikrointegration (IZM)

These posters will have
1-minute pitches in EuMC-PP1
on Wednesday morning!

EuMC26-14**PTFE-core flexible waveguide
and application to high-data-rate
interconnects at 80 GHz**

Alexandre Renau¹, Prakash Gyawali¹, Ronan Cranny²,
Julien Logette², Stéphanie Géas², Antoine Baudin²,
Yanis Charif², Ludovic Burgnies¹, Pascal Szriftgiser³,
Guillaume Ducourmau¹

¹Univ. Lille, CNRS, Univ Polytechnique Hauts-de-
France, UMR 8520 - IEMN - Institut d'Electronique
de Microélectronique et de Nanotechnologie,
F-59000 Lille, France, ²Axon Cable, ³University of
Lille, CNRS, Laboratoire de Physique des Lasers,
Atomes et Molécules, PhLAM, UMR 8523, F-59000
Lille, France

EuMC26-17**Characterization of a Frequency
Dependent Reflective Surface at
300 GHz: Absorption, Bandwidth
and Losses**

Dutin Frédéric¹, Victor Torres², Jorge Teniente³,
Abdu Subahan Mohammed¹, Rita Younes¹, Pascal
Szriftgiser⁴, Guillaume Ducourmau¹

¹Université de Lille, CNRS, Centrale Lille, Univ.
Polytechnique Hauts-de-France, UMR CNRS 8520
IEMN, Institut d'Electronique de Microélectronique
et de Nanotechnologie, ²Anteral, Spain, ³Public
University of Navarra (UPNA), ⁴University of Lille,
CNRS, Laboratoire de Physique des Lasers, Atomes
et Molécules, PhLAM, UMR 8523, F-59000 Lille,
France

EuMC26-15**A Wideband Low return Loss
Measurement Fixture for
Load-pull Verification of Power
Transistors**

Mohammadamin Kamali¹, Ioannis Peppas¹, Arezoo
Abdi¹, Arash Arsanjani¹, Helmut Paulitsch¹, Michael
Ernst Gadringer¹, Wolfgang Bösch¹

¹Graz University of Technology

EuMC26-16**15 GHz Independently Control-
lable Dual-Polarized 2-Bit Recon-
figurible Intelligent Surface**

Mehmet Ahad Yurtoglu¹, Ramez Askar¹, Sven Wittig¹,
Mathis Schmieder¹, Michael Peter¹, Wilhelm Keusgen²

¹Fraunhofer Institute for Telecommunications,
Heinrich Hertz Institute, HHI, ²Technische
Universität Berlin

WEDNESDAY 10:50 - 12:30

ROOM

Progress

EuRAD02

Automotive Radar Data Processing 1

Chair: André Bourdoux¹Co-Chair: Alessio Filippi²¹imec, ²NXP Semiconductors10:50
-
11:10**EuRAD02-1**

Free Space Segmentation using Automotive Radar

Mujtaba Hassan¹, Francesco Fioranelli¹, Alexander Yarovoy¹, Andras Palffy¹, Satish Ravindran², Dariu Gavrilă¹Delft University of Technology, ²NXP Semiconductors11:10
-
11:30**EuRAD02-2**

Revisiting the Decimated Back-Projection for Forward-Looking MIMO-SAR Imaging

Adnan Al Baba¹, Hichem Sahli¹, André Bourdoux², Marc Bauduin²¹Vrije Universiteit Brussel - imec, ²imec11:30
-
11:50**EuRAD02-3**

Joint ego-motion estimation and multiple object tracking using automotive radar

Sen Yuan¹, Taoyue Wang¹, Alexander Yarovoy¹, Francesco Fioranelli¹¹TUDELFT11:50
-
12:10**EuRAD02-4**

Novel Intuitive Metrics for Radar Point Cloud Validation

Ram Kishore Arumugam¹, Patrick Wallrath¹, André Froehly¹, Reinhold Herschel², Nils Pohl²¹Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques), ²Wavesense Dresden GmbH, ³Ruhr Universität Bochum12:10
-
12:30**EuRAD02-5**

Transformer-Based 4D Imaging Radar Point Clouds Understanding with Automatic Labeling

Zhifei Wang¹, Huiqiang Zhou¹, Hongquan Liu¹¹Calterah Semiconductor Technology Co., Ltd.

Spark

EuRAD03

Radar System Modeling and Signal Processing

Chair: Marina Gashinova¹Co-Chair: Felix Yanovsky²¹University of Birmingham, ²State University Kyiv Aviation Institute, Kyiv, Ukraine**EuRAD03-1**

On the modeling of plasma effects on radar signature

Harmen van der Ven¹¹Royal Netherlands Aerospace Center NLR**EuRAD03-2**

Digital Twins for Radar Object Detection: Improving Deep Learning with Synthetic Data

Philipp Reitz², Christian Künzle¹, Norman Franchi¹, Maximilian Lübke¹¹Friedrich-Alexander-Universität Erlangen-Nürnberg**EuRAD03-3**

Modelling Surface Roughness Using Measured Roughness Parameters for Automotive Radar Simulation

Helmut Schön¹, Duc Bao Ha¹, Fabian Roos¹, Sascha Laue¹**EuRAD CP nominee**¹Robert Bosch GmbH**EuRAD03-4**

Digital Twin Creation Using CLEAN for Radar Target Emulation

Arvid Sims¹, Bernhard Holzinger¹, Tom Vandeplas², Thomas Dallmann², Dirk Heberling²¹Keysight Technologies Deutschland GmbH, ²Keysight Technologies Belgium, ³TU Ilmenau, ⁴RWTH Aachen**EuRAD03-5**

Comparison of Re-Iterative Adaptive Beamformers for Phased Array Radars

Eiichi Yoshikawa¹, Chandra V Chandrasekar¹, Daichi Kitahara², Koji Nishimura³, Yuuki Wada⁴, Tomoo Ushio⁴¹Colorado State University, ²Keio University, ³Kyoto University, ⁴Osaka University

WEDNESDAY 13:50 - 15:30

ROOM

Mission 2

EuMC27

New Synthesis, RF Design, and Integration Techniques for Microwave Filters

Chair: Roberto Gómez-García¹

Co-Chair: Giuseppe Macchiarella²

¹University of Alcalá, ²Politecnico di Milano

13:50
-
14:10

EuMC27-1

Accurate Cascade Synthesis of High-Order Stopband Filters

Matteo Oldoni¹, Stefano Tamiazzo², Giuseppe Macchiarella¹, Gian Guido Gentili¹

¹Politecnico di Milano, ²Andrew

14:10
-
14:30

EuMC27-2

Fully Formula-Based Design Approach of Asymmetric-Response Transmission-Line Filters Without Electromagnetic Coupling Tests

Hyunjong Choi¹, Juseop Lee¹

¹Korea University

14:30
-
14:50

EuMC27-3

A Wideband Superconducting Filter with Extended Stopband Rejection for Radio Astronomy Receivers

Bahare Mohamadzade¹, Alex Dunning¹, Ken Smart¹, Douglas B. Hayman¹, Yoon Chung¹, Santiago Castillo¹, Stephanie Smith¹

¹Commonwealth Scientific and Industrial Research Organisation

14:50
-
15:10

EuMC27-4

Substrate-Embedded Ka-Band Input Filter for Satellite Multibeam Payloads

Paolo Vallerotonda¹, Andriy Verbitskyy¹, Luca Pelliccia¹, Francesco Vitulli², Aurora De Padova¹, Sergio Di Nardo¹, Omid Bouzekri¹, Francois Deborgies³

¹RF Microtech s.r.l., ²THALES ALENIA SPACE (ITALY), ³ESA ESTEC

15:10
-
15:30

EuMC27-5

Split-Type Dual- and Tri-Band Filter Design Using Miniaturized Substrate-Integrated Coaxial Cavities

Min-Hua Ho¹, Wanchu Hong¹, Gwan-Wei Su², Mingchih Chen³

¹National Changhua University of Education, ²Wisconsin Technology Inc., ³Fu Jen Catholic University

Quest

EuMC28

Antenna Arrays and Beamforming Networks I

Chair: Marianna Ivashina¹

Co-Chair: Cyrille Menudier²

¹Chalmers University, ²XLIM Research Institute, University of Limoges

EuMC28-1

LOFAR: A hundred thousand element antenna array

Paulus P. Krüger¹

INDUSTRIAL KEYNOTE

¹Netherlands Institute for Radio Astronomy - ASTRON

EuMC28-2

Phase-offset Based Sidelobe Suppression for Co-frequency Multi-beam Systems

Chanhee Lee¹, Seong-Ju Lim¹, Young-Jun Lim¹, Ga-Yeong Park¹, Chihyun Cheong¹, Jong-Won Yu¹

¹Korea Advanced Institute of Science and Technology, ²Hanwha Systems

EuMC28-3

Polarization-Agile SatCom Antennas with Beamforming Chips on a Hexagonal Grid

Bilal Cetin¹, Rens Baggen¹, Jens Leiss¹, Pia Bergtholdt¹, Jürgen Kunisch¹, Constantine Kakoyiannis¹, Michael Wleklinski¹, Jochen Mosig¹, Wolfgang Wischmann¹

¹IMST GmbH

EuMC28-4

Monolithic Dual-Polarized Leaky-Wave Array with Off-Axis Pointing, 36 dBi Gain and "..."

Valentin Lourenço Martins¹, Erwan Rahault², Aurélie Dorlé², Stéphane Méric², Esteban Menargues³, María García-Vigueras³

EuMC CP & YEP nominee
¹ONERA/DEMR, Univ. de Toulouse and Univ. Rennes, INSA, CNRS, IETR-UMR 6164, ²Univ. Rennes, INSA Rennes, CNRS, IETR-UMR 6164, ³ONERA/DEMR, Univ. de Toulouse, ⁴SWISSto12

EuMC28-5

Dual Pattern Elements for Scan Loss Reduction in Wide-angle Scanning Phased Arrays

Giacomo Giannetti¹, Stefano Maddio¹, Monica Righini¹, Stefano Selleri¹

¹University of Florence

Expedition

EuMC29

Advanced Resonator Technologies for Wireless Communications and Power Transfer

Chair: Simon Hemour¹

Co-Chair: Changjun Liu²

¹Bordeaux University, IMS Laboratory, ²Sichuan University

EuMC29-1

Novel Coil Structures for Resonator-Coupled WPT Systems Enabling Long Distance Transmission

Daichi Togiya¹, Toshio Ishizaki¹

¹Ryukoku University

EuMC29-2

Enhancing Microstrip Resonators through LTCC and new Photo-imageable Paste Technology

Martin Ihle¹, Lynn Ratajczak¹, Kathrin Reinhardt¹, Stefan Körner¹, Benedykt Sikorski², Kamil Trzebiatowski², Łukasz Kulas², Krzysztof Nyka²

¹Fraunhofer Institut für Ceramic Technologies and Systems - IKTS, ²Gdansk University of Technology

EuMC29-3

Compact WPT System Using Four Resonators for Biomedical Implants

Aboualalaa Mohamed¹, Ramesh K. Pokharef¹

¹Kyushu University, ²Binghamton University, Binghamton, NY 13902, USA

EuMC29-4

Design of a Dual-Band Polarization-Insensitive Rectifying Metasurface for Wireless Power Transfer

Kai Song¹, Liping Yan¹, Changjun Liu¹

¹Sichuan University

EuMC29-5

Establishing BackCom Links Beyond Antenna Resonances

Yishan Wang¹, Jayakrishnan Methapettyparambu Purushothama¹, Wei Gong², Symon K. Podilchak², George Goussetis¹, Vincent Fusco¹, Yuan Ding¹

¹Heriot-Watt University, ²University of Science and Technology of China, ³University of Edinburgh, ⁴Queen's University Belfast

Spark

EuMC30

Advanced Linear Measurements

Chair: Ilona Rolfes¹

Co-Chair: Xiaobang Shang²

¹Ruhr University Bochum, ²National Physical Laboratory

EuMC30-1

A Reliable 2nd-tier Procedure for Characterizing Devices with N+1 Ports Using an N-Port VNA

Ziad Hatab¹, Bart Schrijver¹

¹Keysight

EuMC30-2

Automatic Probe Adjustment for 4-port On-wafer Measurement Without VNA Calibration

Ryo Sakamaki¹, Seitaro Kon¹, Takeshi Yoshida¹, Satoshi Tanaka¹, Shuhei Amakawa², Minoru Fujishima²

¹National Institute of Advanced Industrial Science and Technology, ²Hiroshima University

EuMC30-3

Enhanced Machine-Learning Based Probe Alignment for On-Wafer RF Measurements

Domenico Vitali¹, Alessandro Chillico¹, Bruno Puri¹, René Heldmaier², René Pascal Klausen³, Wojciech Samek⁴, Olof Bengtsson⁴

¹Ferdinand Braun Institut gGmbH (FBH), ²FBH-Berlin, ³Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute, HHI

EuMC30-4

Influence of RF Probe Tip Geometry on Surface Wave Generation in Millimeter-Wave on-Wafer Characterization

Arash Masrouri¹, Quentin Courte¹, Jean-Pierre Raskin¹, Dimitri Lederer¹

¹ICTEAM, Université catholique de Louvain, Belgium

EuMC30-5

Experimental Study on the Repeatability of Nanoscale On-Wafer Calibration Structures on High Resistivity Silicon Substrate up to 110 GHz

Daouda Seck¹, Djamel Allal², Kamel Haddadi³

¹LNE / University of Lille, ²Laboratoire National de Métrologie et d'Essais (LNE), ³University of Lille - IEMN

WEDNESDAY 13:50 - 15:30

ROOM

Flash

EuMC31

THz Circuits and Systems

Chair: Guillaume Ducournau¹Co-Chair: Joachim Oberhammer²¹University of Lille, ²KTH Royal Institute of Technology13:50
-
14:10EuMC31-1
Superconducting Integrated
Circuits for Sub-mm Wave
AstronomyJochem Baselmans¹, Akira Endo²**INDUSTRIAL KEYNOTE**¹SRON Netherlands Institute for Space, TU Delft, Universität zu Köln, ²TU Delft14:10
-
14:30EuMC31-2
320-GHz InP-HEMT Low Noise
Amplifier with Modified Ridge
CouplerIbrahim Abdo¹, Hiroshi Hamada¹, Teruo Jyo¹, Takuya Tsutsumi¹, Tarou Sasaki¹, Hiroyuki Takahashi¹¹NTT Corporation14:30
-
14:50EuMC31-3
High Power Characterization of
SIW-based D-band Traveling Wave
AmplifiersWeifeng Wu¹, Lei Li², James C. M. Hwang², Patrick Fay¹¹University of Notre Dame, USA, ²Cornell University, Ithaca, NY14:50
-
15:10EuMC31-4
A Photonic Assisted Visible Light
FMCW Lidar System for Large
Aperture Phased Array MIMO
Based on LEDsStephan Kruse¹, Jan Brockmeier¹, Max Schwengelbeck¹, Tobias Schwabe¹, J. Christoph Scheytt¹¹Paderborn University, Department of Electrical Engineering, Heinz Nixdorf Institute15:10
-
15:30EuMC31-5
A High-Gain 300 GHz Upconver-
sion Mixer Circuit in SiGe 130nm
BiCMOS TechnologyEnrico Jimenez Tuero¹, Seyyid Dilek¹, Andrea Malignaggi¹, Corrado Carta¹¹IHP - Leibniz-Institut für innovative Mikroelektronik, ²IHP - Leibniz Institut für innovative Mikroelektronik, Technische Universität Berlin

Glow

EuMC32

Modelling for Remote Sens-
ing and ScatteringChair: Andrea Neto¹Co-Chair: Alessandro Galli²¹TU Delft, ²Sapienza University of RomeEuMC32-1
Fast Determination of the
Monostatic Radar Channel in the
Near-Field of Electrically Large
TargetsBartosz Tegowski¹, Dominik Langer¹, Nils C. Albrecht¹, Alexander Kölpin¹**EuMC YEP nominee**¹Hamburg University of Technology (TUHH), Institute of High-Frequency TechnologyEuMC32-2
A fast method for real-time SAR
computation in homogeneous
virtual models in the HF to the
low-UHF bandsDaniele Ferrante¹, Micol Colella¹, Giuseppe Vecchi², Francesca Apollonio¹, Micaela Liberti¹¹DIET, Sapienza, University of Rome, Italy, ²LACE, Politecnico di TorinoEuMC32-4
3D-Modeling of Electro-Magnetic
Parameters of Microwave PlasmasChristoph Schopp¹, Holger Heuermann¹¹FH Aachen, University of Applied SciencesEuMC32-5
A PMCHWT-SMW Based Fast
Solver for the EM Scattering
Problems of Composite Metallic-
Dielectric StructuresJie Kang¹, Jihong Gu¹, ZhaoYuan Wang¹, Dazhi Ding¹¹Nanjing University of Science & Technology

Progress

EuRAD04

Automotive Radar Data
Processing 2Chair: David Greig¹Co-Chair: Martin Vossiek²¹Leonardo UK, ²Friedrich-Alexander University Erlangen-Nürnberg (FAU)EuRAD04-1
MIMO-SAR Multi-Session Simulta-
neous Localization and MappingDaniel Louback S. Lubanco¹, Ahmed Hashem¹, Markus Pichler-Scheder², Thomas Schlechter³, Reinhard Feger¹, Andreas Stelzer¹¹Johannes Kepler University, ²Linz Center Of Mechatronics GmbH, ³University of Applied Sciences Upper AustriaEuRAD04-2
Radar-based In-Vehicle Heart
Rate Estimation with an AI-based
Validity CheckPhilipp Stockel¹, Patrick Wallrath¹, Sandra Nowok¹, Maria A. Gonzalez Huici¹¹Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHFR)EuRAD04-3
Over-the-Air Virtual Scenario
Emulation for Vehicle-in-the-Loop
Testing with Improved AccuracyMuhammad Luqman Nazar¹, Masoumeh Pourjafarian¹, Matthias A. Hein¹¹Technische Universität IlmenauEuRAD04-4
Aiding Radar Odometry with S-57
Nautical Charts for GNSS-free and
Compass-free Pose EstimationChristian Denker¹, Carl Wölper², Sebastian Stäudte², Jens Wilbertz²¹Jade Hochschule University of Applied Sciences, ²University of BremenEuRAD04-5
Automotive SAR for Advanced
Road Debris DetectionTheresa Noegel¹, Marc Reinecke¹, Oliver Sura¹, Max Heidbrink¹, Marcel Hoffmann¹, Martin Vossiek¹**EuRAD YEP nominee**¹Institute of Microwaves and Photonics (LHFT), Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

Mission 1

EuRAD05

Industrial and Short-Range
Radar SensingChair: Matthew Ritchie¹Co-Chair: Francesco Fioranelli²¹University College London, ²TU DelftEuRAD05-1
Multi-Purpose Handheld Photonic
Terahertz FMCW Radar for Nonde-
structive Inspection of Thin and
Thick Layers of Paint-Coated Glass
Fiber-Reinforced CompositesShiva Mohammadzadeh¹, Raphael Hussung¹, Maris Bauer¹, Fabian Friederich¹, Dominik Gundacker¹¹Fraunhofer ITWMEuRAD05-2
A Novel Doppler Radar Setup with
a Wireless Reference Connec-
tion for the Near-Range Particle
DetectionKennet Braasch¹, Alexander Teplyuk¹, Michael Höft¹¹Kiel UniversityEuRAD05-3
Radar-based Analysis of Combustion
Processes Using a Stabilized
FMCW Radar in W-BandDaria Tsukanova¹, Francesca Schenkel¹, Irwin Barenholts¹, Dennis Pöhle¹, Ilona Rolfes¹, Christian Schulz¹¹Ruhr University BochumEuRAD05-4
Depth Map Reconstruction from
Low-altitude UAVHamed Javadi¹, Hichem Sahli¹, André Bourdoux¹¹IMECEuRAD05-5
Improving the Accuracy of
Pseudo-Transmission Measure-
ments in Material Charakteriza-
tion Kits by Modulated LoadsJan Barowski¹, Birk Hattenhorst², Javagar Mahendran¹, Timo Jaeschke², Ilona Rolfes¹¹Ruhr University Bochum, ²Zpi-Labs GmbH

WEDNESDAY 14:50 – 15:30

ROOM Media Arena**EuMC/EuRAD-PP**

1-Minute Poster Pitch: EuMC/
EuRAD

Chair: Mark S. Oude Alink¹

Co-Chair: Francesco Fioranelli²

¹University of Twente, ²TU Delft

**14:50
–
15:30**

**1-Minute Poster Pitch:
EuMC/EuRAD**

NEW at EuMW: 1-Minute Poster Pitches! Join us for this exciting and fast-paced new format in which posters are pitched in a maximum of one minute. In this session, the posters of EuMC/EuRAD02 will be pitched.

WEDNESDAY 16:10 – 17:50

These posters will have
1-minute pitches in EuMC/
EuRAD-PP on Wednesday
afternoon before this session!

Hall 7

EuMC/EuRAD02

EuMC/EuRAD Interactive Poster Session

Chair: Francesco Fioranelli¹

Co-Chair: Mark S. Oude Alink²

¹TU Delft, ²University of Twente

EuMC/EuRAD02-1

A 10W, High Gain, Multi-Octave Bandwidth Driver Amplifier for HF Radar's Transmitter Application

Chiranjit Majumder, Chiranjit Majumder¹, Nagaditya Poluri, Nagaditya Poluri¹, Basudev Majumder, Basudev Majumder²

¹Indian Institute of Technology Kanpur, ²Indian Institute of Space Science and Technology, Thiruvananthapuram

EuMC/EuRAD02-5

A Multi-Band Full-Duplex Prototype for Integrated Sensing and Communication

Bixing Yan¹, Andre Kokkeler¹, Yang Miao¹

¹University of Twente

EuMC/EuRAD02-9

Low-cost phased array for land mobile application

Przemyslaw Gorski¹, Frederic Bongard¹, Daniel Llorens del Rio¹, Alvaro Diaz Bolado¹, Michael Elsbury¹, Maxime Renard¹, Jose Sarmiento¹, Maria Carolina Viganó¹

¹ViaSat Antenna Systems SA

EuMC/EuRAD02-2

Power amplifier modeling and active antenna simulation

Jeremy Michel¹, Guillaume Neveux¹, Cyrille Menuudier¹, Marc Thévenot¹, Clément Hallépée¹, Damien Pitthon¹, Faycel Fezai¹, Michel Stanislawiak²

¹XLIM - CNRS - Université de Limoges, ²Thales Land & Air Systems

EuMC/EuRAD02-6

Extraction of target poles with high accuracy matrix pencil method based on ultra-wideband radar

Junyi Huang¹, Yu Ji¹, Yang Wu¹, Ang Liu¹, Yafeng Wang¹, Yuqi Tan¹, Shen Dong¹, Guangxin Wu¹, Yuhao Yang¹, Linghao Xia¹

¹Nanjing Research Institute of Electronics Technology

EuMC/EuRAD02-10

Eigenvector Informed Precoder Design for Active MIMO Transmitters

Jiayu Hou¹, George Goussetis², John Thompson², Yuan Ding¹

¹Heriot-Watt University and the University of Edinburgh, ²Heriot Watt University, ³University of Edinburgh, ⁴Heriot-Watt University

EuMC/EuRAD02-3

Active Backscatter Modulation using FMCW Radar Sensor for V2X Communication

Christoph Domnik¹, Michael Meuleners¹, Christoph Degen¹

¹Hochschule Niederrhein University of Applied Sciences

EuMC/EuRAD02-7

Compact and Lightweight Harmonic Tags for Insect Tracking with an X-Band Harmonic Radar

Andrei Mogilnikov¹, Anastasia Lavrenko¹

¹University of Twente

EuMC/EuRAD02-11

Application of Gradient Descent Algorithm in RFC Optimization and Data Transmission Strategy of MIMO System

Yifeng He¹, Yinyu Wei¹, Feng Su¹

¹Xian Institute of Space Radio Technology

EuMC/EuRAD02-4

A Local Interferometric Technique to Distinguish Between Different Radio-Vortices at 15 GHz

Lorenzo Scalcinati¹, Bruno Paroli¹, Mirko Siano¹, Marco A.C. Potenza¹

¹University of Milan

EuMC/EuRAD02-8

Evaluation of the Downlink Communication Parameters of an Indoor 5G Non-Public Network for the Constant Jammer Detection

Jimmy Nauzad¹, Maximilian Lübke², Norman Franchi³

¹Friedrich-Alexander-Universität Erlangen-Nürnberg, ²Friedrich-Alexander-Universität Erlangen-Nürnberg, ³Friedrich-Alexander-Universität Erlangen-Nürnberg

WEDNESDAY 16:10 – 17:50

ROOM

Mission 1

EuMC/EuRAD01

Special Session: Dutch Eco-system for Defence Radar

Chair: Ronny Harmanny¹

Co-Chair: Frank E. van Vliet²

¹Thales Nederland B.V., ²TNO Defense, Safety and Security

16:10
–
16:30

EuMC/EuRAD01-1

Excellence in Radar Systems: The Netherlands in the lead

Frank E. van Vliet¹

¹TNO Defense, Safety and Security

16:30
–
16:50

EuMC/EuRAD01-2

Anticipating the Threat

Dolf Verhoeven¹

¹NLD MoD / Materiel and IT Command

16:50
–
17:10

EuMC/EuRAD01-3

Radar systems at Thales Nederland, past, present and the future

Hans Schurer¹

¹Thales Nederland B.V.

17:10
–
17:30

EuMC/EuRAD01-4

Radar research and education at Dutch academia

Alexander Yarovoy¹

¹Delft University of Technology

17:30
–
17:50

EuMC/EuRAD01-5

Radar Innovation at TNO's Department of Radar Technology

Jacco de Wit¹

¹TNO Defense, Safety and Security

Mission 2

EuMC33

Innovations in Gap Waveguide Technology

Chair: Vicente Enrique Boria-Esbert¹

Co-Chair: Nicolas Delhote²

¹Technical university of Valencia, ²XLIM Research Institute, University of Limoges

EuMC33-1

Passive Components, Active Innovation: Gap Waveguide Technology for Next-Generation Millimeter Wave Circuits

Abbas Voosogh¹

INDUSTRIAL KEYNOTE

¹Gapwaves AB

EuMC33-2

Passive Intermodulation Mitigation in Waveguide Bandpass Filters Using Groove Gap Waveguide Technology

Mónica Martínez Mendoza¹, Raúl Cervera¹, Davide Smacchia², Jose Vicente Morro Ros³, Pablo Soto Pacheco⁴, Vicente Enrique Boria-Esbert¹

¹Universitat Politècnica de València, ²ESA-VSC European High Power RF Space Laboratory

EuMC33-3

3D printed 260 GHz drawer-like bandpass filter using groove gap waveguide concept

Aurélien Périgaud¹, Nicolas Delhote², Damien Pas-serieux³, Christian Wolff⁴, Andreas Frölich⁵

¹XLIM Research Institute, University of Limoges, Limoges, France, ²Horizon Microtechnologies GmbH

EuMC33-4

Optimized Flange Designs for a Multigap-Waveguide Liquid Crystal Phase Shifter at Ka-Band

Marc Späth¹, Robin Neuder², Téo Nespoulet², Martin Schüßler³, Rolf Jakob⁴, Alejandro Jiménez-Sáez⁵

¹TU Darmstadt, ²Univ. Rennes, INSA Rennes, CNRS

EuMC33-5

Ku-Band Sharp-Rejection Dual-Band Bandpass Filter in Groove Gap Waveguide Using Input/Output Extracted Cavities and Frequency Transformation

Mohamed Malki¹, Roberto Gómez-García²

¹University of Alcalá

Quest

EuMC34

Antenna Arrays and Beam-forming Networks II

Chair: Stefania Monni¹

Co-Chair: Kamil Yavuz Kapusuz²

¹TNO Defense, Security and Safety, ²IMEC-Ghent University

EuMC34-1

Additively manufactured antennas and slotted waveguide (array) antennas

Mark Sippel¹, Konstantin Lomakin¹

INDUSTRIAL KEYNOTE

¹Golden Devices GmbH

EuMC34-2

Dual-Polarized Cosecant-Squared Beam-Shaped Array Antenna for mmWave Mobile Communications

Ahmed Ashoor¹, Mehri Borhani Kakhki¹, Wenyao Zhai¹, Hari Krishna Pothula¹, David Wessel¹

¹Huawei Technologies Canada Co.

EuMC34-3

A 4:1 Dual-Polarized Connected Array Prototype with Parallel Plate Waveguide Feeds

Riccardo Ozzola¹, Ulrik Imberg², Daniele Cavallo¹

¹Delft University of Technology, ²Huawei Technologies AB

EuMC34-4

Wide Angle Scanning Phased Array Antenna for Ka-band Applications

Chanyalew Zewdu DAGNAW¹, Cyrille Menuudier¹, Marc Thévenot¹

¹Xlim - UMR 7252 - CNRS - Université de Limoges

EuMC34-5

A Wide-Scanning Evanescent Mode Waveguide Array with Enhanced Thermal Performance

Thijs Brouwers¹, Guillaume Theis², Bart Smolders², Diego Caratelli¹

¹The Antenna Company, ²Eindhoven University of Technology, The Netherlands

Expedition

EuMC35

Bioelectromagnetic Interaction for Healthcare Applications

Chair: Katia Grenier¹

Co-Chair: Chung-Tse Michael Wu²

¹LAAS-CNRS, ²Rutgers University

EuMC35-1

120 Mb/s Fat-Intrabody Communication (Fat-IBC)

Johan Engstrand¹, Ted Johansson¹, Roger L. Karlsson¹, Robin Augustine¹

¹Uppsala University

EuMC35-2

Dielectric Tissue Phantom Fabrication and Automated Compression Test System for Non-Invasive Blood Glucose Monitor

Dominika Kuziecko¹, Maxime Weiss², Bettina Gouyet³, Adrian Porch⁴, Heungjae Choi⁵

¹University of Cambridge, ²INP/ENSEIRB-MATMECA Bordeaux, France, ³Cardiff University

EuMC35-3

Experimental Setup for Modulated Electro-Hyperthermia (mEHT) Investigations with Arbitrary Modulation and Real-Time Impedance Monitoring

Christoph Schulze¹, Eva Oberacker², Paraskevi Danai Veltsista³, Anna Dieper⁴, Pirus Ghadjar⁵, Wolfgang Heinrich⁶, Olof Bengtsson⁷

¹FBH, ²Charité-Universitätsmedizin Berlin

EuMC35-4

Optimizing Prediction of Electromagnetic and Biological Parameters for Cardiac Ablation Using Deep Learning

Raffaele Crusi¹, Nicolò Colistra², Francesca Camera², Giuseppina Monti¹, Marco Salvatore Zappatore¹, Caterina Merla³, Luciano Tarricone⁴

¹University of Salento, Italy, ²ENEA, Italy

EuMC35-5

Instantaneous Electromagnetic Exposure from Vehicle-to-Everything Communication

Tobias Struck¹, Berk Altinel¹, Christian Bornkessel¹, Matthias A. Heim¹

¹Technische Universität Ilmenau

WEDNESDAY 16:10 – 17:50

ROOM

Polar

EuMC36

MTT-ISTP Panel Session:
Photovoltaic Power Orbital
Station – A Future at Reach
with Microwaves?

Chair: Simon Hemour¹

Co-Chair: Naoki Shinohara²

¹Bordeaux University, IMS Laboratory,
²Kyoto University

16:10
–
17:50

MTT-ISTP Panel Session: Photovoltaic Power Orbital Station – A Future at Reach with Microwaves?

With solar panels collecting power nights and days, space-based wireless power holds great promise for providing clean, reliable energy. However, the project scales are so huge that significant technological, economic, and environmental challenges must be overcome before it can become a viable solution. Ambitious programs are being started around the world to meet the challenge. In this panel, experts will share their knowledge and vision and engage interactions with the audience on this game-changer.

Moderator:

- Simon Hemour, Bordeaux University, France

Panelists:

- Stela Tkatchova, European Innovation Council
- Sanjay Vijendran, Space Energy Insights, The Netherlands
- Koichi Ijichi, J-Spacesystems, Japan
- Duan Baoyan, Xidian University, China
- Martin Soltau, Space Solar, UK
- Nuno Borges Carvalho, University of Aveiro, Portugal

Contacts:

- Ke Wu, Polytechnique Montréal, Canada
- J.-C. Chiao, Southern Methodist University, USA

Spark

EuMC37

Measurements of Active
Devices

Chair: Denis Barataud¹

Co-Chair: Mauro Marchetti²

¹Xlim - UMR 7252 - CNRS- Limoges
University, ²Maury Microwave

16:10
–
16:30

EuMC37-1 Recent Advances in Load-Pull and Noise Parameter Measurement Techniques

Mauro Marchetti¹

INDUSTRIAL KEYNOTE

¹Maury Microwave

16:30
–
16:50

EuMC37-2 On the Repeatability of Low-Cost Varactor-Based RF Impedance Tuners

Jonathan Okocha¹, Cristina Andrei¹, Matthias Rudolph²

¹Brandenburg University of Technology (BTU),
²Ulrich L. Rohde Chair of RF and Microwave
Techniques, Brandenburg University of Technology
(BTU), Cottbus, Germany

16:50
–
17:10

EuMC37-3 On-Wafer 16-Term Calibration for Characterization of InP HBTs Featuring Sub-THz f_{max}

Abhijeet Kanitkar¹, Ralf Doerner¹, Tom Keinicke
Johansen², Wolfgang Heinrich¹, Thomas Flisgen¹

¹Ferdinand-Braun-Institut, ²Technical University
of Denmark

17:10
–
17:30

EuMC37-4 Thermal Characterization of Radio Frequency Power Amplifier with Thermal Transient Test

Amir Mirza Gheytaghi¹, Zoltan Sarkany², Vittorio
Cuoco¹

¹Ampleon, ²Siemens

17:30
–
17:50

EuMC37-5 In-Situ Calibration with Silicon- Based Noise Diode for Enhanced Industrial RF Testing

Samuel NGUYEN DINH AN¹, Cybelle Belem Goncalves²,
Victor Fiorese³, Daniel Gloria⁴, Federico Alimenti¹,
Giacomo Schiavolini⁵, Guillaume Ducournau⁶, Joao
Carlos Azevedo Goncalves²

¹Univ. Lille, CNRS, ²STMicroelectronics, ³University
of Perugia, ⁴IEMN, Univ. Lille

Flash

EuMC38

Focussed Session: Terahertz
Technologies - Actual and
Future Trends

Chair: Dirk Nüßler¹

Co-Chair: Christoph Reising¹

¹Fraunhofer FHR

EuMC38-1

Current Trends in Terahertz
Technology - Transition from
Fundamentals to Practical Ap-
plications

Christoph Reising¹, Dirk Nüßler², Steffen Hansen¹,
Christian Bredendiek¹, Dominic Funke¹, Till Ziegler-
Bellenberg³, Siying Wang⁴, Patrick Wallrath¹, Jan
Wessel¹

¹Fraunhofer Institute for High Frequency Physics
and Radar Techniques (FHR), ²Ruhr University
Bochum

EuMC38-2

Development and Design of THz-
Pulse Generators for Broadband
Pulse-Based Transceiver Systems

Olga Krylova¹, Klaus Aufinger², Nils Pohl¹

¹Ruhr-University Bochum, ²Infinion Technologies AG,
³Ruhr University Bochum

EuMC38-3

Towards Energy-Efficient High-
Speed THz Communications Links

Nuria Lombart Juan¹

¹TU Delft

EuMC38-4

Sub-mm wave Thermal Radiation
from Silicon Wafers

Andrea Neto¹, Paolo Sberna¹, Laurens Beijnen¹, Juan
Bueno¹, Marco Spirito¹

¹TU Delft

EuMC38-5

An Integrated Terahertz Near-
Field Edge Sensing Probe in a
130-nm SiGe Technology

Xinpeng Du¹, Marcel Andree¹, Janusz Grzyb¹, Holger
Rücker², Ullrich R. Pfeiffer¹

¹University of Wuppertal, ²IHP - Leibniz-Institut für
innovative Mikroelektronik

WEDNESDAY 16:10 – 17:50

ROOM

Glow

EuMC39

Numerical Modelling

Chair: Oscar Quevedo-Teruel¹Co-Chair: Luca Perregri²¹KTH Royal Institute of Technology,²University of Pavia16:10
–
16:30

EuMC39-1

A Fast Frequency Sweep Method for Second-order EM Adjoint Sensitivity Analysis Based on MOR

Jianguo Xue¹, Feng Feng¹, Jinyi Liu¹, Xiaolong Li¹, Mutian Li¹, Jiali Zhang¹, Qi-Jun Zhang²¹Tianjin University, ²Carleton University16:30
–
16:50

EuMC39-2

An Adaptive Frequency Sweep Algorithm Employing Additive Perturbation in the Loewner Matrix Model for Electromagnetic Simulations

Shilpa T N¹¹National Institute of Technology Rourkela16:50
–
17:10

EuMC39-3

A 3D TCAD Thermal vs. Electro-Thermal Analysis of Large Area Discrete RF Power Transistors

Gabriele Formicone¹¹Integra Technologies, Inc.17:10
–
17:30

EuMC39-4

Double-Resonance Diffraction Radiation Antenna Grating Exited by Modulated Electron Beam

Dariia Herasymova¹¹Institute of Radio-Physics and Electronics NASU17:30
–
17:50

EuMC39-5

Novel Design Dimension Reduction Technique for Internal Acceleration of 3-D EM Topology Optimization for Waveguide Structures

Jiali Zhang¹, Feng Feng¹, Jing Jin², Ke Liu¹, Ke Liu¹, Jianguo Xue¹, Qi-Jun Zhang³¹Tianjin University, ²Central China Normal University, ³Carleton University

Progress

EuRAD06

Beamforming in Phased Array Radars

Chair: Marc Bauduin¹Co-Chair: Sen Yuan²¹Interuniversity Microelectronics Centre (Imec), ²TU Delft

EuRAD06-1

Broadband Beam Steering Algorithm for a Ka-Band AESA Frontend

Lukas Schmitz¹, Olaf Saalmann²¹Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR), ²Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR)

EuRAD06-2

Multi-Modal Radar and LiDAR Mapping of Marine Infrastructure at Millimeter and Sub-THz Frequencies

Anum Pirikani¹, Dillon Kumar², Natalie Reeves³, Mikhail Cherniakov⁴, Marina Gashinova⁵¹The University of Birmingham, ²University of Birmingham, ³University of Birmingham, ⁴University of Birmingham, UK

EuRAD06-3

An Efficient Sparse Iterative Recovery Algorithm for DOA Estimation in Automotive FMCW Radar

Yuxuan Zhang¹, Zihan Yang¹, Zhifei Wang¹, Kai Yang¹¹Calterah Semiconductor Technology Co., Ltd, China

EuRAD06-4

Iterative Adaptive Thresholding for 2D Estimation in Sparse Radar Arrays: Performance Analysis and Experimental Validation

Aitor Correas-Serrano¹, Christian Kurtzscheld¹, Maria A. Gonzalez Huici¹, Gunnar Briese¹¹Fraunhofer FHR

EuRAD06-5

Deep Learning-Based Inverse Covariance Matrix Reconstruction for Single-Snapshot Direction-of-Arrival Estimation

Zihan Yang¹, Zhifei Wang¹, Yuxuan Zhang¹, Kai Yang¹¹Calterah Semiconductor Technology Co., Ltd, China

THURSDAY 08:30 - 10:10

ROOM	Mission 1	Auditorium	Quest	Expedition
	EuMC/EuRAD03 Design of (MIMO) Radar Antenna Arrays Chair: Reinhard Feger ¹ Co-Chair: Rob van der Meer ² ¹ Johannes Kepler University Linz, ² Robin Radar Systems	EuMC/EuRAD04 Special Session: Space Microwave Technology - The ESA Experience Chair: Iain Davies ¹ Co-Chair: Elisa Cipriani ¹ ¹ ESA / ESTEC	EuMC40 Machine Learning and Optimization Chair: Tom Dhaene ¹ Co-Chair: Luca Perregrini ² ¹ UGent-imec, ² University of Pavia	EuMC41 Integration and Reconfiguration Approaches for Non-Planar Filters Chair: Michael Höft ¹ Co-Chair: Eric Rius ² ¹ Christian-Albrechts-Universität zu Kiel, ² Université de Brest
08:30 - 08:50	EuMC/EuRAD03-1 Sparse Array Design for Cost-Efficient Automotive Imaging Radar Ebrahim Sadeghpour ¹ , Saeid Sedighi ¹ , Marco Heinen ¹ , Maximilian Pöpperl ¹ ¹ Valeo Schalter und Sensoren GmbH	EuMC/EuRAD04-1 Q-band Front End Radiating Module for next generation active antennas at Thales Alenia Space Vincent Oullion ¹ ¹ Thales Alenia Space	EuMC40-1 Functionality Pre-encoding: Indirect Learning Technique for Radio Frequency Devices Characterization Abdullah Abdelrahman ¹ , Ahmed Kishk ² ¹ Concordia University, ² CONCORDIA UNIVERSITY	EuMC41-1 Compact Reconfigurable Filtering Components Using Dual-Mode TM-Mode Dielectric Resonators Abdulrahman Widaa ¹ , Michael Höft ² ¹ Physikalisch-Technische Bundesanstalt, ² Kiel University
08:50 - 09:10	EuMC/EuRAD03-2 Sidelobe Level Reduction in Antenna Arrays via Element Spacing Optimization Masoud Dorvash ¹ , Oliver Lang ¹ , Reinhard Feger ¹ ¹ Johannes Kepler University Linz - JKU	EuMC/EuRAD04-2 GaN MMIC Based Solid State Power Amplifier for X Band for Long Range High Capacity Communication Benoit Lefebvre ¹ ¹ Thales Alenia Space	EuMC40-2 Synthesis of 3-Pol Low-Cost Phased Arrays Via Element Polarization Optimization Eren Hamamci ¹ , Jonas Heylen ¹ , Guilherme Theis ² , Yanki Aslan ¹ ¹ TU Delft, MS3, ² Robin Radar Systems	EuMC41-2 Plastic 3D-Printed Tunable Microwave Filters for Very Low-Cost Applications Axel Detrain ¹ , Marco Guglielmi ² ¹ SRON, ² Universidad Politécnica de Valencia
09:10 - 09:30	EuMC/EuRAD03-3 76.5 GHz Hybrid Phased Array Radar with Grating-lobes-free Array Distribution for Automotive Radar Applications Masato Kohtani ¹ , Sungwoo Cha ¹ , Toshihiko Matsuoka ¹ , Shinji Yamaura ¹ ¹ MIRISE Technologies Corporation	EuMC/EuRAD04-3 Taking a Leap in Integration Density for Radio Telescopes With a SiGe based Single-Chip LO Generation Tobias T. Braun ¹ , Marcel van Delden ¹ , Christian Bredendiek ² , Nils Pohl ¹ ¹ Ruhr University Bochum, ² Fraunhofer FHR, ³ Ruhr University Bochum, Germany / Fraunhofer FHR, Germany	EuMC40-3 Data-Driven Path Loss Estimation in Human Body Communication: Enhancing Efficiency via Parameter Prioritization and Transfer Learning Hamideh Esmaeili ¹ , Lijia Liu ² , Cheng Yang ¹ , Jianqing Wang ¹ , Christian Schuster ¹ ¹ Hamburg University of Technology (TUHH), ² Nagoya Institute of Technology	EuMC41-3 Monolithically Integrated Half-Cylindrical Resonator- Based Bandpass Filters Ajay Mothe ¹ , Dimitra Psychogiou ¹ ¹ Tyndall National Institute, University College Cork, Ireland
09:30 - 09:50	EuMC/EuRAD03-4 Maximum Gain Multi-Beam Pattern Synthesis for Phased Array Radar using Convex Optimisation Wietse Bouwmeester ¹ , Rob van der Meer ¹ EuRAD YEP nominee ¹ Robin Radar Systems	EuMC/EuRAD04-4 Characterization of a V-Ka band receiver module with ultra low noise figure, high gain and linearity for geostationary satellite communication Sascha Krause ¹ , Bård Erik Nordbo ¹ , Øystein Jensen ¹ , Grunde Joheim ¹ , Deokki Min ¹ , Sigmund Bardal ¹ , Stein Hollung ¹ ¹ Kongsberg Defence and Aerospace, Space Electronics	EuMC40-4 Data-driven Full-Functionality Modeling of Broadband Radio Frequency Components Abdullah Abdelrahman ¹ , Ahmed Kishk ¹ ¹ Concordia University	EuMC41-4 Coaxial Bandpass Stub Filters Based on a New Interconnection Eric Rius ¹ , Jessica Bénédicto ¹ , Jean François Favennec ² , Juan-Pablo Guzman Velez ¹ ¹ Lab-STICC University of Brest, ² Lab-STICC/ENIB
09:50 - 10:10	EuMC/EuRAD03-5 Optimizing MIMO Radar Antenna Array for Precise and Reliable 2D Direction of Arrival Estimation Reza Aliabadi ¹ , Thomas Zwick ² , Mariene Harter ¹ ¹ Institute for Unmanned Aerial Systems, Offenburg University, ² Inst. of Radio Freq. Eng. and Electr., Karlsruhe Institute of Technology	EuMC/EuRAD04-5 Characterization Method for a GaN Based Amplifier, Controlled in Amplitude and Phase through IQ Modulator and Drain Bias Regulation Fabrizio Marrese ¹ , Elia Pancini ² ¹ Leonardo SpA, ² Leonardo Spa	EuMC40-5 Accelerating Automated Microwave Planar Circuit Design Using Population-Based Metaheuristics with Models Addressing to Data Drift Yuta Takayama ¹ , Takuma Akada ¹ , Kazuhiro Fujimori ¹ ¹ Okayama University	EuMC41-5 Ultra-Compact Inkjet-Printed Folded Waveguide Resonator-Based Bandpass Filters Berkay Dogan ¹ , Deepak Deepak Patil ¹ , Dimitra Psychogiou ¹ ¹ School of Engineering, University College Cork, Cork, T12 K8AF, Ireland, ² Tyndall National Institute, Cork, T12 R5CP, Ireland, ³ Tyndall National Institute, Cork, T12 R5CP, Ireland

THURSDAY 08:30 - 10:10

ROOM

Spark

EuMC42

Reconfigurable Intelligent Surfaces

Chair: Alejandro Jiménez-Sáez¹

Co-Chair: Vahid Nayyeri²

¹TU Darmstadt, ²Iran University of Science and Technology

08:30
-
08:50

EuMC42-1

A Broadband Liquid Crystal Reconfigurable Intelligent Surface with 750 Elements Operating around 60 GHz

Robin Neuder¹, Julia Schwarzbeck¹, Marc Späth¹, Alejandro Jiménez-Sáez²

EuMC CP nominee

¹Technical University Darmstadt

08:50
-
09:10

EuMC42-2

Water-Controlled 1-bit Reconfigurable Surface

Rasoul Fakhteh Balasi¹, Yi-Wen Wu¹, Yi Wang¹

¹University of Birmingham

09:10
-
09:30

EuMC42-3

The Choice of Time Gating Parameters for Characterization of the Reconfigurable Intelligent Surfaces with Continuous Amplitude and Phase Control

Pavlo Krasov¹, Oleg Iupikov¹, Yuqing Zhu¹, Marianna Ivashina¹

¹Chalmers University of Technology

09:30
-
09:50

EuMC42-4

Design and Analysis of Phase Configuration in RIS-assisted Communication Systems

Ga-Yeong Park¹, Hyo-Won Lee¹, Young-Jun Lim¹, Chanhee Lee¹, Ji-Young Kim¹, Jong-Won Yu¹

¹School of Electrical Engineering, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea

09:50
-
10:10

EuMC42-5

N78 Frequency Band Modular RIS Design and Implementation

Sefa Kayraklık¹, Recep Baş², Hasan Oğuzhan Çalışkan³, Samed Şahinoğlu⁴, Sercan Erdoğan¹, İlhami Unal¹, İbrahim Hokelek¹, Kıvanç Nurdan¹, Ali Görçin¹

¹TUBITAK BILGEM - HISAR, ²TUBITAK MAM - MILTAL, ³TUBITAK BILGEM, ⁴University College Dublin

Flash

EuMC43

Sustainable Technologies for Microwave Systems

Chair: Jean-Pierre Raskin¹

Co-Chair: Bertrand Parvais²

¹Université catholique de Louvain, ²imec & VUB

EuMC43-1

Life Cycle Assessment (LCA)-Driven Design for the Microwave Engineer: How to Develop Sustainable Wireless Systems?

Mahmoud Waghi¹

INDUSTRIAL KEYNOTE

¹University of Glasgow

EuMC43-2

On the Carbon Footprint of D-Band Point-to-Point Radio Links for 6G

Wolfgang Heinrich¹, Andreas Wentzel¹, Lutz Stobbe²

¹Ferdinand-Braun-Institut (FBH), ²Fraunhofer IZM

EuMC43-3

Sustainable wireless technologies with SUSTAIN 6G

Olivier Bouchet¹, Marie-Hélène Hamon¹, Rodolphe Legouable¹, Bruno Jahan¹

¹Orange Innovation

EuMC43-4

Advancing the Circular Economy: Enhancing Black Plastic Recycling through Sub THz Technology

Sven Leuchs¹, Christian Krebs², Dirk Nüßler², Christopher Ludwig², Michael Gräf², Christopher Schwäbig², Josh Perske², Stefan Thomas Wickmann², Sabine Gütemann²

¹Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR), ²Fraunhofer FHR

EuMC43-5

Thermal analysis of a transmission line made on a bio-sourced substrate using an analytical model

Rim BERRO¹, Nhu-Huan Nguyen¹, Tân-Phu Vuong¹, Nicolas Corrao¹, Vincent Grennerat¹, Pascal Xavier¹

¹Grenoble INP CROMA

Glow

EuMC44

Microwave Sensing Techniques for Biological and Medical Systems

Chair: Luciano Tarricone¹

Co-Chair: Robin Augustine²

¹University of Salento, ²Uppsala University

EuMC44-1

Solenoid Transceive Coil for Rodent Imaging with 3T Deuterium MRI

Rasmus Alexander Jepsen¹, Kristina Pilgaard Jacobsen¹, Wenjun Wang¹, Jan Henrik Ardenkjær-Larsen¹, Vitaliy Zhurbenko¹

¹Technical University of Denmark (DTU), Kgs. Lyngby, Denmark

EuMC44-2

Feasibility Study of UWB Radar for Non-Invasive Fluidothorax Monitoring

Ondrej Fiser¹, Jakub Kollar¹, Marek Novak¹, Tomas Drizdal¹, David Vrba¹, Jan Vrba¹

¹Czech Technical University in Prague, Faculty of Biomedical Engineering

EuMC44-3

Active UWB-Based Microwave Catheter Tracking: An In Silico Study for MWA Navigation

Jakub Kollar¹, Barbora Smahelova¹, Marek Novak¹, Jan Vrba¹, Ondrej Fiser¹

¹Czech Technical University in Prague, Faculty of Biomedical Engineering

EuMC44-4

Detection of Dielectrically Heterogeneous 3D Multicellular Objects with Microwave Dielectric Spectroscopy

Yuwei Li¹, Olivia Peytral-Rieu¹, David Dubuc¹, Katia Grenier¹

¹LAAS-CNRS

EuMC44-5

Single-Channel Continuous-Wave Radar for Multi-Target Vital Sign Detection via Spatio-Spectral Mapping with Space-Time Coding Array

Shuping Li¹, Donglin Gao¹, Shaghayegh Vosoughitabar¹, Chung-Tse Michael Wu²

¹Rutgers University, ²Apple Inc., ³National Taiwan University

Progress

EuRAD07

Radar Networks and Activity Monitoring

Chair: Kamel Haddadi¹

Co-Chair: Fabian Lurz²

¹University of Lille, CNRS / IEMN, ²Otto-von-Guericke University Magdeburg

EuRAD07-1

Ultra-Precise PTP Implementation Extended with a Kalman Filter for Wireless Clock Synchronization Enabling Signal Time-of-Flight and Distance Measurements

Roghayeh Ghasemi, Tobias Koegel¹, Patrick Fenske¹, Danielle Gunders-Hunt¹, Martin Vossiek¹

EuRAD CP nominee

¹Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany

EuRAD07-2

Pose Estimation in the Near-Field of Sparse Arrays

TAKUYA KAWAGUCHI¹, Christian Höller², Gabriel Schnoering²

¹Fujikura Ltd., ²FTES AG

EuRAD07-3

Dual-Timescale Classification of Human Activities Using Radar Point Clouds

Nicolas Kruse¹, Alec Daalman¹, Francesco Fioranelli¹, Alexander Yarovoy¹

¹Delft University of Technology

EuRAD07-4

Leveraging Electromagnetic Simulation and Deep Learning for Hand-Pose Estimation in Microwave Imaging

Miriam Senne¹, Georg Schnattinger¹, Christoph Baur¹

¹Rohde & Schwarz GmbH & Co. KG

EuRAD07-5

A Dataset on Human Activity Recognition with a Multistatic Radar Network

Ann-Christine Fröhlich¹, Ingrid Ullmann¹

¹Institute of Microwaves and Photonics - Friedrich Alexander University of Erlangen-Nürnberg

THURSDAY 09:30 – 10:10

ROOM **Media Arena****EuMC-PP2**

1-Minute Poster Pitch: EuMC

Chair: Mark S. Oude Alink¹Co-Chair: Kamil Yavuz Kapusuz²¹University of Twente, ²IMEC-Ghent University/Belgium**09:30**
–
10:10**1-Minute Poster Pitch: EuMC**

NEW at EuMW: 1-Minute Poster Pitches! Join us for this exciting and fast-paced new format in which posters are pitched in a maximum of one minute. In this session, the posters of EuMC50 will be pitched.

THURSDAY 10:50 - 12:30

ROOM

Auditorium

EuMC/EuRAD05

Recent Developments in Antenna Measurements

Chair: Marco Spirito¹

Co-Chair: A.J. van den Biggelaar²

¹Delft University of Technology, ²ANTEN-NEX B.V.

10:50
-
11:10

EuMC/EuRAD05-1

Realtime 3D Radiation Pattern Measurement: Experimental Demonstration

Mohammad Azadifar¹, Carlos Romero²

¹HEIG-VD & EM Path, ²Armasuisse Science and Technology

11:10
-
11:30

EuMC/EuRAD05-2

Amplitude-Only Measurement Based Calibration for Phased Arrays with Limited Power Detection Range

Young-Jun Lim¹, Chanhee Lee¹, Hyeon-Jeong Cho¹, Ji-Young Kim¹, Hyuk-Ja Kwon², Jong-Won Yu³

¹Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea, ²Hanwha Systems

11:30
-
11:50

EuMC/EuRAD05-3

Near-Field Test of Millimeter-Wave Patch Antenna Arrays with Dielectric Probes

Athanasios Papanikolaou¹, Jan Hesselbarth¹, Jose Moreira²

¹University of Stuttgart, ²Advantest Europe GmbH

11:50
-
12:10

EuMC/EuRAD05-4

Performance Characterization of an Active Phased Array Antenna by Simultaneously Measuring the Radiation Pattern and the Error Vector Magnitude

Máté László Iványi¹, Gaetano Chirico², Yanki Aslan¹, Alexander Yarovoy¹, Marco Spirito¹

¹Delft University of Technology, ²University of Cassino and Southern Lazio

12:10
-
12:30

EuMC/EuRAD05-5

Compact Multi-Probe Planar Near Field Antenna Measurement System

Martin Obermaier¹, Johannes Lange², Thomas Deckert², Marc Vanden Bossche², Dirk Plettemeier¹

EuMC YEP nominee

¹Technical University Dresden, ²NI/Emerson

Quest

EuMC45

Special Session: Computational Electromagnetics in the Netherlands and Belgium

Chair: Kristof Cools¹

Co-Chair: Martijn van Beurden²

¹Ghent University - imec, Dept. of Information Technology, IDLAB-EM group, ²Eindhoven University of Technology

EuMC45-1

Effective Forward and Inverse Numerical Solution Procedures in Computational Electromagnetics

Rob Remis¹

¹TU Delft

EuMC45-2

The future of Electromagnetic Engineering research and education, a NL-B perspective

Peter Zwamborn¹

¹TNO Defense, Safety and Security

EuMC45-3

Modelling Quantum Effects in Metallic Nanoantennas with Deep-nanometric Features

Xuezhi Zheng¹, Christos Mystilidis¹, Guy Vandenbosch²

¹KU Leuven

EuMC45-4

Differential Surface Admittance Boundary Integral Equation Modeling of Advanced Interconnects

Martijn Huynen¹, Daniël De Zutter¹, Dries Vande Ginste¹

¹Ghent University - imec

EuMC45-5

Domain Decomposition Methods for the Flexible and Efficient Modelling of EM Fields

Paul Olyslager¹, Hendrik Rogier¹, Kristof Cools¹

¹Ghent University - imec, Dept. of Information Technology, IDLAB-EM group

Expedition

EuMC46

Non-Planar Passive Components and Channel Filter Approaches

Chair: Raafat R. Mansour¹

Co-Chair: Jordi Verdú²

¹University of Waterloo, ²Universitat Autònoma de Barcelona

EuMC46-1

Low Insertion Loss Transition Design for Repeatable Measurements of Polymer Microwave Fibers

Lukas Ebner¹, Stefan Wögerbauer², Helmut Paulitsch³, Siegfried Krainer⁴, Michael Ernst Gadringer⁵

¹Christian Doppler Laboratory for Technology Guided Electronic Component Design and Characterization, ²Graz University of Technology TU Graz, ³Infinion Technologies Austria AG, Villach, Austria

EuMC46-2

Development of a Dual-Circularly-Polarized W-band Receiver Front End

Josip Vukusic¹

¹Chalmers University of Technology

EuMC46-3

Monolithically-Integrated Nested Ridge Waveguide Dual-Channel Filters

Berkay Dogan¹, Dimitra Psychogiou¹

¹School of Engineering, University College Cork, Cork, T12 K8AF, Ireland, ²Tyndall National Institute, Cork, T12 R5CP, Ireland

EuMC46-4

Compact Implementation of Novel Contiguous Multiplexer Serving Channels with Extreme Bandwidth Differences

Mustafa Bakr¹, Smain Amari², Uwe Rosenberg²

¹University of Oxford/St Peter, ²University of Oxford, ³Mician Global Engineering GbR, Bremen

EuMC46-5

Extracting the Path of Rotations from the Orthogonal Transformation Matrix for a Filter with Irregular Coupling

Ricardo Pampliega¹, Lluís Acosta¹, Gustavo Piris¹, Carlos Caballero¹, Jordi Verdú¹, Pedro de Paco¹

¹Universitat Autònoma de Barcelona

Spark

EuMC47

Metasurfaces

Chair: Erio Gandini¹

Co-Chair: Alejandro Jiménez-Sáez²

¹ESA ESTEC, ²TU Darmstadt

EuMC47-1

Dispersion-Diagram Beam Steering Analysis of a Dual-Band Multibeam Metasurface Antenna Based on Innovative Dynamic Spatial Harmonics Interval

Mohammed Anif¹, Firas Dawod¹, Adrien Guth¹, Muh-Dey Wei¹, Dirk Heberling¹, Renato Negra¹

¹RWTH Aachen University, ²South Dakota Mines

EuMC47-2

The frequency intersection of toroidal multipole resonances in all-dielectric hexagonal metasurface

Zoya Eremenko¹, Oleksiy Breslavets¹

¹O. Ya. Usov Institute for Radiophysics and Electronics, National Academy of Sciences of Ukraine

EuMC47-3

A Mimicry Metasurface with Independent Amplitude-Phase Control for Radar Deception

Boyang Qian¹, Hanjun Zhao¹, Hui Chu¹

¹Nanjing University of Science and Technology

EuMC47-4

Dual-Function Polarization-Rotating Metasurfaces for Beam Steering and Focusing Applications

Mona Mohamed¹, Ahmed Mahmoud², Amr Safwat²

¹Faculty of Engineering, Ain Shams University, ²Nile University, School of Engineering and Applied Sciences

EuMC47-5

Multifunctional Reflective Metasurface Based on a Pair of Exceptional Points

Chongpu Guo¹, Jiaran Qi¹

¹Harbin Institute of Technology

THURSDAY 10:50 – 12:30

ROOM

Flash

EuMC48

mm-Wave Antenna Arrays and Applications

Chair: Mark Bentum¹

Co-Chair: Thomas Musch²

¹Eindhoven University of Technology (TU/e), ²Ruhr-Universität Bochum

10:50
–
11:10

EuMC48-1
Antenna Arrays for Satellite Communications

Maria Carolina Viganó¹

INDUSTRIAL KEYNOTE

¹Viasat

11:10
–
11:30

EuMC48-2
A K/Ka Band 5G Satellite Payload for LIDE Mission

Francesco Adamo¹, Simone Pauletto², Nicholas Sesto Gorella³, Fabio Zanchetta³, Andrea Loppi³, Ivan Zabochin³, Guendalina Simoncini³, Mario Fragiaco³, Anna Gregorio³, Sergio Carrato²

¹University of Trento (Italy), ²University of Trieste, ³PicoSats s.r.l.

11:30
–
11:50

EuMC48-3
Coverage Estimation of 5G mmWave in Indoor Environment considering Human Body Shadowing

Hyeon-Jeong Cho¹, Ji-Hoon Lee¹, Ji-Young Kim¹, Dong-Min Seo¹, Yeong-Ju Seo¹, Jong-Won Yu¹

¹Korea Advanced Institute of Science and Technology

11:50
–
12:10

EuMC48-4
A 60 GHz Precise Reflection-Type Phase Shifter with Extremely Small Phase Shift, Based on GeTe Phase-Change Switches

Ayoub Naoui¹, Clémence Hellion², Marjolaine Allain², Joey Denizart², Rémi VELARD², Loïc Vincent², Bruno Reig², Etienne Perret², Florence Podevin²

¹Grenoble Alpes University INP, ²CEA Leti, Univ. Grenoble Alpes, F 38000 Grenoble, France, ³CIME-Nanotech, University Grenoble Alpes, Grenoble Institute of Technology

12:10
–
12:30

EuMC48-5
Carrier Phase Noise Impact on OFDM Performance at D-band: Concepts and Experimental Assessment

Yalin Zhou¹, Zichuan Zhou¹, Zhixin Liu¹, Izzat Darwazeh¹

¹Department of Electronic and Electrical Engineering University College London (UCL)

Glow

EuMC49

Planar Sensors

Chair: Alexander Kölpin¹

Co-Chair: Ilona Rolfes²

¹Hamburg University of Technology,

²Ruhr University Bochum

EuMC49-1

Tunable Microwave Sensor for High-Sensitivity Detection of Minor Impurities in Liquids

Mohammadmehdi Javanmardi¹, Vahid Nayyeri¹, Adib Abrishamifar¹, Ugur C. Hasar²

¹Iran University of Science and Technology, ²University of Gaziantep

EuMC49-2

Low Profile and High Sensitivity Phase-Variation Sensor Applied to Relative Humidity Measurements

Xavier Canalias¹, Paris Vélez¹, Pau Casacuberta¹, Lijuan Su¹, Nazmia Kurniawati¹, Ferran Martín¹

¹Universitat Autònoma de Barcelona

EuMC49-3

Planar Low-Cost Microwave Ring Resonator Temperature Sensor using a PDMS Active Layer

Zabdiel Brito-Brito¹, Jesús Salvador Velázquez-González¹, Ferrn Mira¹, Yi Wang², Ignacio Llamas-Garro¹

¹Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Castelldefels, Barcelona, ²University of Birmingham, UK

EuMC49-4

Terahertz Wave Profile Imaging Based on Phase-Shifting Interferometry

Mahdi Montazery¹, Mohammad Neshat²

¹University of Tehran, ²University of Sussex

EuMC49-5

Highly Sensitive Capacitive Proximity Sensor Based on Microwave Technology

Amirhossein Karami-Horestani¹, Ferran Paredes¹, Karl Adolphs-Saura¹, Amir Ebrahimi¹, Ferran Martín¹

¹GEMMA/CIMITEC, Universitat Autònoma de Barcelona, ²Royal Melbourne Institute of Technology (RMIT) University

Media Arena

EuRAD-PP

1-Minute Poster Pitch: EuRAD

Chair: Mark S. Oude Alink¹

Co-Chair: Ronny Harmanny²

¹University of Twente, ²Thales Nederland B.V.

11:50
–
12:30

1-Minute Poster Pitch: EuRAD

NEW at EuMW: 1-Minute Poster Pitches! Join us for this exciting and fast-paced new format in which posters are pitched in a maximum of one minute. In this session, the posters of EuRAD12 will be pitched.

THURSDAY 10:50 - 12:30

Hall 7

EuMC50

EuMC Interactive Poster Session 2

Chair: Kamil Yavuz Kapusuz¹

Co-Chair: Mark S. Oude Alink²

¹IMEC-Ghent University/Belgium, ²University of Twente

These posters will have
1-minute pitches in EuMC-PP2
on Thursday morning before
this session!

EuMC50-1

Intermodulation Based Non-linear Behavior Prediction Towards Electronic Waste Reduction

Till Schmidt¹, Raphaël Dauny¹, Corinne Dejours¹, Valerie Vigneras¹, Laurent Oyhenart¹, Simon Hemour¹

¹IMS Bordeaux, ²INP/ENSEIRB-MATMECA Bordeaux, France

EuMC50-4

Sub-THz PA EVM measurements with Ultra-Wideband Test Signals

Jean-Pierre Teyssier¹, Vincent Gillet¹, Johan Ericsson¹, Gerhard Schoenthal²

¹Keysight Technologies, ²Virginia Diodes Inc., USA

EuMC50-7

8-Port Network Analysis Up to 110 GHz Using Multi-VNA Port Extension

Jens Löffler¹, Manuel Koch¹, Sascha Breun¹, Robert Weigel¹, Norman Franchi¹

¹Friedrich-Alexander Universität Erlangen-Nürnberg

EuMC50-10

Compensation of Fano Resonance in Microwave Resonators

Felix Bachbauer¹, Gerald Gold¹

¹Friedrich-Alexander Universität Erlangen-Nürnberg

EuMC50-2

Analytical Expressions for Antenna on-Chip Efficiency at mm-Wave and Sub-THz Frequencies

Louis Delait¹, Christophe Craeye¹, Jean-Pierre Raskin¹, Dimitri Lederer¹

¹ICTEAM, Université catholique de Louvain, Belgium

EuMC50-5

Ultra-Wide Band THz Directional Coupler

Nikolaos Xenidis¹, Joachim Oberhammer¹, Dmitri V. Lioubtchenko¹

¹KTH Royal Institute of Technology, Stockholm, Sweden

EuMC50-8

Statistical Analysis on Interlaboratory Comparison Case Study of Dielectric Measurements

Yuhui Luo¹, Xiaobang Shang¹, Liam Ausden¹, Nick Ridler¹, Djamel Allal¹, Marcin Wojciechowski²

¹National Physical Laboratory (NPL), ²Laboratoire National de Métrologie et d'Essais (LNE), France, ³Wojkowska Akademia Techniczna im Jaroslawa Dabrowskiego (WAT), Poland Central Office of Measures (GUM), Poland

EuMC50-11

Design of Multimode Horn Feed for Parallel Plate Waveguide-Based Offset Dual-Reflector Antenna

Thi-Kim-Ngan Nguyen¹, Artem R. Vilenskiy², David González Ovejero¹, Ronan Sauleau¹, Marianna Ivashina¹

¹Univ Rennes, CNRS, IETR- UMR 6164, ²XPANCEO, ³Antenna Systems Group, Dept. of Electrical Engineering, Chalmers University of Technology

EuMC50-3

Characterization of D- and Y-Band Filters with a Photonic THz System Continuously Tunable from 130 to 510 GHz

Garrit Schwanke¹, Milan Deumer¹, Sebastian Lauck¹, Lars Liebermeister¹, Mehmet Ahad Yurtoglu¹, Ramez Askar¹, Michael Peter¹, Martin Schell¹, Robert B. Kohlhaas¹

¹Fraunhofer Heinrich Hertz Institute

EuMC50-6

Filtering Power Divider with Reflectionless Response at All Ports Based on Cascaded Building Blocks

Minahil Shirazi¹, Adnan Nadeem¹, Symeon Nikolaou¹, Kexin Li², Dimitra Psychogiou², Photos Vryonides²

¹Frederick Research Center (FRC)-Frederick University, 1036 Nicosia, ²University College Cork & Tyndall National Institute

EuMC50-9

Passive Intermodulation Products Radiated from an Antenna Reflector: Theory and Experiments

Jacques Sombrin¹, Isabelle Albert², Nicolas Fil², Christian Feat², Jérôme Sinigaglia³

¹TESA Laboratory, ²Centre National d'Études Spatiales (CNES), ³THALES ALENIA SPACE (FRANCE)

EuMC50-12

Investigation of the Radiation Characteristics of Circular Open-End Polymer Microwave Fibers

Stefan Wögerbauer¹, Helmut Paulitsch¹, Siegfried Krainer², Michael Ernst Gadringer³

¹Institute of Microwave and Photonic Engineering, Graz University of Technology, Austria, ²Infineon Technologies Austria AG, Villach, Austria, ³Christian Doppler Laboratory for Technology Guided Electronic Component Design and Characterization, Graz, Austria

These posters will have
1-minute pitches in EuMC-PP2
on Thursday morning before
this session!

EuMC50-13

Analysis of Bessel and Bessel-Gauss beams in the transition region from near to far field

Stella Ventucci¹, Edoardo Negri², Walter Fuscaldo², Paolo Burghignoli¹, Alessandro Galli¹

¹Sapienza University of Rome, Italy, ²Consiglio Nazionale delle Ricerche (CNR)

EuMC50-16

A miniaturized integrated passive device on-chip bandpass filter with high selectivity for satellite communication system

Haoran Zhu¹, Shunchun Yang², Yufa Sun¹

¹Anhui University, ²Beihang University

EuMC50-19

Series Selection of LC Components in Microwave Rectifier Using Multi-Stage Matching for Wideband Operation

Takehiro Yamaki¹, Kodai Nakao¹, Satoshi Yoshida¹

¹Ryukoku University

EuMC50-14

Generation of Admissible Grid Topologies for Coupled-Resonator Filters

Stefano Tamiazzo¹, Giuseppe Macchiarella², Matteo Oldoni²

¹Andrew, ²Politecnico di Milano

EuMC50-17

Low Cost FR4 Substrate Based Credit Card Sized Chipless RFID Tags and Switching Probe Reader

Fuminori Sakai¹, Yoshimasa Amano¹, Mitsuo Makimoto², Koji Wada²

¹Sakura Tech corporation, ²The University of Electro-Communications

EuMC50-20

Optimization-Driven Design of a High-Efficiency Pixelated Rectenna for Low-Power Wireless Power Transfer

Rasool Keshavarz¹, Ali Raza¹, Amanath Ullah¹, Akifumi Nagatani², Negin Shariati¹

¹University of Technology Sydney, ²NTT DOCOMO, INC, Japan

EuMC50-15

A Millimeter-Wave Switchable SIW Diplexer with Controllable Bandwidths and Transmission Zeros

Pei-Ling Chi¹, Yu-Hsien Chang¹, Tao Yang²

¹National Yang Ming Chiao Tung University, ²University of Electronic Science & Technology of China

EuMC50-18

Patch Antenna for Microwave Ablation: Numerical Design and Ex Vivo Experimental Validation

Leonard Leiner¹, Maarten Paulides², Kemal Sumser², Christopher L. Brace¹

¹University of Wisconsin - Madison, ²Eindhoven University of Technology

THURSDAY 10:50 – 12:30

ROOM

Progress

EuRAD08

Phased Array Radars

Chair: Carmine Clemente¹

Co-Chair: Alexander Yarovoy²

¹University of Strathclyde, ²Delft University of Technology

Mission 1

EuRAD09

Radar-Based Target Detection and Recognition

Chair: Marlene Harter¹

Co-Chair: Mohammed Jahangir²

¹Offenburg University of Applied Sciences, ²University of Birmingham, UK

10:50
–
11:10

EuRAD08-1

PHARA: A Hybrid-Scanning, Full-Polarimetric Phased-Array Radar for Weather Observations

Rob van der Meer¹

INDUSTRIAL KEYNOTE

¹ROBIN RADAR SYSTEMS

EuRAD09-1

Vortex Radar: Status and Perspectives

Rossella Gaffoglio¹

INDUSTRIAL KEYNOTE

¹Fondazione Links

11:10
–
11:30

EuRAD08-2

Development and Realization of an AESA Receiver for the PAMIR-Ka Radar Demonstrator

Gabriel El-Armauti¹, Olaf Saalmann¹

¹Fraunhofer FHR

EuRAD09-2

Radar Based Torso Tracking in Radiation Therapy

André Froehly¹, Sandra Nowok¹, Alex Shoykhetbrod¹, Ralf Brauns¹, Patrick Wallrath¹

EuRAD CP nominee

¹Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHR)

11:30
–
11:50

EuRAD08-3

Signals Analysis and Synthesis of the Continuous Wave Frequency Diversity Antenna Array with an Arbitrary Aperture

Anton Shevchenko¹, Leonid Kornienko¹, Stanislav Piskunov¹

¹Kharkiv National Air Force University, Ukraine

EuRAD09-3

Ensuring AI/ML Safety in Automotive Radar DoA Estimation

Ionela-Cristina Voicu¹, Iani Almajan¹, Jihwan Youn¹, Jun Li¹, Satish Ravindran¹, Ryan Wu¹

¹NXP Semiconductors

11:50
–
12:10

EuRAD08-4

Interferometric phase measurement performance of 3D phased array surveillance radars

Neuton Severo de Farias Neto Farias¹, Leandro Pralon¹, Márcio de Menezes²

¹Brazilian Army Technological Center, ²No affiliation

EuRAD09-4

Efficient Ensemble Pruning for Robust Adversarial Defense in SAR-ATR

Amir Hosein Oveis¹, Marco Martorella², Alessandro Cantelli-Forti¹, Elisa Giusti¹

¹CNIT (National Inter-University Consortium for Telecommunications), ²The University of Birmingham

12:10
–
12:30

EuRAD08-5

Null Steering Using 4×4 Beam-forming Network with Hybrid Couplers and Controllable Phase Shifters

Javad Jafaryahya¹, Rasool Keshavarz¹, Negin Shariati¹

¹University of Technology Sydney

EuRAD09-5

Differentiation between drones and birds using kinematic analysis

Bing Hong Teh¹, Samuel Dubos¹, Jean-Marc Divanon²

¹Thales Solutions Asia Pte Ltd, ²THALES

THURSDAY 13:50 – 15:30

ROOM

Quest

EuMC51

Multiphysics Simulation Techniques

Chair: Alessandro Galli¹

Co-Chair: Andrea Neto²

¹Sapienza University of Rome, ²TU Delft

13:50
–
14:10

EuMC51-1
Systematic Optimization Methodology for mm-Wave Power Amplifiers

Armen Harutyunyan¹, Padmanava Sen¹

¹Barkhausen Institut gGmbH

14:10
–
14:30

EuMC51-2
Radiation Characteristics of Layered Cylindrical Luneburg Lens Antenna Equipped with Conformal Graphene Strip: Effect of Graphene Parameters

Iryna Mikhailikova¹, Sergii Dukhopelnykov²

¹Laboratory of Micro and Nano Optics, Institute of Radio-Physics and Electronics NASU, ²Institute of Radio-Physics and Electronics of the NASU

14:30
–
14:50

EuMC51-3
Optimization of Hypersonic Re-Entry Vehicle Aerodynamics for Communication Blackout Mitigation

Gian Marco Zampa¹, Tony Di Fabbio¹, Eric Segalerba¹, Joel Enrique Guerrero Rivas¹

¹Leonardo SpA

14:50
–
15:10

EuMC51-4
Physics Based Modeling of Multi-Finger GaN-HEMTs: Device Width Optimization

Soheil Nouri¹, Bilal Pirzada¹, Amirreza Ghadimi-Avval¹, Samir El-Ghazaly¹

¹University of Arkansas

15:10
–
15:30

EuMC51-5
Graphene Strip Grating on Substrate as Conventional and Inverse Polarizer in Terahertz Range

Fedir Yevtushenko¹

¹Institute of Radio-Physics and Electronics NASU

Expedition

EuMC52

MTT-S ISTP Panel Session: Microwaves for a Sustainable Future - Innovations and Challenges in Technology, Energy, and Resources

Chair: Jasmin Grosinger¹

Co-Chair: Peter Siegel²

¹Graz University of Technology, ²NASA-JPL/Caltech

13:50
–
15:30

MTT-S ISTP Panel Session: Microwaves for a Sustainable Future - Innovations and Challenges in Technology, Energy, and Resources

The Panel will explore the role of microwave science and technology in advancing sustainability in diverse areas of impact, including energy capture and harvesting, power distribution, sustainable agriculture, chemical reaction, and industrial processes. Panelists will emphasize the critical role that microwave technologies play in addressing these complex issues. The session will serve as a platform to engage the broader community, share insights, and inspire collaboration on the road to a more sustainable and energy-efficient future.

Moderator:

- Malgorzata Celuch, QWED, Poland

Panelists:

- Helmut Morath, TU Dresden, Germany
- Jean-Pierre Raskin, UC Louvain, Belgium
- Jasmin Grosinger, Graz University of Technology, Austria
- Sulekha Chattopadhyay, California Air Resources Board, USA
- Debabani Choudhury, SeraTech, USA

Contacts:

- Ke Wu, Polytechnique Montréal, Canada
- J.-C. Chiao, Southern Methodist University, USA

Auditorium

EuMC53

EuMC/EurAAP Special Session: Beamforming Networks for Active Array Antennas

Chair: Bart Smolders¹

Co-Chair: Maria Carolina Viganó²

¹Eindhoven University of Technology, ²Viasat

EuMC53-1

Mutual coupling between antennas: a simple modal representation

Christophe Craeye¹, Jean Cavillout¹

¹Université catholique de Louvain

EuMC53-2

All digital beamforming concepts for RADAR applications

Gilberto Rossi¹, Juergen Rauscher¹

¹Hensoldt Sensors GmbH

EuMC53-3

Reconfigurable Photonics Integrated Multibeam Beamformer Networks

Ronis Maximidis¹, Roel Botter², Paul van Dijk², Chris Roeloffzen²

¹Stellar Phronesis Technology, ²LIONIX International BV, Enschede, Netherlands

EuMC53-4

Integrated microwave photonic functionalities on a hybrid integrated InP-Si3N4 PIC platform: Photonic components for beamforming array antennas

Chris Roeloffzen¹, Paul van Dijk¹, Ilka Visscher¹, Marcel Hoekman¹, Roelof Bernardus Timens¹, Charoula Mitsolidou¹, Ahmad Mohammad¹, Robert Grootjans¹, Roel Botter¹, Carlos Ruiz¹, Sadoon Al-Obaidi¹

¹LioniX International

EuMC53-5

Over-the-Air Testing of Front-End Losses in Active Array Antennas

A.J. van den Biggelaar¹, Marc Vanden Bossche¹

¹ANTENEX B.V.

THURSDAY 13:50 - 15:30

ROOM

Mission 2

EuMC54

Periodic Structures and Metamaterials

Chair: Antoine Calteau¹

Co-Chair: Erio Gandini²

¹Swissto12 SA, ²ESA ESTEC

13:50
-
14:10

EuMC54-1
Design of a Topological Waveguide Using Two Types of Rhombic Unit Cell Structures with Exchanged Microstrip-Line Arrangements

Tsutomu Nagayama¹

¹Kagoshima University

14:10
-
14:30

EuMC54-2
A Two-Dimensional Active Magnetic Metamaterial Cell

Hongtao Zhong¹, Shian Su¹, David S. Ricketts¹

¹North Carolina State University

14:30
-
14:50

EuMC54-3
Active Metamaterial Mini-Array Using Inter-cell Stability Compensation

Shian Su¹, Hongtao Zhong¹, David Ricketts¹

¹North Carolina State University, USA

14:50
-
15:10

EuMC54-4
Single-Layer, Dual-Passband, High-Reject, Beam-Pointing FSS for SatCom Applications

Ashifa Mohammed Musthafa¹, Elmine Meyer², Ulf Johannsen³, Diego Caratelli⁴

¹The Antenna Company, ²Eindhoven University of Technology, Electrical Engineering, Electromagnetics group

15:10
-
15:30

EuMC54-5
Analysis of Forward and Backward Modes in One-Dimensional Periodic Bounded Structures

Oskar Zetterstrom¹, Raúl Rodríguez Berral², Francisco Mesa³, Oscar Quevedo-Teruel⁴

¹KTH Royal Institute of Technology, ²Universidad de Sevilla

Glow

EuMC55

Wireless Communications and Sensing

Chair: Padmanava Sen¹

Co-Chair: Fabian Lurz²

¹Barkhausen-Institut gGmbH, ²Otto-von-Guericke University Magdeburg

EuMC55-1

Industrial Applications of THz Technology: A Fraunhofer View

Dirk Heberling¹, Dirk Nüßler², Christoph Reising²

INDUSTRIAL KEYNOTE

¹RWTH Aachen University, Germany, ²Fraunhofer FHR

EuMC55-2

Point-to-Multipoint Wireless Communication at 100 GHz with a Photonic Switched-Beam Transmitter

Simon Nellen¹, Garrit Schwanke¹, Sara Vega², Oliver Stiewe³, Sebastian Lauck⁴, Milan Deumer⁵, Robert Elschner⁶, Colja Schubert⁷, Ronald Freund⁸, Maria C. Santos⁹, Martin Schell¹⁰, Robert B. Kohlhaas¹¹

¹Fraunhofer Heinrich Hertz Institute, ²Universitat Politècnica de Catalunya (UPC)

EuMC55-3

A Distributed Radar Architecture above 100 GHz using Lens Arrays for Sensing Applications

Ashwita Nair¹, Giorgio Carluccio², Waqas Syed³, Harish Nandagopal⁴, Maria Alonso del Pino⁵, Daniele Cavallo⁶, Kostas Doris⁷, Nuria Llombart Juan⁸

¹Delft University of Technology, ²NXP Semiconductors Eindhoven

EuMC55-4

Performance and Potentials of 6G-Based Joint Communication and Sensing for Low-Level Airspace Monitoring

Nunzio Sciammetta¹, Shikhar Chandra², Markus Kluegel³, Viad C. Andrei⁴, Xinyang Li⁵, Holger Boche⁶, Dominic Schupke⁷

¹Airbus Defence and Space GmbH, ²Technical University of Munich - Airbus Defence and Space GmbH, ³Technical University of Munich

EuMC55-5

Harmonic Response Characterization of Mobile Devices for Application in Avalanche Rescue

Moritz Schabinger¹, Thomas Schaechtle², Georg K. J. Fischer³, Fabian Höflinger⁴, Stefan J. Rupitsch⁵

¹University of Freiburg, ²Fraunhofer EMI

Progress

EuRAD10

Focussed Session: Phased Array Radars for Meteorological Applications

Chair: Alexander Yarovoy¹

Co-Chair: Dusan Zrnic²

¹Delft University of Technology, ²University of Oklahoma

EuRAD10-1

Horus-A Fully Digital Phased Array Radar for Weather Observations

Dusan Zrnic¹, David Schwartzman², Robert Palmer³

¹University of Oklahoma, ²University of Oklahoma, Advanced radar Research center, ³Advanced Radar Research Center

EuRAD10-2

Assessment of Dual-Polarization Measurements by Phased Array Weather Radar for Airborne Applications

Chandra V Chandrasekar¹, Eiichi Yoshikawa²

¹Colorado State University

EuRAD10-3

Cross-Polarization Suppression in Phased-Array Radars for Weather Sensing

Gabriele Federico¹, Martijn de Kok², Ramon Ham-eleers³, Kasper Eijck⁴, Bart Smolders⁵

¹Eindhoven University of Technology - TU/e

EuRAD10-4

Parametric Estimation of Elevation-Doppler Profiles with Phased Array Radar for Precipitation

Tworit Dash¹, Oleg Krasnov², Hans Driessen³, Alexander Yarovoy⁴

¹TU Delft

EuRAD10-5

On the Advantage and Disadvantage of the Phased Array Weather Radar at X Band

Tomoo Ushio¹, Yuuki Wada², Eiichi Yoshikawa³, Kikuchi Hiroshi⁴

¹The University of Osaka, ²Colorado State University, ³The University of Electro-Communications, Chofu, Tokyo, Japan

Mission 1

EuRAD11

Synthetic Aperture Radar Imaging Techniques

Chair: Maria A. Gonzalez Huici¹

Co-Chair: Jacco de Wit²

¹Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR), ²TNO Defense, Safety and Security

EuRAD11-1

Adaptive Sampling for Efficient Synthetic Aperture Radar Imaging

Marius Brinkmann¹, Matthias M. Saurer², Gerhard F. Hamberger³, Thomas F. Eibert⁴

¹Rohde & Schwarz GmbH & Co. KG, ²Technical University of Munich

EuRAD11-2

C-band Receive Module Unit for the Harmony SAR

Massimiliano Imparato¹, Mauro Frediani², Alessandro Barigelli³, Fabiano Boccolini⁴, Danilo Fortini⁵, David Cuadrado-Calle⁶, Ernesto Imbombo⁷, Daniele Petrolati⁸, Florence Helere⁹

¹Thales Alenia Space Italia, ²European Space Agency (ESA)

EuRAD11-3

Wavelet-Based Analysis for SAR Polarimetry Millimeter-Wave Imaging at W-Band

Shahrokh Hamidi¹

¹University of Waterloo

EuRAD11-4

Calibration of Radar Systems with SAR Image-Based Quality Optimization

Dominik Rhiem¹, André Froehly², Patrick Wallrath³

¹Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques)

EuRAD11-5

Influence of Turbulences and Cross-Wind on the Signal Quality in Circular Synthetic Aperture Radar

Michael Pircher¹, Marc Jäger², Ulf Johannsen³

EuRAD YEP nominee

¹Microwaves and Radar Institute, German Aerospace Center (DLR), ²Eindhoven University of Technology, Electrical Engineering, Electromagnetics group

THURSDAY 13:50 - 15:30

Hall 7

EuRAD12

EuRAD Poster

Chair: Ronny Harmanny¹

Co-Chair: Mark S. Oude Alink²

¹Thales Nederland B.V., ²University of Twente

These posters will have
1-minute pitches in EuRAD-PP
on Thursday morning!

EuRAD12-1

Data Fusion of Distributed Sensing Suite for Multi-Perspective Radar Imaging

Anum Pirkani¹, Dillon Kumar², Natalie Reeves³, Mikhail Chernikov², Marina Gashinova²

¹The University of Birmingham, ²University of Birmingham, ³University of Birmingham, UK

EuRAD12-6

Complex-Valued and Quantized Neural Networks for In-Car Occupancy Detection Using IR-UWB Radar

Lukas Klantschnig¹, Harald Witschnig¹, Franz Pernkopf²

¹Infinion Technologies Austria AG, ²Signal Processing and Speech Communication Laboratory, Graz University of Technology, Austria

EuRAD12-10

Privacy-Preserving Seat Detection with FSS-Modulated Backscatter and mmWave Radar

Farid Morabet¹, Marc Lázaro Marti¹, Ramon Villarino¹, David Girbau Sala¹, Antonio Lazaro¹

¹Universitat Rovira I Virgili (URV)

EuRAD12-14

Retrieval of weather parameters in rain for a fast-scanning 4D X-band surveillance radar

Sultan Abdul Kader Syed Mohamed¹, Wietse Bouwmeester¹, Tim Kuipers¹, Jurjen Westra¹, Silvester Heijnen¹

¹Robin Radar Systems

EuRAD12-2

Ku-band 1D-MIMO FMCW Radar System for ISAR-Based 3D Near Field Imaging

Sangwook Nam¹, Dong-Woo Kim², Taewoo Yu²

¹Seoul National University, ²Samsung Electronics

EuRAD12-7

Event-based radar perception processing

Sen Yuan¹, Stefano Chiaavazza², Federico Corradi², Francesco Fioranelli¹

¹TUDELFT, ²Eindhoven University of Technology (TU/e)

EuRAD12-11

Novel Test Platform for Automated HWSW Integration Testing of Automotive 77GHz Radar Systems

Aybars Kizilay¹, Daniel Kuerschner¹, Rabishankar Das¹, Alois Ascher², Mihai Aldea²

¹NXP Semiconductor GmbH, ²Rohde Schwarz GmbH & Co. KG

EuRAD12-15

Characterisation of a Radar-Based Structural Health Monitoring System for Wind Turbine Rotorblades

Tobias Huemmer¹, Thomas Kurin¹, Moritz Maelzer¹, Sebastian Beck², Jochen Moll¹, Fabian Lurz²

¹Otto von Guericke University Magdeburg, ²University of Siegen

EuRAD12-4

A Spatial Filtering Zoom-in Radar Technique Combining Analog Beamforming and MIMO

Zitao Zhu¹, Marcello Ganzerli², Massimo Ciacci², Qilong Liu², Shagun Bajoria², Pieter Harpe², Lucien Breems², Georgi Radulov²

¹NXP / Eindhoven University of Technology (TU/e), ²nxp, ³TUe

EuRAD12-8

False Alarm Mitigation in High-Density Environments to enable accurate Low-Speed Target Identification

Samuel Dubos¹, Bing Hong Teh¹, Xin Guo¹, Jean-Marc Divanon¹

¹Thales Solutions Asia Pte Ltd

EuRAD12-12

Utilizing Diffuse GNSS Signal Reflections from the Sea Surface for Sea Wave Monitoring

Yiyang Luo¹, Vladyslav Lutsenko¹, Irina Lutsenko¹, Alexander Sobolyak¹, Vitalii Trifanov¹, Nguyen Xuan Anh²

¹O.Ya. Usikov Institute for Radiophysics and Electronics of the National Academy of Sciences of Ukraine, ²Institute of Geophysics Graduate University of Science and Technology

EuRAD12-16

Polarimetric Coupling in Phased Array Weather Radars: Requirements and Mitigation Techniques

Jonas Heylen¹, Guilherme Theis², Rob van der Meer², Yanki Aslan¹, Alexander Yarovsky²

¹TU Delft, MS3 / Robin Radar Systems, ²Robin Radar Systems, ³TU Delft, MS3

EuRAD12-5

Design and Modeling CFAR Algorithms Detecting Target on a Curvilinear Trajectory

Felix Yanovsky¹, Igor Prokopenko¹, Alexander Pitertsev¹, Huinam Rhee²

¹State University Kyiv Aviation Institute, Kyiv, Ukraine, ²Sunchon National University, Suncheon, Republic of Korea

EuRAD12-9

Design of Multiband Frequency-Modulated GPS Jamming Waveform Using a Low-Cost Single-Channel Software-Defined Radio

Shashank S¹, Vinay B Narayane², Paresh Saxena¹, Ashutosh Baheti¹

¹BITS Pilani Hyderabad Campus, ²Paras Anti-Drone Technologies Pvt. Ltd

EuRAD12-13

Sea Clutter Suppression Driven by Convolutional Neural Network in ArcSAR

Luis Pereira¹

¹Brazilian Army Technological Center

THURSDAY 16:10 – 17:50

ROOM **Polar**

EuMW03

EuMW/EuMC Closing and Awards Ceremony

Chair: Ioan E. Lager¹

Co-Chair: Ann Francois²

¹Delft University of Technology, ²Ghent University

16:10 – **16:20** Session Welcome

Ioan E. Lager¹, Ann Francois²

¹Delft University of Technology, ²Ghent University

16:20 – **17:05** Applications of Exceptional Degeneracy Points in Nonlinear Circuits, Oscillators and Arrays

Filippo Capolino¹

¹University of California

We present the theory and illustrate possible applications of an important class of “exceptional” degeneracies that occur when two or more eigenstates of a system fully coalesce. Such exceptional degeneracies can be designed in circuits, resonators, and multimode waveguides. These exceptional point degeneracies (EPDs) involve also the degeneracy of polarization states and can be designed in a surprisingly large number of systems, like fully passive systems or in systems that include gain elements. We provide various experimental verifications of the occurrence of EPDs in circuit resonators and waveguides and we discuss applications in antenna arrays, oscillators, delay lines, highly sensitive sensors, second harmonic generation, etc. Particular attention is devoted to the study of the saturated regime in systems with nonlinear gain.

17:05 – **17:20** Awards Ceremony

Andrea Neto¹, Ioan E. Lager¹

¹Delft University of Technology

EuMW 2025 Awards Chair

EuMC Prize

EuMC Young Engineer Prizes

17:20 – **17:35** Closing Remarks

Mark Bentum¹

¹Eindhoven University of Technology (TU/e)

Mark Bentum

EuMW 2025 General Chair

Invitation to EuMW 2026

Stephen Harman

EuMW 2026 General Chair

THURSDAY 16:10 - 17:50

ROOM

Progress

EuRAD13

Focussed Session: Novel Processing and Applications of SAR

Chair: Debora Pastina¹

Co-Chair: Carmine Clemente²

¹University of Rome La Sapienza, ²University of Strathclyde

16:10
-
16:30

EuRAD13-1

Micro-motion extraction from land and maritime targets with spaceborne SAR using sub-aperture phase analysis

Carmine Clemente¹, Aleksanteri Vattulainen¹, Finlay Rollo¹, Alessandro Lotti², Daniele Zonta², Pietro Milillo²

¹University of Strathclyde, ²University of Trento, ³University of Houston

16:30
-
16:50

EuRAD13-2

Advanced SAR Processing for 3D imaging

Stefano Tebaldini¹, Marco Manzoni¹, Naomi Petrushevsky¹, Francesco Banda², Francesco Salvaterra¹, Luca Mantuano¹

¹Politecnico di Milano, ²Aresys

16:50
-
17:10

EuRAD13-3

Ambiguous Staggered SAR: Rationale and Advanced Processing Techniques for Clutter Suppression

Nertjana Ustalli¹, Michelangelo Villano¹

¹Microwaves and Radar Institute, German Aerospace Center (DLR)

17:10
-
17:30

EuRAD13-4

Exploitation of very long dwell spaceborne SAR data for enhanced maritime situational awareness via ISAR approaches

Ilaria Nasso¹, Fabrizio Santi¹, Debora Pastina¹

¹Sapienza University of Rome, Italy

17:30
-
17:50

EuRAD13-5

Synthetic Aperture Radar for Oil Spill Detection and Characterization: Special Focus on Arctic Routes

Ajeet Kumar¹

¹CNIT (National Inter-University Consortium for Telecommunications)

Mission 1

EuRAD14

Distributed and MIMO Radar Systems

Chair: Elisa Giusti¹

Co-Chair: Detmer A. Bosma²

¹CNIT, ²TNO

EuRAD14-1

EISNET: A European perspective on Radar Network for Air Defence

Mayazurra Ruggiano¹

INDUSTRIAL KEYNOTE

¹Thales Nederland B.V.

EuRAD14-2

Design of Sparse MIMO Radar Antenna Arrays Using DPS with Integrated CRB Evaluation

Jiaqi Li¹, Arie G.C. Koppelaar², Anusha Ravish Suvarna¹, Francesco Fioranelli²

¹NXP Semiconductors Eindhoven, ²TU Delft, MS3

EuRAD14-3

Investigation of CW and LFM waveforms for Bi- and Multistatic Radar Synchronisation

Lucas L. Lamberti¹, Stefan V. Baumgartner¹, Gerhard Krieger¹

¹German Aerospace Center (DLR), Oberpfaffenhofen, Germany.

EuRAD14-4

Detection of Tilt in Cooperative Radar Systems Utilizing Overlapping Bistatic Virtual Channels

Tobias Schmid¹, Daniel Schindler¹, Cornelius Kaiser¹

¹Robert Bosch GmbH, Germany

EuRAD14-5

Object Contour Estimation Using a Distributed FMCW Radar Network with Spectral Fusion

Patrik Hertle¹, Jürgen Hasch¹, Daniel Schindler¹, Oliver Blume¹, Christian Waldschmidt¹

¹Robert Bosch GmbH, ²Universität Ulm

Mission 2

EuRAD15

Waveform Diversity in Radar Detection

Chair: Fabiola Colone¹

Co-Chair: Lorenzo Cifola²

¹Sapienza University of Rome, ²Thales NL

EuRAD15-1

Recognition of Gait Patterns in Both Legs Using a Compact Doppler Radar Sensor

Inoh Choi¹, Min Kim², Sangbin Cha¹, Jieun Lee¹, Sanghong Park¹, Youngseok Jin¹, Ji-Eun Bae², Eugin Hyun²

¹PUKYONG NATIONAL UNIVERSITY, ²Korea Institute of Ocean Science & Technology, ³Daegu Gyeongbuk Institute of Science and Technology

EuRAD15-2

Comparison of different QPSK Modulation Methods for Radar Backscatter Communication

Christoph Degen¹

¹Hochschule Niederrhein

EuRAD15-3

Numerical Modeling of Radar-based Vital Sign Detection in Debris Sites for Sparse Frequency Excitations

Dominik Martin Spale¹, Gunnar Gidion¹, Thomas Schaechtle¹, Stefan J. Rupitsch¹

¹University of Freiburg

EuRAD15-4

Performance Improvement of OFDM-Based Forward Scatter Radar using Golay Codes

Abdollah Ajourloo¹, Andrea Quirini¹, Fabiola Colone¹, Pierfrancesco Lombardo¹

¹Sapienza University of Rome

EuRAD15-5

Enhancing polarization diversity in RIS-aided Integrated Communication and Sensing Networks

Abdelrahman Elgarnal¹, Wasim Alshrafi², Thomas Dallmann¹, Peter Knott¹

¹RWTH Aachen University, Germany, ²Fraunhofer FHR (Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR), ³Technische Universität Ilmenau

FRIDAY 08:30 – 10:10

ROOM

Progress

EuRAD16

Focussed Session: Machine Learning in mm-Wave Radars

Chair: Sandeep Rao¹

Co-Chair: Shunqiao Sun²

¹Texas Instruments, ²The University of Alabama, Tuscaloosa, AL, USA

08:30
–
08:50

EuRAD16-1

Deep Frequency Attention Networks for Single Snapshot Sparse Array Interpolation

Ruxin Zheng¹, Shunqiao Sun¹, Hongshan Liu¹

¹The University of Alabama, Tuscaloosa, AL, USA

08:50
–
09:10

EuRAD16-2

Realistic Micro-Doppler Radar Simulation of Cyclists for Vulnerable Road User Classification

Oliver Sura¹, Peter Mergenthaler¹, Christoph Kammel², Eva Dorschky², Marcel Hoffmann², Martin Vossiek¹

¹Institute of Microwaves and Photonics (LHFT), Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), ²fiveD GmbH

09:10
–
09:30

EuRAD16-3

Handheld SAR with Learning-Based Ego-Motion Estimation Using a Compact mmWave Sensor

Okyanus Oral¹, Ahmed Murtada¹, Thomas Feuillen¹, Bhavani Shankar Mysore Rama Rao¹

¹SnT - Interdisciplinary Centre for Security, Reliability and Trust, University of Luxembourg

09:30
–
09:50

EuRAD16-4

Robust Radar Gesture Recognition on the Edge

Akshay Kumar Chandrasekaran¹, Sandeep Rao¹, Goutham C Krishnan¹, Sripradha R¹

¹Texas Instruments (India) Pvt. Ltd.

09:50
–
10:10

EuRAD16-5

Comparison of Real-Time RF Human Skeleton Estimation using Kinematic Cycle Consistency

Sultanus Salehin¹, Sean Kearney¹, Sevgi Zubeyde Gurbuz¹

¹North Carolina State University

Mission 1

EuRAD17

Signal Processing for Radar

Chair: Mayazzurra Ruggiano¹

Co-Chair: Faruk Uysal²

¹Thales Nederland B.V., ²TNO

EuRAD17-1

Beta-Variational Autoencoder-Based Covariance Matrix Reconstruction for Direction-of-Arrival Estimation

Gabriel Valenti¹, Moctar Mouhamadou¹, Cyril Decroze²

¹XLIM UMR 7252, Université de Limoges/CNRS

EuRAD17-2

Low-Latency Spike-Based Range and Velocity Estimation of FMCW Radar Signals

Stefano Chiavazza¹, Sen Yuan², Francesco Fioranelli², Federico Corradi¹

EuRAD CP & YEP nominee

¹TU Eindhoven, ²TU Delft

EuRAD17-3

Ground-Penetrating Radar-Based Detection of Railroad Switches and Direction Classification using Near-Surface Features

Maximilian Noll¹, Sören Kohnert¹, Pau Caldero¹

¹Siemens Mobility GmbH

EuRAD17-4

Multi-Object Identification and High-Accuracy Range Estimation Using Doppler Tags

Theresa Antes¹, Thomas Zwick¹, Benjamin Nuss¹

¹Karlsruhe Institute of Technology (KIT)

EuRAD17-5

Robust SAR Edge Detection

Ahmed Hashem¹, Daniel Louback S. Lubanco¹, Reinhard Feger¹, Markus Pichler-Scheder², Thomas Schlechter², Andreas Stelzer¹

¹Institute for Communications Engineering and RF-Systems / Johannes Kepler University Linz, ²Linz Center Of Mechatronics GmbH, ³University of Applied Sciences Upper Austria, Austria

Mission 2

EuRAD18

Passive Radar Systems and Array Techniques

Chair: Pierfrancesco Lombardo¹

Co-Chair: Michael Antoniou²

¹Sapienza University of Rome, ²University of Birmingham

EuRAD18-1

Passive Space Domain Awareness using LOFAR and Signals of Opportunity of a Non-Cooperative Radar

Detmer A. Bosma¹, Faruk Uysal¹, Cees Bassa², Michiel A. Brentjens²

EuRAD CP nominee

¹TNO, ²ASTRON Netherlands Institute for Radio Astronomy

EuRAD18-2

Don't be Blinded: Multistatic Passive Radar Imaging Using Interfering Automotive FMCW Signals

Lukas Rienesl¹, Michael Gerstmair², Christian Schmid², Andreas Stelzer², Reinhard Feger²

EuRAD YEP nominee

¹Christian Doppler Laboratory for Distributed Microwave and Terahertz Systems for Sensors and Data Links, ²Infineon Technologies Austria AG, ³Institute for Communications Engineering and RF-Systems / Johannes Kepler University Linz

EuRAD18-3

Speckle Reduction in Passive SAR Using Multilook Processing Based on DVB-T Frequency Bands

Joe Bryan¹, Ali Bekar¹, Christopher Gilliam¹, Michael Antoniou¹

¹University of Birmingham

EuRAD18-4

Detection of Vital Signs Using Noncoherent Receivers

Prabhav Manchanda¹, Marcus Knaack², Juhua Liao³, Cristina Andrei⁴, Matthias Rudolph⁵

¹Brandenburg Technical University Cottbus-Senftenberg, ²Fraunhofer Institute of Photonic Microsystems, ³University College London, UK, ⁴Brandenburg Technical University Cottbus, Cottbus

EuRAD18-5

Radar System Combining Frequency Diverse Array and Time-Modulated Array

Geon U Kim¹, Sang-Hwa Yi², Jeong Phill Kim¹

¹Chung-Ang University, Seoul, ²Korea Electrotechnology Research Institute

FRIDAY 10:50 – 12:30

ROOM Progress

EuRAD19

EuRAD Closing

Chair: Laura Anitori¹

Co-Chair: Kostas Doris²

¹CNIT RASS, ²NXP Semiconductors

10:50 Session Welcome

11:00 Laura Anitori¹
¹CNIT RASS

11:00 The DARPA Approach to Radar Innovation

11:30 Frank Robey¹
¹MIT Lincoln Laboratory

11:30 Technology developments and R&D activities at the European
12:00 Space Agency for future spaceborne radars and RF instruments

Salvatore D'Addio¹
¹ESA

12:00 Awards Ceremony

12:20 Laura Anitori¹
¹CNIT RASS

12:20 Closing Remarks and Invitation to EuRAD 2026

12:30 Laura Anitori¹
¹CNIT RASS

Welcome from Workshop/Short Course Chairs

We are delighted to present a rich and dynamic program that bridges academia and industry, offering a unique platform for knowledge exchange and collaboration. This year's lineup is closely aligned with the core technical themes of the three main conferences – EuMC, EuMIC, and EuRAD – delivering in-depth insights and practical expertise across a broad range of domains.

For 2025, we are proud to offer 9 short courses and 23 workshops, spanning cutting-edge topics in integrated circuits, microwave engineering, and radar technologies. These sessions are designed to provide students, researchers, scientists, and engineers with both a comprehensive overview of RF and microwave systems and opportunities to delve into specialized and emerging areas of the field.

Our workshops are thoughtfully curated to address both current innovations and future challenges across the RF, microwave, and wireless landscape. The program offers focused sessions covering cutting-edge research and practical solutions, organized into six main thematic areas:

- 6G, Wireless Systems, and Integrated Communications
- Radar Systems and Sensing Technologies
- Circuits, Devices, and Semiconductor Technologies

- Photonics, Materials, and Emerging Technologies
- Measurements, Modeling, and Design Methodologies
- Sustainability, Power, and Thermal Management

We extend our heartfelt thanks to all organizers, presenters, and authors whose contributions make this program possible. Each session is endorsed by one or more of the EuMW conferences, ensuring relevance, technical rigor, and accessibility for all participants eager to expand their expertise and professional networks.

The workshops and short courses are scheduled throughout the week in alignment with the respective conferences:

- EuMIC: Sunday – Wednesday
- EuMC: Sunday – Thursday
- EuRAD: Monday – Friday

We encourage active participation and lively discussions during the sessions to foster meaningful learning and collaboration.

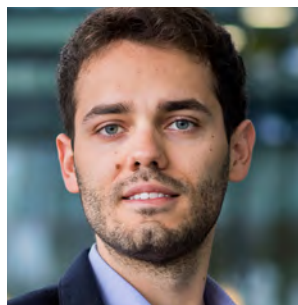
To enhance accessibility, all presentation materials will be available digitally during the conference. Please note that printed copies will not be provided. Registered participants will receive detailed instructions on how to access the materials closer to the event.

Once again, welcome to EuMW 2025 in Utrecht. We look forward to an engaging and inspiring week filled with innovation, insight, and collaboration—united under the banner of “Waves of Innovation.”



ELMINE MEYER

Workshop, Short Course Chair
Eindhoven University of Technology,
The Netherlands



GABRIELE FEDERICO

Workshop, Short Course Chair
Eindhoven University of Technology,
The Netherlands

SUNDAY 08:30 – 17:50

Fundamentals of Microwave PA Design

Chair: Paolo Colantonio¹Co-Chair: Rocco Giofrè¹¹University of Roma Tor Vergata**Room: Expedition****SS01**
EuMIC

Semiconductor Power Amplifiers are key components in radio frequency and microwave transmitter systems. They have received a great deal of attention and development effort over the last decades and are still a hot topic in research area. This short course aims to provide a comprehensive overview of all aspects of fundamental semiconductor microwave power amplifier design. It is an introductory course, aimed at graduate engineers who have moved into the field of RF design, as well as to microwave designers who aim to deeply understand the power amplifier basic concepts. This short course features a range of presentations and will provide a comprehensive overview and basic understanding on recent

important progress and novel state-of-the-art achievements in semiconductor power amplifiers. Very recent advances in semiconductor amplifiers and their applications will also be covered.

Starting from the fundamental concepts on semiconductor devices, the core of a power amplifier design, the theoretical foundations of a power amplifier design are discussed. It will include fundamental concepts and state-of-the-art results on actual designs of a range of semiconductor power amplifiers using existing foundries. The load pull technique is also addressed and focused on the designer perspective.

The presentations will also cover a variety of advanced topics, and will provide the attendees with a clear overview of the main streams of current and important research trends worldwide in this field, as the Doherty architecture and the more recent load modulation power amplifier design concepts.

The short course will also focus on the major challenges, such as stability (small and large signal) and how to address these in amplifier design. Finally, accounting for the linearity issue, a basic overview on linearization techniques and their adoption to properly mitigate the amplifier distortion effects will conclude the short course.

PROGRAMME

Semiconductor devices for PAs

Ilcho Angelov¹¹Chalmers University

PA theoretical foundation

Paolo Colantonio¹¹University of Roma Tor Vergata

Design and model-oriented Load Pull techniques: from basic CW to wideband and double pulsed Load Pull systems

Marco Pirola¹, Gustavo Avolio²¹Politecnico di Torino (Italy), ²Maury Microwave, Eindhoven, The Netherlands

The Doherty Power Amplifier

Rocco Giofrè¹¹University of Roma Tor Vergata

Balanced PAs: an old trick revival

Roberto Quaglia¹, Aleksander Bogusz²¹Cardiff University (UK), ²Cardiff University

X-parameters high-power PAs modeling for System Level Analysis

Alessandro Cidronali¹¹University of Florence (Italy)

Linear and Nonlinear Stability Analysis of Power Amplifiers

Giorgio Leuzzi¹¹University of L'Aquila (Italy)

Linearization techniques overview

Pere L. Gilabert¹¹Universitat Politècnica de Catalunya (UPC-Barcelona Tech.), Spain

A practical guide to first-time-right integrated microwave PA design

Gijs van der Bent¹¹TNO Radar Technology Department

SUNDAY 08:30 – 12:30

Wearable Antenna Systems for Joint Body-Centric Communication, Powering and Sensing

Chair: Hendrik Rogier¹¹Ghent University - imec

Room: Juliana 3

**SS02**
EuMC

In this short course, the challenges will be addressed that designers face when implementing wireless nodes for joint body-centric communication, powering and sensing. Therefore, insights will be provided into design procedures that enable the development of wearable antenna systems that exhibit sufficient robustness and yield adequate operational autonomy for the targeted applications in the sixth-generation wireless communication system. For this purpose, a comprehensive holistic, stochastic design framework for wearable systems will be outlined in detail. First, an overview of all the different system-level design requirements will be presented. This is followed by a discussion on the material and manufacturing selection process, together with the range of material characterization

procedures available to designers to initiate the actual design process. A full-wave/circuit co-design and co-optimization strategy for pervasive integration of active electronics and energy harvesters will be proposed, which yields optimal wireless nodes. This procedure takes place after the preliminary design of the different building blocks, such as antenna system, transceiver and sensing electronics, energy harvesters and power managements system. Specific attention will be devoted to the extensive statistical analysis based on generalized polynomial chaos expansions, which ensures that designs are sufficiently resilient to variations due to fabrication tolerances and to uncertainty due to challenging deployment conditions. Moreover, validation procedures, in both the far and the near field, and both in

anechoic and realistic operation conditions, will be covered in full detail. The course will end with an overview of some designs for a few representative applications.

PROGRAMME

Wearable antenna systems for joint body-centric communication, powering and sensing

Hendrik Rogier¹¹Ghent University - imec

MONDAY 08:30 – 12:50

Architecture and Applications for Emerging SATCOM and NTN Communication Networks

Chair: Ian Gresham¹

Co-Chair: Salvatore Finocchiaro¹

¹Qorvo

Room: Juliana 3

SM01
EuMC

In less than a decade, low earth orbit (LEO) communications constellations have radically changed the space communications industry. Emerging Satellite Communication (SatCom) applications like broadband internet access in remote areas, enhanced emergency response systems, and vehicle and object tracking, amongst other applications leveraging low-earth orbit (LEO) constellations, are all driven by advancements in high-throughput satellites (HTS) and smaller, more affordable satellite technologies. In 2016, there were approximately 725 commercial communications satellites in all orbits. By the middle of 2024, SpaceX and OneWeb had launched more than ten times this number into LEO orbits, and that number is expected to grow over the next 5 years as Amazon (project Kuiper) and Telesat

begin populating their constellations. These networks require new ecosystems that support a wide range of terminals with different cost, performance, and ruggedization requirements. LEO Satcom systems require near-instantaneous switching between two satellites to maintain connectivity, driving the terminal solution to electronically steered arrays. For ultra-low-cost, high-volume consumer market verticals, the economics have driven all aspects of terminal development internally to eliminate stacked margins on the components.

Next-generation SatCom networks will also enable 6G NTN. The key success factors are high throughput, capacity, low latency, and beamformed wireless links. In this Short Course, renowned speakers from the

Industry will provide a top-to-bottom review of the ecosystem for LEO satellite communication networks: Market trends, Operator visions and objectives, technical challenges for terminals (ground, airborne), terminal integration, antenna design, semiconductor, and IC solutions.

PROGRAMME

The Economics of NTN and D2D

Joe Madden¹
¹Mobile Expert

Technology Developments and R&D Activities at the European space Agency

Salvatore D'Addio¹
¹ESA

Flat Panel Satcom Terminals – Integration Challenges

Christoph Spranger¹
¹Vites

Integrated SATCOM Strategies: Multi-Orbit Networks and the Future of Airborne Connectivity

Blane Boynton¹
¹Intelsat

Enabling next generation SATCOM and NTN – a T&M perspective

Markus Lörner¹
¹Rohde & Schwarz

Connecting the World Through Space: RF Innovations for Space Payloads and Terminals

Ryan Jennings¹
¹Qorvo

MONDAY 08:30 – 12:30

Radiative Wireless Power Transfer Basics and Implementation



SM02
EuMC

Chair: Huib Visser¹

¹Imec Netherlands / Eindhoven University of Technology

Room: Juliana 4

This short course consists of three basic parts, presented in four lectures. The first one covers the history and the basics of WPT with an emphasis on radiative WPT, i.e. for applications to be powered on multiple meters distance from a source. The second part zooms in on the subsystems that make up a radiative WPT receiver. These subsystems are the antenna, the rectifier and impedance matching networks. Attention will be paid to designing these subsystems using free available software, like Octave, QucsStudio and OpenEMS as well as design formulas provided during the short course. In the last part, we will go through an assignment, using the mentioned freeware. At the end of the short course, the student should be capable of designing his/her own low-power radiative Wireless Power Transfer receiver.

PROGRAMME

Radiative Wireless Power Transfer Basics and Implementation, Part 1: History and Basics

Huib Visser¹

¹Imec Netherlands / Eindhoven University of Technology

Radiative Wireless Power Transfer Basics and Implementation, Part 2: Subsystems A

Huib Visser¹

¹Imec Netherlands / Eindhoven University of Technology

Radiative Wireless Power Transfer Basics and Implementation, Part 2: Subsystems B

Huib Visser¹

¹Imec Netherlands / Eindhoven University of Technology

Radiative Wireless Power Transfer Basics and Implementation, Part 3: Example

Huib Visser¹

¹Imec Netherlands / Eindhoven University of Technology

WEDNESDAY 08:30 – 17:50

Embedding Sustainability into RF Technologies

Chair: Bertrand Parvais¹

Co-Chair: Cedric Rolin²

¹imec & VUB, ²imec

Room: Juliana 2



SW01
EuMC/
EuMIC

Our world is constrained by environmental limits and finite resources. Today's innovation process must factor in these limitations to foster the advent of technologies that remain sustainable on the long term. Sustainability is however a broad complex multidisciplinary topic, joining engineering with environmental sciences and encompassing full product life-cycle, which includes material and energy sourcing, product manufacturing, product usage and end-of-life disposal. Addressing this may seem a daunting task for the engineer involved in early technology R&D and product design.

This short course aims to address these difficulties by providing actionable insights and tools to integrate sustainability into the development of RF technologies. Our aim

is to equip the course attendees with the knowledge and methodologies needed to incorporate sustainability into their research practices, with a focus on RF technologies that are currently being intensively researched for the deployment of our future wireless communication networks. The event will be structured around three key axes: (i) the sustainability of the semiconductor industry, (ii) the embodied emissions of RF chips, and (iii) the operational emissions of RF technologies. By offering a deep dive into these areas, the workshop will empower engineers to make informed, sustainable decisions throughout the product lifecycle.

PROGRAMME

Sustainability in ICT: the double-edged quest for efficiency

David Bol¹

¹UCLouvain

Perspectives for sustainable ICT

Hughes Ferreboeuf¹

¹The Shift Project

Sustainability in the context of technological innovation

Anna Wiczorek¹

¹Eindhoven University of Technology

Quantifying the environmental impact of IC chip manufacturing

Cedric Rolin¹

¹Imec

Assessing the environmental impact of R&D cleanroom operations

Enola Fidon¹

¹CEA Leti, France

A life-cycle assessment study of RF technologies

Benjamin Vanhouche¹

¹Imec & VUB

Indium Phosphide Semiconductor Technology for Next Generation Communication Systems: Sustainability and Material Considerations

Laura Vauche¹

¹CEA Leti, France

Sustainable engineered substrate at Soitec

Alexandra Lelong¹

¹SOITEC

Bottom-up model of the life-cycle environmental impacts of cellular networks

Louis Golard¹

¹UCLouvain

THURSDAY 08:30 - 17:50

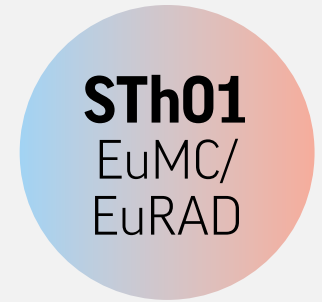
Basics of Systems Engineering for the Microwave Engineering Community

Chair: Ulf Johannsen¹

Co-Chair: Ulf Könemann²

¹TU Eindhoven, ²Fraunhofer IEM

Room: Juliana 1



Modern microwave engineering systems are complex and highly integrated. For the future, the trend further points in this direction where heterogeneous integration, phased array antennas and massive-MIMO front-ends with associated signal processing algorithms are just a few prominent examples. With complexity and high technology integration comes the need for large, multi-disciplinary development teams that are located at several different enterprises and locations. Therefore, clear workflows and development methodologies are required to arrive at viable solutions within time and budget. Here, Systems Engineering comes into play. While Systems Engineering is its own discipline that is currently mainly employed for large cyber-physical systems, its basic principles are universal and can help

the microwave engineering community deal with the increasing complexity of their systems. Therefore, this (interactive) course, given by experts, is dedicated to teaching the basics of Systems Engineering at Europe's largest microwave event

PROGRAMME

Why Systems Engineering is a Must-Have Skill for a Microwave Engineer

Ulf Johannsen¹

¹TU Eindhoven

Basics of Systems Engineering

Ulf Könemann¹

¹Fraunhofer IEM

Systems Engineering Applied to Microwave Engineering Systems

Markus Andres¹

¹HENSOLDT

THURSDAY 13:50 – 17:50

Synchronization in Distributed Radar – Prospective and Problems

Chair: Mohammed Jahangir¹

Co-Chair: Darren Griffiths¹

¹University of Birmingham

Room: Juliana 3



STh02
EuRAD

Researchers and industrialists working on distributed radar systems, open to all career stages from junior to senior engineers. The workshop addresses a generic element required by all coherent radar networks which should maximise its reach. At the same time, the workshop will make mention to distributed radar applications within the EuRAD thematical areas, including but not limited to drone detection, collision avoidance but also cover wider aspects of radar surveillance and remote sensing such as maritime and space situational awareness.

PROGRAMME

Oscillator Stability – Theoretical Modelling and Simulations

Michael Antoniou¹, Ali Bekar¹

¹University of Birmingham

Radar Use Case Prospective

Mohammed Jahangir¹

¹University of Birmingham, UK

Synchronization Methods for Distributed Radar

Darren Griffiths¹

¹University of Birmingham

FRIDAY 08:30 – 12:30

Integrated Sensing and Communications: Fundamentals, State-of-the-Art and the Road Ahead



SF01
EuRAD

Chair: Maria-Sabrina Greco¹

Co-Chair: Christos Masouros²

¹University of Pisa, ²UCL

Room: Juliana 1

The emergence of applications such as smart cities, urban security, smart mobility, and infrastructure monitoring, demands next-generation networks with multi-functional capabilities beyond communication to address 6G KPIs like ultrahigh data rates, precise localization, low latency, and energy efficiency, while aligning with the UN's Sustainable Development Goals. Spectrum congestion has been a major bottleneck in the network design, and for more than a decade, spectrum sharing, co-existence and dynamic spectrum licensing has been the prevalent paradigm. The proposed Short Course overviews the emerging wireless technology of Integrated Sensing and Communications (ISAC), that is shifting the paradigm from co-existence to co-design. The timeliness of this Short Course is underlined by the

global push by academia, industry, and standards bodies to incorporate ISAC into 6G and beyond. Delegates will benefit from insights into ISAC's foundational principles, practical implementation strategies, and how it underpins emerging applications like intelligent transportation, WiFi sensing, and perceptive mobile networks. It offers a comprehensive view of how ISAC technologies can address spectrum congestion, improve sustainability, and create new opportunities in wireless network design, appealing to researchers, industry professionals, and early-stage scholars. The Short Course will cover the below content

- Motivation: emerging wireless applications demanding ISAC and the potential for a sustainable provision
- Signalling design: Sensing/

Communication-Centric ISAC Designs

- Signalling design: Joint waveform design for ISAC, beamforming ISAC designs, pareto framework, and hardware efficient ISAC
- Network level ISAC design and optimization
- Distributed ISAC: Synchronisation issues and solutions
- Security challenges and opportunities for ISAC, and state of the art secure ISAC techniques
- Cognitive sensing techniques for ISAC
- MIMO Radar cognitive beamforming
- Experimentation and proof-of-concept results

PROGRAMME

Short course Part A

Christos Masouros¹

¹University College London

Short course Part B

Maria-Sabrina Greco¹

¹University of Pisa

FRIDAY 08:30 – 12:30

Nonlinear Radar: from Concepts to Applications

Chair: Anastasia Lavrenko¹

¹University of Twente

Room: Juliana 2

A large orange circle containing the text "SF02" in a bold, sans-serif font above "EuRAD" in a smaller, sans-serif font.

SF02
EuRAD

Conventional radar systems are well-suited for detection and tracking of highly reflective objects whose complex permeability differs significantly from the medium around them. Illuminated by an incident electromagnetic wave such objects reflect back a wave at the same frequency and a scaled amplitude, which is then detected and processed at the radar receiver. Nonlinear radar operates differently. It relies on the nonlinear properties of a target to reflect an electromagnetic wave at a frequency different from that of the illuminating signal. Such a nonlinear response can be enabled by target's inherent nonlinearities, as is the case with most electronic devices that use semiconductors, or by supplying the target with a specially designed transponder tag. One of the main advantages of nonlinear operation is that

the background clutter is greatly reduced, since wave reflections from most objects are linear and can be easily filtered out at the receiver. This allows detection of objects that would otherwise be virtually invisible to the conventional radar. It also creates unique opportunities and challenges for system design. Unique properties of nonlinear radar systems makes it an attractive technology for small animal tracking, electronic surveillance, search and rescue, health monitoring, and automotive applications. This SC provides a comprehensive introduction into the field of nonlinear radar including main concepts, design approaches, most recent developments and common application use cases followed by a practical demonstration using a portable X-band FMCW nonlinear radar developed at the University of Twente.

PROGRAMME

Nonlinear radar: Introduction and basic concepts

Anastasia Lavrenko¹

¹University of Twente

Design, analysis and characterization of nonlinear targets

Andrei Mogilnikov¹

¹University of Twente

X-band FMCW nonlinear radar: system design and evaluation

Anastasia Lavrenko¹

¹University of Twente

Use case examples and system demonstration

Andrei Mogilnikov¹

¹University of Twente

SUNDAY 08:30 – 17:50

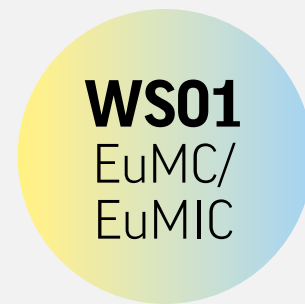
Advancements in Technologies and Circuits Leading to 6G

Chair: Florinel Balteanu¹

Co-Chair: Andrei Grebennikov²

¹Skyworks Solutions Inc., ²Sumitomo

Room: Mission 1



The research area of 6G RF technology is experiencing rapid growth, especially as 5G technology becomes more widespread. Future 6G networks will rely significantly on millimeter-wave (mm-wave) frequencies, reaching up to 300 GHz, crucial for achieving unprecedented data rates and connectivity. The remarkable increase in global smartphone usage has been driven by advancements in CMOS semiconductor technology, particularly at cutting-edge feature sizes like 3nm, greatly enhancing computational capabilities. The 5G mobile industry operates on a large scale, necessitating extensive testing of hardware changes and improvements to ensure functionality and reliability before mass deployment. This workshop will discuss the current 5G RF cellular technology designs, the challenges

of implementing 5G, and the expected circuit and technology advancements that will lead to 6G. Additionally, it will explore the integral role of mm-wave frequencies in future 6G networks, supported by ongoing improvements in CMOS technology that enhance performance through digital signal processing (DSP) and digital calibration.

PROGRAMME

Where and how could InP be competitive versus SiGe for 6G?

Frédéric Giancesello¹, Pascal Chevalier¹

¹ST Microelectronics

Circuit and architecture co-design for wideband and energy-efficient 6G systems

Christian Fager¹, Victor Åberg²

¹Chalmers University, ²Lund University

Recent Advancements of GaN HEMT Power Amplifiers towards 6G

Takuma Torii¹, Shintaro Shirjo¹

¹Mitsubishi Electric Corporation

CMOS mmW/THz phased-array design for 6G era

Kenichi Okada¹

¹Institute of Science, Tokyo, Japan

RF Front End Modules and Evolution to 6G

Florinel Balteanu¹

¹Skyworks Solutions Inc.

Design methodology for Sub-THz Power Amplifier for D-band

Nathalie Deltimple¹

¹INP/ENSEIRB-MATMECA Bordeaux

Radio architectures and enabling technologies for FR3 infrastructure

Rui Ma¹

¹pSemi Murata

Low-Complexity Adaptive Digital Predistortion for User Equipment Linearization

Pere L. Gilabert¹

¹Universitat Politècnica de Catalunya

SUNDAY 08:30 – 17:50

Polymer Microwave Fiber (PMF) Communication for sub-THz, Low-Cost High Data Rate Short-Range Systems

WS02
EuMC

Chair: Frida Strömbeck¹

Co-Chair: Herbert Zirath¹

¹Chalmers University

Room: Mission 2

The recent development of high frequency semiconductor processes has enabled mm-Wave technologies to take advantage of the large bandwidths available at these frequencies (100-300 GHz) to achieve ultra-high data rates. One drawback is the corresponding larger free space path loss (FSPL), which can be compensated for by using high gain antennas. However, that will lead to a very directive link and lose its flexibility.

Polymer Microwave Fiber (PMF) is a promising alternative to use for these short-range communication links (less than 10 meters). It's a robust, low-cost solution which can support data rates exceeding 100 Gbps. These links are essential to future intra-box/module-to-module/in-cabin vehicle communication for example.

This workshop will cover recent

developments in PMF design, interconnects and technologies for the PMF systems. State-of-the-art PMF communication links and breakthrough systems will be presented, as well as novel and promising future applications.

PROGRAMME

CMOS based circuits for high datarate PMF-links

Patrick Reynaert¹

¹KU Leuven

BiCMOS based high datarate PMF-links in D-band and H-band

Frida Strömbeck¹, Herbert Zirath¹

¹Chalmers University

Recent D and H-band PMF links

Jose Luis Gonzalez-Jimenez¹

¹CEA Leti

D-band Transition to PMFs and insight towards H-band

Laurent Petit¹

¹Radiall

D- and H-band PMF coupler integration in eWLB package

Maciej Wojnowski¹

¹Infineon

Recent advances in PMFs for high datarate communication

Maria Jozwicka¹

¹H&S

Applications of PMF-links for telecommunication systems

Sining An¹

¹Ericsson AB

Broadband Sub-THz Dielectric Waveguides

Samir Lagoug¹

¹IMS

SUNDAY 08:30 – 17:50

Acoustic Wave Filters for Space Applications

Chair: Sylvain Ballandras¹

Co-Chair: Eric Dominguez¹

¹SOITEC SA

Room: Quest

WS03
EuMC

The last decades have seen a continuous improvement of mobile systems, from pioneer analogue voice telephony in the 80's to the Long Term Evolution in the 2010, and 5G nowadays: Gbps data rates are considered and billions of Subscriber Identification Modules (SIM) cards are located in Smartphones, Lap-Top and Internet of Things (IoT) devices. At the same time, satellite systems have evolved: from single GEO (Geosynchronous Earth Orbiting) equipments offering overseas services for international connections or few analogue TV channels to Low Earth Orbiting (LEO) constellations like Starlink or One Web, thousands of satellites are now deployed, delivering Internet Protocol based services for mobile or fixed users usually going through base stations. During the past ten years, a significant number

of innovations have been developed to enhance the capability of passive acousto-electric devices to answer the imperative demands of filter characteristic improvement: Piezo-OnInsulator wafers, epitaxial-layer based films for BAW and SAW, new types of modes and devices, frequency operation increases, etc. All these improvements push to reconsider the use of such devices for satellite/Space communications. Therefore, the workshop intends to illustrate, promote and foster all initiatives engaged in the domain of acousticbased RF filter solutions to answer the "New Space" needs and requirements in all the spectral segment of space telecommunications, from L- to C-band and pushing away the usually considered limits for SAW and BAW filters to achieve filtering operations above 10 GHz.

PROGRAMME

SAW filter technology trends for space applications

Olivier Vendier¹

¹TAS

Single crystal BAW

Marie Bousquet¹

¹CEA-Leti

Innovative SAW filter structures on POI for Space applications

Thierry Laroche¹

¹SOITEC SA, Besançon site

Advanced materials for POI wafers with high isolation properties

Jean-Pierre Raskin¹

¹UCL

SAW filters for space applications

Tormod Bjornetun Haugen¹

¹Kongsberg

Innovative Acoustic Devices

Silvan Settler¹

¹Ecole polytechnique fédérale de Lausanne (EPFL)

Combined BAW and IPD filters for 6G communications

Tuomas Pensala¹

¹VTT

New developments of SAW devices on POI

Baron Thomas F¹

¹FEMTO-ST

Evaluation tests for advanced SAW filters on POI for Space applications

Kaoutar Zeljami¹

¹ALTER Technology

SUNDAY 08:30 – 17:50

Additive Manufacturing for Microwave Components and Systems

WS04
EuMC

Chair: Tinus Stander¹

Co-Chair: Cristiano Tomassoni²

¹University of Pretoria, ²University of Perugia

Room: Auditorium

Additive manufacturing has firmly established itself as a valuable tool for rapid prototyping and cost-effective low-volume production of RF, microwave and mm-wave devices and systems. While powder bed fusion techniques remain important in direct printing of metal components, metallization of 3D printed ceramics, photopolymers and thermoplastics have created new opportunities with significant cost and weight advantages. In particular, the recent availability of low loss dielectric materials have enabled the use of 3D printed materials as functional components in microwave designs, rather than merely metallized structural components. Low-loss, low-cost metallization and

accurate characterization of these materials are key to their success. This includes the use of printed conductive inks, creating all-additive approaches for selectively metallized parts.

This workshop brings together additive manufacturing experts from academia and industry to showcase new design and manufacturing techniques, as well as equipment and materials, for additively manufactured microwave components. The workshop also highlights application of these designs in aerospace, IoT, 5G, radio astronomy and

industrial radars.

PROGRAMME

Dielectric-filled 3D printed waveguides and waveguide insert filters

Tinus Stander¹

¹University of Pretoria

Recent advances in additive manufacturing for radar applications

Carlos Sempere Chaves¹

¹Fraunhofer FHR

3D printed ceramic filters for space applications

Cristiano Tomassoni¹

¹University of Perugia

Characterization of printed dielectric materials in the millimeter wave range

Paola Escobari Vargas¹

¹Eindhoven University of Technology

Zero-Power Additively Manufactured FHE-Enabled RF Ultrabroadband Modules for IoT, Precision Agriculture, Industry 4.0 and Digital Twins Applications: the scaleup to 5G+ and 150GHz+

Manos M. Tentzeris¹

¹Georgia Institute of Technology

Monolithically-Integrated 3D Printed RF Filters: New Topologies, Miniaturization & Performance Improvement Techniques

Dimitra Psychogiou¹

¹University College Cork

ATARU Transforming DLP Tech: New 3D Print Resin with Outstanding Dielectric & Thermo-Mechanical Properties

Stefan Schliske¹

¹NanoDimension

On the design of filters and passives with metal 3D printing technology

Stefano Sirci¹

¹SwissToT2

New approaches to metallized resin-printed filters

Benjamin Potelon¹

¹Lab-STICC, IMT-Atlantique, Brest, France

New design paradigms using low-loss stereolithographic printing resins

Stefano Dada¹

¹Rogers Corporation

mm-Wave waveguide devices through plating of SLA-printed parts

Christoph Birkenhauer¹

¹Golden Devices

SUNDAY 08:30 – 17:50

Opportunities and Challenges for the Cryogenic Microwave Control of Quantum Processors

Chair: Masoud Babaie¹

Co-Chair: Fabio Sebastiano¹

¹TU Delft

Room: Spark

WS05
EuMC/
EuMIC

Quantum computers have the potential to solve problems that are intractable for classical digital computers, offering breakthroughs in fields such as cryptography, material science, and optimization. A quantum computing system consists of two main components: the quantum processor, which operates at milli-Kelvin (mK) temperatures, and the electronic interface, which must function at cryogenic temperatures to address scalability challenges. This interface plays a critical role and involves three primary functions: multiplexing and demultiplexing, control, and readout. As a result, microwave engineering and circuit design are essential to developing this interface, ensuring high-fidelity qubit control and readout.

To effectively design this interface,

microwave engineers must first understand the specific operational requirements of different qubit platforms and the associated needs for signal generation and acquisition. The workshop will begin with an introduction to two of the most promising qubit platforms: transmons and color centers, focusing on their unique signal requirements and control challenges.

Designing circuits for cryogenic temperatures also requires robust modeling techniques. We will discuss key device characteristics and modeling strategies at 4K, which are essential for developing reliable cryogenic electronics that can function in quantum systems.

One major challenge in quantum computing

is minimizing the number of cables between the qubit stage (milli-Kelvin) and the electronics stage (4K). To address this, we will explore the role of cryogenic multiplexers in reducing cable complexity and improving signal transmission. The workshop will then cover the readout chain, where achieving an ultra-low noise figure across the entire receiver is crucial. We will present two approaches: the use of active low-noise amplifiers (LNAs) in FD-SOI technology, and a fully passive amplification strategy using parametric amplifiers. Finally, the session will focus on qubit control, highlighting the design of high-speed DACs capable of generating precise control pulses for transmon qubits, as well as the generation of high-voltage pulses for ion-trap qubits.

PROGRAMME

Engineering Quantum Control: Challenges and Innovations in the Microwave Domain

Adriaan Rol¹

¹Orange Quantum Systems

Realising entanglement networks with colour-center qubits

Conor Bradley¹

¹Delft Networks

MOSFET Modeling for the Design of Cryo-CMOS Circuits with the sEKV Model

ChristianENZ¹

¹EPFL

Developing Cryogenic Standard Responses with Uncertainties at 4.2 K using a Thermo-Mechanical EM Approach

Marco Spirito¹

¹Delft University of Technology

Scaling silicon-based quantum computing using 22 nm FDSOI technology

Fernando Gonzalez-Zalba¹

¹Quantum Motion

A 40 GS/s 8b-DAC SST-TX in 7 nm FinFET CMOS for cryogenic quantum applications with 32kB SRAM-based RF-DDS AWG

Marcel Kossel¹

¹IBM

Design of Cryogenic Integrated Circuits for a Trapped Ion Quantum Computer

Vadim Issakov¹

¹U.Braunschweig

Cryo-CMOS Degenerate Parametric Amplifier: An Exploration of Ultra-low Noise Quantum State Discrimination on Silicon

Cheng Wang¹

¹UESTC

SUNDAY 08:30 – 17:50

RFIC Design, Packaging and Antenna Solutions for mmWave and Sub-THz Communication and Radar

WS06
EuMC/
EuMIC

Chair: Ivan Ndip¹

Co-Chair: Matthias Wietstruck²

¹Brandenburg University of Technology (BTU)/ Fraunhofer IZM, ²Leibniz Institute for High Performance Microelectronics, IHP GmbH

Room: Flash

In this workshop, experts from academia and industry will present the latest developments on RFIC design, antenna and packaging solutions for mmWave and sub-THz wireless communication and radar sensing applications.

First, BiCMOS technology and process design kit for mmWave monolithically integrated circuits as well as communication and sensing applications of this technology above 100 GHz will be presented. This will be followed by two presentations focusing on different aspects of SiGe-based transceiver design for radar applications above 100 GHz. Challenges and design solutions of CMOS-based on-chip antennas at D-band will be presented. The remaining four presentations will concentrate on RF packaging

design and system-integration technologies. Specifically, wafer-level packaging, silicon interposers, interconnects and waveguide transitions as well as novel system-in-package (SiP) and AirCore waveguide technologies for mmWave and sub-THz wireless applications will be extensively discussed.

PROGRAMME

BiCMOS Technology and Design Kit for High-Frequency Communication and Sensing Applications

Klaus Aufinger¹

¹Infineon

High-Power Millimeter-Wave Power Amplifiers above 100 GHz in Silicon-Germanium Technology

Ahmet Çağrı Ulusoy¹

¹Karlsruhe Institute of Technology (KIT)

SiGe IC Design for Radar Applications Beyond 100 GHz

Dominic Funke¹

¹Fraunhofer FHR & Ruhr University Bochum

Integrated Signal Generation and on-chip antennas up to 300 GHz in CMOS

Vadim Issakov¹

¹Technical University Braunschweig

SiGe BiCMOS and Wafer-level Packaging Technologies for mm-Wave/sub-THz Applications

Matthias Wietstruck¹

¹Leibniz Institute for High Performance Microelectronics, IHP GmbH

TERASi Next Generation Packaging: Enabling SiP and Chiplets for E-Band and Beyond

Kristófer Kristinsson¹, Adrian Gomez-Torrent¹, Bernhard Beuerle¹, James Campion²

¹TERASi AB, ²TeraSi AB, Sweden

Heterogeneous Integration for the Next Generation of Communication and Sensing

Xiao Sun¹

¹IMEC

Overview of Compact and Low-loss integration concepts for 3D Metal Waveguide and Multi-layer Gap Waveguide Antenna modules at mmWave frequency range

Ashraf Uz Zaman¹

¹Chalmers University

SUNDAY 08:30 – 17:50

Integrated Microwave Photonics

Chair: Chris Roeloffzen¹Co-Chair: Christos Tsokos²¹LioniX International, ²Institute of Communication and Computer Systems**Room: Glow****WS07**
EuMC

Join us for an insightful workshop exploring the transformative potential of integrated microwave photonics. The morning session, "Illuminating the Future: Exploring Applications and Systems of Integrated Microwave Photonics," delves into cutting-edge innovations that leverage photonic technologies to address challenges in communication, sensing, and signal processing. In the afternoon, "Building the Foundation: Photonic Integration Platforms and Enabling Key Components," we focus on the foundational technologies driving photonic integration, highlighting photonic integration circuit (PIC) platforms, materials, and components essential for next-generation solutions. This workshop offers a comprehensive view of the field, fostering dialogue among researchers, engineers, and industry

professionals shaping the future of microwave photonics.

PROGRAMME

RF Photonic Front-end Technologies for THz Communications

Andreas Stohr¹¹Microwave Photonics GmbH

Microwave Photonic for satellite communication payloads

Kasia Balakier¹¹European Space Agency

A broadband 1-40GHz RF receiver based on hybrid integrated photonics for agile signal identification

Paolo Ghelfi¹¹CNIT, Pisa Italy

Programmable and Reconfigurable Photonic Circuits for Signal Processing

Wim Bogaerts¹¹Photonics Research Group IMEC - Ghent University

Photonic integration platforms and control electronics solutions for high-performance microwave photonics systems

Christos Kouloumentas¹¹Optagon Photonics

Programmable Microwave Photonic Signal Processor in the Thin-Film Lithium Niobate Platform

David Marpaung¹¹Nonlinear Nanophotonics group - University of Twente

Breaking the Bottleneck: High-Volume Manufacturing of TFLN PICs for Telecom & Datacom

Amir Ghadimi¹¹Lightium

Millimeter-wave phase arrays enabled by photonic integrated circuits

Guillermo Carpintero¹¹LeapWave Technologies

SUNDAY 08:30 – 17:50

Thermal Effects and Heat Management in Active Phased Arrays: Chip, Package and Antenna Level Concepts



Chair: Yanki Aslan¹

¹Delft University of Technology

Room: Beam

The emerging wireless communication and sensing applications require high power and compact active phased array systems integrating electronics with antennas. Due to limited efficiency, a significant portion of power is converted to heat. To maintain component safety, increase lifetime and ensure performance reliability, it is crucial to remove the excessive heat through effective conduction and convection mechanisms. Thermal management is currently being applied at the level of chips, packaging, substrates, antennas and external coolers, which requires multiphysics modeling, characterization, design, and testing approaches. With expert speakers from both industry and academia, this workshop will provide a multidisciplinary understanding on the joint electro-thermal behavior of front-ends and

antennas. The workshop will also discuss various state-of-the-art cooling technologies in integrated phased arrays, and analyze their performance-complexity trade-offs.

PROGRAMME

Overview and Challenges in Phased Array Thermal Management

Yanki Aslan¹

¹Delft University of Technology

Analysis of Electro-Thermal Effects in GaN MMICs and Active Antenna Transmitters

Tobias Kristensen¹

¹Chalmers University of Technology

Electro-thermal Analysis for RF Power Applications

Graeme Ritchie¹

¹Cadence Design Systems

Thermal Modeling and Characterization of GaN and LDMOS Power Amplifiers

Amir Mirza Gheytaghi¹

¹Ampleon

Competitive and Sustainable Advanced Packaging (CSAP)- a new approach to FO-PLP

Edsger Smits¹

¹CITC Chip Integration Technology Center

Thermal Modelling of Active Antennas and Dual-Functional Heatsink Antenna Concepts

Feza Turgay Celik¹

¹Delft University of Technology

Development and Testing of a Two-Phase Mechanically Pumped Loop for Active Antennae

Charlton Castro¹

¹NLR - Royal Netherlands Aerospace Centre

A Thermally Enhanced All-Metal Antenna Array for Millimeter-wave Applications

Thijs Brouwers¹

¹The Antenna Company

SUNDAY 08:30 – 17:50

Innovations in Load-Pull Techniques for Wideband and High-Frequency Applications

Chair: Gian Piero Gibiino¹

Co-Chair: Olof Bengtsson²

¹University of Bologna, Italy, ²Ferdinand-Braun-Institut (Germany)

Room: Juliana 1



The load-pull principle, introduced over 50 years ago, has become a cornerstone for the characterization of RF power transistors. While early methods relied on mechanical slug tuners and RF power meters, modern load-pull systems address the challenges of next-generation wireless systems, including wideband operation and sub-THz implementations. This workshop brings together experts to discuss the latest advancements in load-pull measurement technologies, focusing on these emerging demands.

Topics will include state-of-the-art active, passive, and hybrid load-pull techniques, advanced calibration methods, and their applications in transistor and power amplifier characterization. Participants will gain valuable insights into behavioral modeling approaches utilizing load-pull measurements and wideband active load-pull technologies in both frequency and time domains. Case studies will explore on-wafer characterization, phased-array emulation, and reverse intermodulation distortion in MIMO

systems. The workshop will also spotlight innovations in sub-THz systems, including the use of VNA frequency extenders for wideband signal testing.

PROGRAMME

Advanced loadpull measurements for next generation communication systems

Mauro Marchetti¹

¹Maury Microwave, USA

Multi Harmonic Active Load Pull for High Power, High Efficiency Transistor Characterisation

Carsten Monka-Ewe¹

¹TNO, Netherlands

Optimised Large Signal Measurements for Behavioural Model Extraction

Paul J. Tasker¹

¹Cardiff University, UK

A Practical Comparison of various load pull methods for non-linear DUT characterization

Sajjad Ahmed¹

¹Focus Microwaves, Canada

A VNA based wideband multi-port measurement system for active load pull and coherent MIMO circuit characterization

Olof Bengtsson¹

¹Ferdinand-Braun-Institut, Germany

Measuring and Modeling Power Amplifier Performance under Varying Antenna Loads using Wideband Active Load-pull (WALP)

Troels Studsgaard Nielsen¹

¹Keysight Technologies, USA

Application of Wideband Active Load-Pull Technology for PA Components and Systems

Gian Piero Gibiino¹

¹University of Bologna, Italy

Emulation of large array distortion using active load pull techniques

Koen Buisman¹

¹University of Surrey, UK

Characterization and modeling of PA reverse intermodulation distortion in MIMO transmitter applications using dual injection active load pull approach

Christian Fager¹

¹Chalmers University, Sweden

Enabling Modulated Signal Measurements with VNA Frequency Extenders: A New Approach to Wideband Active Load-Pull at High Frequencies

Ahmed Ben Ayed¹

¹University of Waterloo, Canada

SUNDAY 08:30 – 17:50

Advanced mm-Wave IC Design: A Step Ahead

Chair: Luca Aluigi¹

Co-Chair: Alessandro Fonte²

¹Huawei Technologies, ²SIAE Microelettronica

Room: Juliana 2

WS10
EuMC/
EuMIC

The design of advanced mm-wave integrated circuits (ICs) has become a critical area of research and development in modern communications, radar systems, satellite communications, and emerging technologies such as beyond-5G. As the demand for higher data rates, increased bandwidth, and more efficient power consumption intensifies, engineers face new and complex challenges in design and integration of mm-wave ICs.

The workshop will explore the cutting-edge

advancements in mm-wave IC design, focusing on the key challenges ahead. Topics will include the integration of high-frequency components, power efficiency in high-speed operations, thermal management, and the evolving role of novel materials and fabrication processes. Special attention will also be given to the unique challenges and opportunities in satellite communications, where mm-wave technology plays a crucial role in enabling next-generation satellite networks and services.

Participants will gain insights into the opportunities these challenges present, as well as the potential solutions that are shaping the future of mm-wave technologies across various domains.

Join us for an in-depth discussion on how to overcome these hurdles and drive innovation in one of the most exciting areas of modern electronics.

PROGRAMME

Innovative Gallium Nitride technologies enable disruptive architectures of Front-end T/R chips

Ernesto Limiti¹

¹University of Rome Tor Vergata

Transistor stacking: an enabling technique for mm-wave load-modulated power amplifiers?

Anna Piacibello¹

¹Politecnico di Torino

Efficiency vs. Linearity in Power Amplifiers for Satellite Communications

Julio Andres Lonac¹

¹Huawei Technologies

Characterization and modelling of electron devices at mm-wave frequencies: What is so complex?

Antonio Raffo¹

¹University of Ferrara

Ultra-low phase-noise frequency generation at mm-Wave

Simone Mattia Dartizio¹

¹Politecnico di Milano

Wideband and Power-Efficient SiGe BiCMOS Building Blocks for D-Band Communications

Giuglielmo De Filippi¹

¹Fondazione Chips-IT

Front-end design of SiGe BiCMOS analog receivers for 5G and beyond backhauling applications

Pasquale Tommasino¹

¹Sapienza University of Rome

130nm SiGe BiCMOS 1-bit Active Switch Dual Input LNA for Slot Antenna based ARIS Element

Giulio Brancali¹

¹University of Perugia

Integrated Multiple Switch-Beam Array Antenna For Resilient Communication Link M2m/Iot Application

Francesco Grego¹

¹University of Calabria

Choosing the right technology – A comparison of Silicon-based and III-V technologies for millimeter-wave IC design s

Alessandro Fonte¹

¹SIAE Microelettronica

SUNDAY 13:50 – 17:50


The Path to 2030: Joint Communication and Sensing in the 6G Internet-of-Everything Era

Chair: Padmanava Sen¹

Co-Chair: Sam Lemey²

¹Barkhausen Institut, ²Ghent University-imec

Room: Juliana 3



WS11
EuMC/
EuMIC

Joint Communications and Radio Sensing (JCAS), also referred to as Integrated Sensing and Communications (ISAC), has been a key focus of several 6G projects, discussions, and standardization platforms worldwide in recent years. It has been extensively explored as a critical part of next-generation communication systems beyond cellular networks. To expand the utilization of JCAS, a system-level co-design approach will serve as a key enabler, with RF hardware (front-end and antenna system) playing a pivotal role.

This workshop aims to cover the state-of-the-art advancements and emerging enabling technologies, with a specific focus on antenna systems, beamforming and array processing techniques, reconfigurable frontends, signal processing, privacy-preserving

mechanisms and related demonstration platforms to identify the remaining gaps between ideas and actual deployments in real-world scenarios (aiming 2030 as the year of 6G deployments).

The workshop will span applications that use frequencies from sub-10 GHz (e.g., FR1, UWB) to sub-THz (e.g., D-band and 256 GHz), with multiple talks highlighting flexible architectures and dual-/wide-band methodologies. Comprising of six talks, the sessions emphasize deployable concepts for the 6G Internet-of-Everything era. They address deployment challenges and solutions across diverse frequency bands, showcasing innovations such as reconfigurable frontends and antennas, repurposing existing systems for new use cases, and promoting energy-efficient operation.

PROGRAMME

Reconfigurable frontends for Deployable Privacy-preserving ISAC/JCAS

Padmanava Sen¹

¹Barkhausen Institut

Ultra-wideband Joint Communication and Sensing for the Internet-of-Everything: from Self-Shielding Antenna System Design in the FR3 Band to Machine-Learning-Based Algorithms

Sam Lemey¹

¹Ghent University-imec

Novel Reconfiguration Techniques for Wideband and Low-profile Antenna Frontends in

Joint Communication and Sensing Systems

Akram Alomainy¹

¹Queen Mary University of London

Practical aspects of integration of sensing functionality with radio communication systems

Marko E. Leinonen¹

¹University of Oulu

Dual-band Active Antenna Array System and Duplexer Transition for future JCAS applications in W-and D-band

Kevin Van Hastenberg¹

¹TU Eindhoven

SiGe BiCMOS Integrated Circuits and Systems for sub-THz Communication and Sensing

Corrado Carta¹

¹IHP Microelectronics

SUNDAY 13:50 – 17:50


AI and Data-Driven Modeling for RF/MW Design

Chair: Tom Dhaene¹

Co-Chair: Domenico Spina²

¹Ghent University, ²Vrije Universiteit Brussel

Room: Juliana 4



WS12
EuMC/
EuMIC

Joint Communications and Radio Sensing (JCAS), also referred to as Integrated Sensing and Communications (ISAC), has been a key focus of several 6G projects, discussions, and standardization platforms worldwide in recent years. It has been extensively explored as a critical part of next-generation communication systems beyond cellular networks. To expand the utilization of JCAS, a system-level co-design approach will serve as a key enabler, with RF hardware (front-end and antenna system) playing a pivotal role.

This workshop aims to cover the state-of-the-art advancements and emerging enabling technologies, with a specific focus on antenna systems, beamforming and array processing techniques, reconfigurable frontends, signal processing, privacy-preserving

mechanisms and related demonstration platforms to identify the remaining gaps between ideas and actual deployments in real-world scenarios (aiming 2030 as the year of 6G deployments).

The workshop will span applications that use frequencies from sub-10 GHz (e.g., FR1, UWB) to sub-THz (e.g., D-band and 256 GHz), with multiple talks highlighting flexible architectures and dual/wide-band methodologies. Comprising of six talks, the sessions emphasize deployable concepts for the 6G Internet-of-Everything era. They address deployment challenges and solutions across diverse frequency bands, showcasing innovations such as reconfigurable frontends and antennas, repurposing existing systems for new use cases, and promoting energy-efficient operation.

PROGRAMME

Neural Network-based methodologies for the design of modern RF and microwave systems

Domenico Spina¹

¹Vrije Universiteit Brussel

Data-efficient Bayesian techniques for microwave design and optimization

Tom Dhaene¹

¹Ghent University

Gaussian processes for data-efficient uncertainty quantification of electronic designs

Paolo Manfredi¹

¹Politecnico di Torino, Italy

Kernel-Based System Identification of Electronic Devices

Thijs Ullrick¹

¹Ghent University, Belgium

Machine Learning-enhanced development of complex antenna structures: topology synthesis, multi-objective optimization and robust design

Adrian Bekasiewicz¹

¹Gdansk University of Technology

SUNDAY 08:30 – 12:30

Microwave Carbon Footprint of Wireless Communications - from Energy Efficiency to Embedded Emissions

WS13
EuMC

Chair: Stefan Wunderer ¹

Co-Chair: Andreas Wentzel ²

¹NOKIA, ²FBH

Room: Juliana 4

While wireless communications has been showing a steady growth over the past decade, sustainability puts a question mark behind this development. Already nowadays communication networks account for a non-negligible share to the global carbon footprint. Among this, the wireless infrastructure makes up for a considerable part, which is expected to see a significant increase in the coming years due to the exponential growth of transmitted data. The carbon footprint is currently dominated by energy consumption in the use phase. The percentage of used renewable energy within the infrastructure is increasing year by year. This will shift the carbon reduction efforts to embedded emissions for the network operators.

For the user equipment, on the other hand, fabrication plays an important role. In many European countries, equipment manufacturers have to provide data on the footprint in the data sheets. Altogether, the wireless community is forced to include the sustainability aspects into system and component development from the very beginning, which is new for the majority of those working in the field.

The purpose of this workshop is to provide insight into the necessary methodology, the tools, and the resulting data of how to assess the carbon footprint of wireless communication networks. The talks cover hardware components and chip technology as well as system considerations.

PROGRAMME

Sustainability as Design Imperative for 6G

Stefan Wunderer ¹

¹NOKIA

Sustainability in the infrastructure of mobile communication networks

Kristian Lindskog ¹

¹Ericsson

Energy Efficiency and Carbon Footprint of D-Band Point-to-Point Radio Links for 6G

Wolfgang Heinrich ¹

¹FBH

Carbon footprint of an InP HBT process for D-band MMICs

Tuğana Aslan ¹

¹FMD (Research Fab Microelectronics Germany)

MONDAY 08:30 – 17:50

Photonic Technologies and Systems for RF Applications

Chair: Andreas Stöhr¹

Co-Chair: Guillaume Ducournau²

¹University Duisburg-Essen, ²Univ of LILLE

Room: Juliana 1

WM01
EuMC

Today, most devices and technologies rely on electronics to process, transmit, and analyze information. This workshop will address photonic RF technologies aiming to transform these electronic connections into photonic ones, increasing transmission speeds and improving responsiveness while consuming substantially lower levels of power. The key advantage of photonic RF technology is the potential to provide a continuous and interference-free coverage of multi-octave frequency bands up to the THz regime with only a single technological solution paving the way for a plethora of future applications, measurement technologies and metrology. Potential applications include high-capacity fixed wireless access, mobile mm-wave/THz communications, satellite communications, earth observation

and techniques for ultrawideband signal processing. Generic functions include multi-octave bandwidth high output power RF sources and receivers, optically pumped mm-wave/THz receiver, phase-stable transport of RF signals over optical fiber, optical beamforming technology.

The workshop will provide an insight into the state-of-the-art of photonic RF technologies, and it aims to discuss whether maturity, performance and cost of photonic RF technology is ready to compete with existing solutions.

PROGRAMME

Photonic Terahertz Vector Network Analyzer for High-Frequency Test and Measurement Applications

Taro Eichler¹

¹Rohde & Schwarz

Antennas and Packaging for Multiuser Sub-THz Wireless Communication

Akanksha Bhutani¹

¹KIT

Broadband RF photonics systems enabled by dielectric waveguide technology

Guillermo Carpintero¹

¹UC3M

THz photodiodes

Sumer Makhoulouf¹

¹UDE

Antenna-coupled terahertz optical modulators using electro-optic polymer waveguides

Takahiro Kaji¹

¹NICT

Photonic Terahertz Systems and their Use as High Frequency Measurement Equipment

Nico Vieweg¹

¹OPTICA

RF over Fiber for Satellite Communications and Earth Observation

Yilmaz Uçar¹

¹MWP

THz photonics for system-level testing

Guillaume Ducournau¹

¹Univ of LILLE

Ultra-high stable laser source for microwave photonics and THz

Samir Kassi¹

¹Univ Grenoble Alpes & KAPAH Company

V-Band Optoelectronic Oscillator for Earth Observation Applications

Dimitrios Kastritsis¹

¹University of Cyprus

Laser Sources Architectures for Classical and Quantum RF and Optical Sensing

Daniel Dolfi¹

¹THALES

THz transistors

Peter Huggard¹

¹Rutherford Appleton Labs

MONDAY 08:30 – 17:50

Latest Advancements in Microwave Measurement Techniques for Future Communications and Quantum Applications

WM02
EuMC

Chair: Xiaobang Shang¹

Co-Chair: Nick Ridler¹

¹National Physical Laboratory (NPL), UK

Room: Juliana 2

This full-day workshop will explore the latest advancements in microwave measurement techniques. Topics covered include on-wafer S-parameter measurements at millimetre-wave and sub-terahertz frequencies, on-wafer noise figure measurements, microwave measurements at cryogenic temperatures, novel VNA calibration methods, millimetre-wave modulation effects in optical links, robot-based field measurement techniques, and the characterisation of dielectric materials at millimetre-wave frequencies, among others.

These advanced measurement techniques are crucial for the development of circuits

aimed at future communications and quantum applications. The workshop will feature twelve presentations by distinguished speakers from diverse scientific backgrounds, including representatives from metrology institutes, instrumentation manufacturers, and both industry and academia. This will provide attendees with a comprehensive overview of the topics discussed.

The workshop will conclude with a dedicated session for open discussions, offering an opportunity for both speakers and attendees to engage in a dialogue about

the challenges and opportunities facing the microwave measurement community in the years ahead. This interactive session will encourage contributions from all participants, fostering a collaborative exchange of ideas.

PROGRAMME

On-wafer S-parameter Measurement at Millimetre-wave and Sub-terahertz Frequencies

Xiaobang Shang¹

¹National Physical Laboratory

Characterisation of a Commercial High Resistance Silicon Calibration Substrate at D-band

Gia Ngoc Phung¹

¹PTB, Germany

On Accuracy and Traceability of Wafer-Level Measurements at mm-Wave Frequencies

Andrej Rumiantsev¹

¹MPI Corporation, Taiwan

AIST's Cryogenic Testbed System Using Transmission Line with High Thermal Insulation

Hiroyuki Kayano¹

¹Advanced Industrial Science and Technology (AIST), Japan

Working Towards A Large-scale Quantum Computer

James Kirkman¹

¹Quantum Motion, UK

Avoiding Pitfalls and Optimisation of RF/millimetre-wave Measurements at Cryogenic Temperatures

Gavin Fisher¹

¹FormFactor, Germany

R&D Development Challenges in RF and mmWave Lab for S-parameters and Noise Characterisation in an Industrial Environment

Joao Carlos Azevedo Goncalves¹

¹STMicroelectronics, France

Millimeter-wave modulation effects in optical links

Jon Martens¹

¹Anritsu, US

Recent Developments in VNA Calibration Techniques

Michael Ernst Gadringer¹

¹Graz University of Technology, Austria

Robot Based Microwave Measurement Technique

Jae-Yong Kwon¹

¹KRISS, South Korea

Radar Based Material Characterization Methods in the Millimetre-wave Range

Jan Barowski¹

¹Ruhr University Bochum, Germany

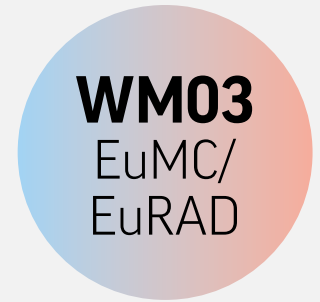
Broadband Material Characterization Using a Balanced-Type Circular Disk Resonator at Millimetre-wave and Sub-Terahertz Bands

Yuto Kato¹

¹National Metrology Institute of Japan, Japan

MONDAY 13:50 – 17:50

Standard, Prototype, and Measurement for Integrated Sensing and Communications in the COST Action INTERACT



Chair: Yang Miao¹

¹University of Twente

Room: Juliana 3

Integrated sensing and communications (ISAC) is considered as one of the key features for 6G, where radar sensing functionalities will be integrated with the radio communication infrastructure to provide more reliable high-speed communications and also to enable emerging new services like autonomous driving, smart human support, and industry 5.0. In ISAC systems, the accurate information of surrounding operation environment is as important as the high-speed data transmissions. Despite promising, there are yet challenges in ISAC system design, use case scenario characterization and modeling, resource allocation to balance and optimize the dual function performances in the use cases.

This workshop aims to provide the current state-of-the-art of the ISAC development in the framework of COST action INTERACT. This workshop focuses on the ISAC standard, prototype and measurement, aiming at providing both industry and academia a comprehensive end-to-end overview covering systems, resources, scenarios, and performance tradeoffs.

PROGRAMME

Digital twins, ISAC channel measurement, digital twin, and inference from various link scenarios

Narcis Cardona¹

¹University politecnica de valencia, Spain

Dual-band ISAC prototype and demo at upper mid-band

Bixing Yan¹

¹University of Twente, Netherlands

ISAC standardization in 3GPP

Christopher Mollen¹

¹Ericsson, Sweden

Distributed MIMO prototype and measurements for ISAC use cases

Minseok Kim¹

¹Niigata University, Japan

ISAC prototype, measurement and resource allocation

Carsten Smeenk¹

¹Fraunhofer IIS, Germany

WEDNESDAY 08:30 – 12:30

Innovative Semiconductor Device Architectures and Accurate Modeling for Emerging Applications

Chair: Kenjiro Nishikawa¹

Co-Chair: Kazuya Yamamoto²

¹Kagoshima University, ²Mitsubishi Electric Corporation

Room: Juliana CZ1

WW01
EuMC

As it is well known, III-V-based amplifiers, especially GaN-based power amplifiers (PAs), are becoming popular even in communication fields such as sub-7GHz (FR1) base-stations and millimeter-wave satellite communication fields as well as military radar fields. InP-based low-noise amplifiers operating under cryogenic environments and diode-based rectenna have also been focused on by practical use of quantum computing and RFID/Sensing systems.

Despite these advancements, many circuit designers, particularly those working on GaN-based PA development, frequently express dissatisfaction with the design accuracy, largely attributable to the limitations and inaccuracies of existing transistor models. In the domain of cryogenic low-noise

amplifiers, a substantial number of designers remain unaware of critical device-specific challenges and key design considerations, including precise transistor modeling. Furthermore, circuit designers engaged in the development of wireless power transfer (WPT) systems have the potential to leverage emerging technologies, such as graphene-based diodes integrated on flexible substrates, which could enable the realization of highly efficient and practical wireless power transfer solutions.

This workshop aims to address the pressing challenges faced by circuit designers by exploring innovative semiconductor device structures and advanced modeling techniques. While bridging the gap between theoretical advancements and practical

commercialization, the research seeks to empower designers to achieve greater accuracy and efficiency in the design of cutting-edge semiconductor devices and systems.

It is, therefore, expected that the workshop attendees will be very useful for III-V-based device and amplifier designers; students, beginners, or less-experienced circuit/device designers as well as actual experts engaged in circuit- and device-developments for practical applications from sub-7GHz to millimeter-waves.

This proposal is endorsed by MTT-S TC-9.

PROGRAMME

Fundamentals and modeling techniques of high-power GaN HEMT devices for PA applications in sub-7 GHz base transceiver stations

Ken Kikuchi¹

¹Sumitomo Electric Device Innovations, Inc

GaN HEMT Memory Effects and their Impact on RF PA Linearizability

Luis Cotimos Nunes¹

¹University of Aveiro

GaN Device Modeling for Trapping Effects and Its Applications

Yutaro Yamaguchi¹

¹Mitsubishi Electric Corporation

Low-power optimization of HEMT LNAs in quantum computing

Jan Grahm¹

¹Chalmers University of Technology

Advanced Graphene-based diode for high-efficient rectifiers

Renato Negra¹

¹RWTH Aachen University

WEDNESDAY 08:30 – 12:30

High Resolution Radar Technologies for Future Automotive Systems

Chair: Stephan Kruse¹

Co-Chair: Ulf Johannsen²

¹University of Paderborn, ²Eindhoven University of Technology

Room: Juliana 1



High-resolution radar could be a key enabler for high-level autonomous driving. This workshop provides an overview of the latest trends and outcomes in high-resolution radar systems. Participants will gain insights into radar system design and implementation, state-of-the-art pure electronic radar, photonic radar, and integration techniques. The industrial keynote talk will explore the role of high-resolution radar in automotive safety. Subsequent scientific presentations will cover the latest advancements in pure electronic radar circuit and system design, photonic radar, antenna integration, and packaging using MID processes.

PROGRAMME

Resolution matters!

Marc-Michael Meinecke¹

¹Volkswagen AG

IC to antenna interfaces for high performance automotive mm-wave radars

Harish Nandagopal¹

¹NXP Semiconductors

Considering Photonic Integration in System Design

Antonella Bogoni¹

¹PNTLab CNIT

Application of MID technology for the creation of RF components

Thomas Mager¹

¹Fraunhofer IEM

Series-Fed Dipole Array for D-Band Sensing in Wafer Level Package Technology

Martijn de Kok¹

¹TNO

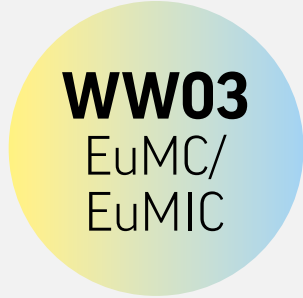
WEDNESDAY 08:30 – 12:30

RF & Sub-THz Heterogeneous Integration

Chair: Francesco Filice¹

¹IMEC (Leuven, Belgium)

Room: Juliana 3

A circular logo with a gradient from yellow to blue. The text 'WW03' is at the top, 'EuMC/' is in the middle, and 'EuMIC' is at the bottom.

5G and 6G applications push towards the development of highly integrated systems able to operate from sub-mm-wave up to sub-THz frequencies, leveraging both beamforming and MIMO techniques. The challenge in efficiency is tackled with heterogeneous MMIC integration. The SHIFT consortium covers a wide range of applications focusing on such topics. The workshop will aim at providing a full picture of the different actors required to realize these kinds of demonstrators, by some practical development examples and the contributions of designers and manufacturers.

Within this context, the first part will focus on the frequency range for 5G MIMO applications, showing an example of CMOS power amplifier design techniques in GaN-on-SiC

addressing MIMO PA challenges. This development targets a final module consisting of a SiGe driver with a GaN power stage, with a packaging integration that allows to handle high-power signals.

A second larger part of the workshop will be devoted to the development of a beamforming D-band (140-GHz) transceiver system combining BiCMOS (B55x) and InP (EU foundry) devices by means of advanced mm-wave PCB/package concepts, to address future telecommunication systems operating above 100 GHz.

Different contributions will cover this subject following a bottom-top approach, starting from the discussion of advanced IC-substrate packaging techniques and moving

forward to the complete package design, considering the need for heterogeneous chip-embedding. The details of the related MMIC and antenna-arrays design will be provided.

PROGRAMME

D-band system-in-package design for 6G telecommunication modules.

Francesco Filice¹
¹IMEC

Heterogeneous Integration of 5G mMIMO SiGe Driver & GaN on SiC PA using European Sovereign Innovative Packaging Technology

Frédéric Giansello¹
¹STMicroelectronics

Towards efficient radio modules beyond 100 GHz: packaging, antenna and co-design solutions

Francesco Foglia Manzillo¹
¹CEA - LETI

Leveraging InP D-HBT Technology for future mm-wave and sub-THz applications via heterogeneous integration: present situation and future needs

Bertrand Ardouin¹
¹III-V Lab

Enabler technologies for beyond 100GHz applications & 6G telecommunication

Daniel Schlick¹
¹AT&S

WEDNESDAY 08:30 – 12:30

Recent Progress in Compact, Ultra-Low Phase Noise Microwave-Photonic Frequency Synthesis

WW04
EuMC

Chair: J. Christoph Scheytt¹

Co-Chair: Franz-Xaver Kärtner²

¹Paderborn University, ²DESY / Hamburg University

Room: Juliana 4

This workshop will introduce participants to microwave photonic frequency synthesis, with a focus on achieving ultra-low phase noise through the use of mode-locked lasers and/or optical frequency division. As the demand for higher precision and frequency stability in microwave systems increases, particularly in areas such as telecommunications, radar and time-frequency metrology, the ability to generate low phase noise microwave signals becomes increasingly critical. Optical techniques have emerged as powerful tools for frequency synthesis due to the exceptional frequency stability, wide frequency range from microwave to THz, and low noise of optical oscillators. Besides ultra-low phase noise frequency synthesis, another aspect of the workshop will be compact realizations from current benchtop

devices to future chip-scale microwave-photonic frequency synthesizers

PROGRAMME

Integrated photonic low-noise microwave and mm-wave synthesis

Scott Diddams¹

¹NIST, University of Colorado, CO, US

The Power of Free-Running: Generating Microwaves Without Servo Bumps

Thomas Schibli¹

¹University of Colorado, CO, US

Low phase noise microwave frequency synthesis using OEPLL and OPLL

Meysam Bahmanian¹

¹Paderborn University, Germany

Compact frequency comb systems for timing transfer and low-noise microwave generation

Jungwon Kim¹

¹KAIST, South-Korea

Chip-based low noise photonic microwave oscillators via integrated optical frequency division

Jiang Li¹

¹HQ Photonics, Pasadena, CA, US

THURSDAY 08:30 - 17:50

Automotive Radar Research Trends

Chair: Martin Hitzler¹

Co-Chair: Jonathan Bechter²

¹Ulm University, ²Zendar GmbH

Room: Juliana 2

WTh01
EuRAD

The workshop aims to create an overview of today's automotive radar research, and wants to show what is required to bring these technologies to application. We expect strong advancements in the fields of artificial intelligence for radars, distributed radar networks, and advanced radar signal processing concepts. With sufficient compute and memory resources those technologies unlock next level automotive radar performance. Today, algorithm execution is mostly limited by the resources on smart radars, which typically use object or point cloud interfaces. To overcome the compute limitations, it seems reasonable to run the radar data processing completely or partly on a central or zonal processor. The workshop talks show examples for future radar technologies, like object detection and

classification, road surface classification, radar perception, and coherent radar network processing. The presented examples are discussed with view on interface and compute requirements. We want to create an understanding of what automotive radars can achieve in future, and which interfaces and compute and memory resources need to be provided.

PROGRAMME

On the Annotation of Radar Data for Machine LearningBased Object Detection in Automotive Scenarios

Max Heidbrink¹

¹FriedrichAlexanderUniversität ErlangenNuremberg, Germany

Next-Gen, AI-Driven Radar Perception for Automotive and Beyond

Andras Palfy¹

¹Perciv AI, The Netherlands

Multi-modal Automotive High-resolution Imagery and Scene Recognition using Tracking and Segmentation Approaches

Anum Pirikani¹

¹The University of Birmingham

FMCW radar simulation: closing the gap to camera simulation realism?

David Van Hamme¹

¹Universiteit Gent, Belgium

Millimeter-Wave Radar Sensing Technology for Industrial Applications

Hiroki Mori¹

¹Toshiba Corporation

Polarimetry for automotive MIMO radars

Alexander Yarovoy¹

¹Delft University of Technology, The Netherlands

AI Processing and Radar Networks using Satellite Radars

Jonathan Bechter¹

²Zendar GmbH

Radar systems For Large Array Apertures

Feike Jansen¹

¹NXP Semiconductors

Synchronization concepts for automotive radar networks

Julian Aguilar¹

¹Ulm University

THURSDAY 08:30 - 12:30

Multistatic/Distributed Radar System

Chair: Matthew Ritchie¹

Co-Chair: Elisa Giusti²

¹UCL, ²CNIT

Room: Juliana 3

A large orange circle containing the text "WTh02" in a bold, sans-serif font, with "EuRAD" in a smaller, regular sans-serif font below it.

WTh02
EuRAD

This workshop will explore recent advancements in multistatic and distributed radar systems, addressing key challenges, experimental results, and emerging applications. The event will provide a comprehensive overview of the state of the art in the field, offering participants valuable insights into both fundamental and applied aspects of radar systems.

The primary topics covered will include synchronization and timing requirements, which are essential for ensuring accurate signal processing in distributed radar architectures. The discussion will explore the challenges associated with both coherent and incoherent signal processing techniques and the strategies employed to achieve precise synchronization across multiple radar

nodes, enabling effective data fusion and reliable performance in multistatic setups.

The workshop will also delve into practical applications such as passive radar techniques and SAR measurements, addressing the benefits and limitations of various system configurations and platforms.

Finally, the focus will shift to practical implementations and experimental results, highlighting recent advancements in multibistatic radar imaging, synchronization techniques, and distributed sensing systems. The discussions will feature real-world case studies and insights into the latest innovations, providing attendees with a deeper understanding of how these technologies are being deployed in current radar systems.

By presenting these cutting-edge topics, the workshop will be highly relevant for professionals working in radar systems, radar signal processing, and distributed sensing technologies, offering valuable perspectives on current challenges and future directions in the field

PROGRAMME

Multistatic Sensing - Introduction to Benefits and Challenges

Matthew Ritchie¹

¹UCL

Timing/sync requirements

Piers Beasley¹

¹BAE

Distributed passive radar systems

Krzysztof Kulpa¹

¹WUT

Distributed SAR measurements

Michael Antoniou¹

¹UoB

Multi-bistatic Interferometric ISAR

Elisa Giusti¹

¹CNIT

THURSDAY 08:30 – 11:30

Active Phased Arrays: Bridging Design and Measurement for Young and Industry Professionals Part 1

WTh03
EuMC

Chair: Kamil Yavuz Kapusuz¹

Co-Chair: Marc Dirix²

¹IMEC-Ghent University/Belgium, ²Emerson & Cuming AC

Room: Spark

The workshop Active Phased Arrays: Bridging Design and Measurement for Young and Industry Professionals aims to provide a comprehensive view of the evolving landscape of active phased array technologies, with a strong emphasis on practical integration, simulation, and measurement challenges. Designed to connect young professionals with experienced experts from industry and academia, this event fosters cross-disciplinary dialogue and collaboration.

The workshop explores key developments in the design, realization, and optimization of small and large-sized active phased array systems operating across a broad frequency spectrum, from megahertz (MHz) to terahertz (THz). It covers a wide range of topics, including advanced simulation tools,

integration techniques, efficient thermal management, and innovative phased array architectures. The program highlights the importance of bridging theory and application by addressing the full design-to-deployment pipeline, including system-level thinking and cross-functional co-design.

In addition to the technical content, the workshop includes interactive opportunities for networking and career development, encouraging participants to engage with peers, mentors, and potential collaborators. By promoting both technical depth and practical insight, the workshop supports the growth of a new generation of engineers and researchers capable of driving innovation in (active) phased array technologies for communications, sensing, and beyond.

PROGRAMME

IEEE MTT-S Young Professionals: Driving Innovations from MHz to THz

Goutam Chattopadhyay¹

¹2025 President, IEEE MTT-S

Towards Low-Loss Integration of D-Band Phased Arrays with CMOS Beamformers and SiGe Power Amplifiers

Samuel Rimbaut¹

¹Ghent University

Dedicated Software Tool for Rapid Full-Wave Design, Optimisation and Analysis of Phased Array Antennas

Cecilia Cappellin¹

¹TICRA

Design, Simulation and Realization of Phased Array Antennas

Simona Bruni¹

¹IMST

Coffee Break

THURSDAY 13:50 – 17:50

Active Phased Arrays: Bridging Design and Measurement for Young and Industry Professionals Part 2

WTh03
EuMC

Chair: Kamil Yavuz Kapsuz¹

Co-Chair: Marc Dirix²

¹IMEC-Ghent University/Belgium, ²Emerson & Cuming AC

Room: Flash

The workshop Active Phased Arrays: Bridging Design and Measurement for Young and Industry Professionals aims to provide a comprehensive view of the evolving landscape of active phased array technologies, with a strong emphasis on practical integration, simulation, and measurement challenges. Designed to connect young professionals with experienced experts from industry and academia, this event fosters cross-disciplinary dialogue and collaboration.

The workshop explores key developments in the design, realization, and optimization of small and large-sized active phased array systems operating across a broad frequency spectrum, from megahertz (MHz) to terahertz (THz). It covers a wide range of topics, including advanced simulation tools,

integration techniques, efficient thermal management, and innovative phased array architectures. The program highlights the importance of bridging theory and application by addressing the full design-to-deployment pipeline, including system-level thinking and cross-functional co-design.

In addition to the technical content, the workshop includes interactive opportunities for networking and career development, encouraging participants to engage with peers, mentors, and potential collaborators. By promoting both technical depth and practical insight, the workshop supports the growth of a new generation of engineers and researchers capable of driving innovation in (active) phased array technologies for communications, sensing, and beyond.

PROGRAMME

Leveraging Open-Source Silicon Design for European Competitiveness

Thomas Parry¹

¹Spherical

Small Scale Integrated Antenna Systems

David Sillars¹

¹Qorvo

A Holistic Design Approach for D-Band Telecommunication/Sensing Packages and Antenna Arrays

Francesco Filice¹

¹IMEC, Belgium

Coffee Break

Integrated Antenna Design and Cooling Concepts in Active Phased Arrays

Yanki Aslan¹

¹Delft University of Technology

Enabling Wide-Angle 2D Scanning with Dielectric Resonator Antenna Arrays

Tudor Popa¹

¹The Antenna Company

Get Together and Drinks

ANSYS & CADFEM Technical Workshops

Tuesday 23, Wednesday 24 and Thursday 25 September
2025

Time: 09:30 - 16:30 (Tue-Wed), 09:30 - 14:30 (Thu)

Room: Croese 1

Cost: Free to
attend, for registra-
tion contact:
[sojka@ihp-microe-
lectronics.com](mailto:sojka@ihp-microe-
lectronics.com)

Ansys is the industry-leading simulation tool for 3D full-wave electromagnetic field simulation. It enables engineers to design high-frequency electronic products such as antennas, RF/microwave components, and high-speed interconnects with unmatched accuracy and efficiency.

Workshops on various topics from:

Ansys: David Prestaux: Principal Application Engineer, Dr. Alireza Kazemzadeh: Senior Application Engineer, Markus Laudien: Senior Principal Application Engineer, Arien Sligar: Senior Principal Product Specialist

CADFEM: Alexander Shalaby, RF Electromagnetics Product Manager
Fraunhofer Institut. für Nachrichtentechnik, HHI: Dr. Alexander Popugaev, Milan Deumer, Vitor Almeida, Mehmet Ahad Yurtoglu

DLR (Deutsches Zentrum für Luft- und Raumfahrt e.V.): Dr. Stefano Caizzone
imec: Francesco Filice

Click [here](#) for more information and the full agenda.



IHP

Technical Workshop

Wednesday 24 September 2025

09:30 – 13:00

Room: Croese 2

Cost: Free to attend, for registration contact:
sojka@ihp-microelectronics.com

24th IHP Technology & Service Workshop

IHP is one of the world's leading research institutions in the fields of silicon-germanium electronics, and its electronic and photonic-electronic technologies and circuits are among the most powerful in the world. The workshop will present the latest information on IHP's technologies and offerings, which are well established in applications such as wireless and broadband communications, health, space and Industry 4.0

Presentations:

A. Mai: IHP's Research & Development for CMOS+X Technology Extensions

F. Vater: Process Design Kit to develop products, serve education and support research projects.

R. Scholz: MPW Service for SiGe BiCMOS, Silicon Photonics and special offers for Open Source Designs

TBA: IHP Solutions GmbH: Production, Value-Added Services for Customers' ASICs and IC Design



Dassault Systèmes Technical Workshop

Tuesday 23 September 2025

08:30 – 17:50

Room: Croese 2

Cost: Free to attend
for all EuMW 2025
registrants

This workshop will cover advanced techniques and tools in RF and applied electromagnetics, focusing on measurement, modeling, and simulation workflows.

Participants will explore the powerful capabilities of CST Studio Suite, with topics including thermal analysis, filters and RF components, reflective intelligent surfaces, GRIN lenses, antenna arrays, and highlights of the latest features in CST Studio Suite.




A new addition in the SIMULIA portfolio is IVCAD Suite (previously AMCAD Engineering), which focuses on transistor and non-linear circuit measurement and modeling, as well as RF system simulation.

The session will demonstrate how these tools seamlessly integrate to streamline RF design and analysis. Join us to discover cutting-edge solutions for addressing complex challenges in RF systems.





Click [here](#) for more information and the full agenda.




SUNDAY OVERVIEW

Room	08:30 – 10:10 	10:50 – 12:30 	13:50 – 15:30 	16:10 – 17:50
Mission 1	WS-01 Advancements in Technologies and Circuits Leading to 6G			
Mission 2	WS-02 Polymer Microwave Fiber (PMF) Communication for Sub-THz, Low-Cost High Data Rate Short-Range Systems			
Quest	WS-03 Acoustic Wave Filters for Space Applications			
Expedition	SS-01 Fundamentals of Microwave PA Design			
Auditorium	WS-04 Additive Manufacturing for Microwave Components and Systems			
Spark	WS-05 Opportunities and Challenges for the Cryogenic Microwave Control of Quantum Processors			
Flash	WS-06 RFIC Design, Packaging and Antenna Solutions for mm-Wave and Sub-THz Communication and Radar			
Glow	WS-07 Integrated Microwave Photonics			
Beam	WS-08 Thermal Effects and Heat Management in Active Phased Arrays: Chip, Package and Antenna Level Concepts			
Juliana CZ1	14th Tom Brazil Doctoral School of Microwaves Co-design and heterogeneous integration for Future Electronic Systems			
Juliana 1	WS-09 Innovations in Load-pull Techniques for Wideband and High-frequency Applications			
Juliana 2	WS-10 Advanced mm-Wave IC Design: A Step Ahead			
Juliana 3	SS-02 Wearable Antenna Systems for Joint Body-centric Communication, Powering and Sensing		WS-11 The Path to 2030: Joint Communication and Sensing in the 6G Internet-of-Everything Era	
Juliana 4	WS-13 Microwave Carbon Footprint of Wireless Communications - From Energy Efficiency to Embedded Emissions		WS-12 AI and Data-Driven Modeling for RF/MW Design	




Metrolines

-  A. Julina area
-  B. Auditorium
-  C. Polar area
-  D. Supernova





[Click here for map "Conference Rooms and Routes"](#)

Room	 Evening programme
Off site locations	Young Professional Get-Together Location: Boules Club


MONDAY OVERVIEW

Room	08:30 – 10:10 	10:50 – 12:30 	13:50 – 15:30 	16:10 – 17:50
Progress				EuMIC10 Foundry Panel
Mission 1		EuMIC02 Doherty Amplifiers and Linearizers for Communication Systems	EuMIC06 Microwave and mm-Wave Integrated Power Amplifiers	
Mission 2		EuMIC03 High-Performance Integrated LNAs	EuMIC07 RF Building Blocks in CMOS and BiCMOS Technologies	
Quest		EuMIC04 Technologies for mm-Wave Transmitters and Receivers	EuMIC08 mmWave Frequency Generation and Translation	
Expedition		EuMIC05 Integrated Circuits for Emerging Applications	EuMIC09 Emerging Architectures for Communications	
Polar	EuMIC01 EuMIC Opening Session			
Auditorium	6G Forum			
Spark	European Microwave School in Radars Build a 1GHz FMCW Radar in a day			
Juliana 1	WM-01 Photonic Technologies and Systems for RF Applications			
Juliana 2	WM-02 Latest Advancements in Microwave Measurement Techniques for Future Communications and Quantum Applications			
Juliana 3	SM-01 Architecture and Applications for Emerging SATCOM and NTN Communication Networks		WM-03 Standard, Prototype, and Measurement for Integrated Sensing and Communications in the COST action INTERACT	
Juliana 4	SM-02 Radiative Wireless Power Transfer Basics and Implementation			




Metrolines

-  A. Julina area
-  B. Auditorium
-  C. Polar area
-  D. Supernova





[Click here for map "Conference Rooms and Routes"](#)

Room	Evening programme 
Barzone	6G Forum Walking Dinner
Off site locations	EuMIC Get-Together Location: Paushuize


TUESDAY OVERVIEW

Room	08:30 – 10:10 	10:50 – 12:30 	13:50 – 15:30 	16:10 – 17:50
Progress	Automotive Forum			
Mission 1	EuMIC/EuMC01 Load-Modulated High-Efficiency Power Amplifiers		EuMW02 EuMC/APMC Special Session: mm-Wave and THz Circuits and Systems	
Mission 2	EuMIC11 GaN Amplifiers from VHF to V-band		EuMIC14 mm-Wave GaN Technology	EuMC07 Materials and Packaging Concepts for Microwave and mm-Wave Applications
Quest	EuMIC12 mmWave Amplifiers and Components		EuMIC15 Characterization, Modelling, and Simulation of Devices and Circuits	EuMC08 mm-Wave Antennas for Radar and Wireless Communications
Expedition	EuMIC13 RF and Millimeter-Wave Devices		EuMIC16 Wideband and mm-Wave Building Blocks	EuMC09 RF Engineering - An Educational Perspective
Polar				EuMIC17 EuMIC Closing Session
Auditorium	EuMC01 Advances in Passive Components and Structures		EuMIC/EuMC02 Panel Session: On-going R&D and Industrial Projects Towards more Sustainable Microwave Engineering	EuMC10 Special Session: Can Truly Environmentally Friendly ICT Become a Reality?
Spark	EuMC02 Novel Antenna Solutions for Wireless Communications		EuMC05 Special Session: Antenna Challenges and Solutions for 6G Mobile Connectivity	EuMC11 Advancements in Active Antennas and Arrays
Flash	EuMC03 Sub-THz Antennas, Systems, and Measurements		EuMC06 Cryogenic Applications of RF Technologies	
Glow	EuMC04 Advanced Interconnects and Packaging Technologies for Applications Beyond 100 GHz			
Media Arena	EuMIC/EuMC-PP 1-Minute Poster Pitch: EuMIC/ EuMC			
Juliana CZ1			URSI-BNL URSI Benelux Forum	
Beatrix		EuMW01 EuMW/EuMC Opening		
Hall 7			EuMIC/EuMC03 EuMC/EuMIC Interactive Poster Session	URSI-BNL Poster URSI Benelux Forum Poster Session
Croese 1	Exhibitor Workshop ANSYS			
Croese 2	Exhibitor Workshop Dassault Systèmes			



Metrolines

-  A. Julina area
-  B. Auditorium
-  C. Polar area
-  D. Supernova





[Click here for map "Conference Rooms and Routes"](#)

Room	 Evening programme
Off site locations	Automotive Forum Dinner Location: Museum Speelklok
Off site locations	EuMW Welcome Reception Location: Mies Bouwman Foyer, Beatrix Theater


WEDNESDAY OVERVIEW

Room	08:30 – 10:10 	10:50 – 12:30 	13:50 – 15:30 	16:10 – 17:50
Progress		EuRAD02 Automotive Radar Data Processing 1	EuRAD04 Automotive Radar Data Processing 2	EuRAD06 Beamforming in Phased Array Radars
Mission 1	EuMC12 Power Amplifier Design and Linearisation Techniques	EuMC20 Active Circuits and Modules	EuRAD05 Industrial and Short-Range Radar Sensing	EuMC/EuRAD01 Special Session: Dutch Ecosystem for Defence Radar
Mission 2	EuMC13 Special Session: Antennas for Non-Terrestrial Networks	EuMC21 Tunable, Reconfigurable, and Acoustic-Wave Filters	EuMC27 New Techniques for Microwave Filters	EuMC33 Innovations in Gap Waveguide Technology
Quest	EuMC14 Metasurfaces and Lenses	EuMC22 Microwave Antennas with Radiation Control	EuMC28 Antenna Arrays and Beamforming Networks I	EuMC34 Antenna Arrays and Beamforming Networks II
Expedition	EuMC15 Innovative Fabrication Techniques for Passive Components	EuMC23 Printed Antennas and Lenses for Microwave and mm-Wave	EuMC29 Advanced Resonator Technologies	EuMC35 Bioelectromagnetic Interaction for Healthcare
Polar	EuRAD01 EuRAD Opening	ARFTG ARFTG 22nd On-Wafer Forum	13:00-14:30 Entrepreneurship in RF: Part 1	EuMC36 MTT-S ISTP: Panel Session: Photovoltaic Power Orbital Station - A Future at Reach?
Auditorium	EuMC16 Panel Session: EE Education in Paradigm-changing Times	DSS Forum		
Spark	EuMC17 Material Characterisation	EuRAD03 Radar System Modeling and Signal Processing	EuMC30 Advanced Linear Measurements	EuMC37 Measurements of Active Devices
Flash	EuMC18 mm-Wave and THz Photonics	EuMC24 Special Session: Microwave Photonics	EuMC31 THz Circuits and Systems	EuMC38 Focussed Session: Trends on THz Technologies
Glow	EuMC19 Advanced Rectification in Wireless Power Systems	EuMC25 Wireless Sensing and Communication Technologies	EuMC32 Modelling for Remote Sensing and Scattering	EuMC39 Numerical Modelling
Media Arena	EuMC-PP1 1-Minute Poster Pitch: EuMC		EuMC/EuRAD-PP 1-Minute Poster Pitch: EuMC/EuRAD	
Barzone			12:30-13:00 Entrepreneurship in RF Lunch	
Juliana CZ1	WW-01 Innovative Semiconductor Device Architectures and Accurate Modeling for Emerging Applications			
Juliana 1	WW-02 High Resolution Radar Technologies for Future Automotive Systems			
Juliana 2	SW-01 Embedding Sustainability into RF Technologies			
Juliana 3	WW-03 RF & Sub-THz Heterogeneous Integration			
Juliana 4	WW-04 Recent Progress in Compact, Ultra-low Phase Noise Microwave-Photonic Frequency Synthesis			
Hall 7		EuMC26 EuMC Interactive Poster Session 1		EuMC/EuRAD02 EuMC/EuRAD Interactive Poster Session
Croese 1	Exhibitor Workshop ANSYS			
Croese 2	Exhibitor Workshop IHP			
Off site locations				14:30-17:00 Entrepreneurship in RF: Part 2



Metrolines

-  A. Juliana area
-  B. Auditorium
-  C. Polar area
-  D. Supernova





[Click here for map "Conference Rooms and Routes"](#)

Room	Evening programme 
Off site locations	EuMW Experience Location: Spoorwegmuseum


THURSDAY OVERVIEW

Room	08:30 - 10:10 	10:50 - 12:30 	13:50 - 15:30 	16:10 - 17:50
Progress	EuRAD07 Radar Networks and Activity Monitoring	EuRAD08 Phased Array Radars	EuRAD10 Focussed Session: Phased Array Radars for Meteorological Applications	EuRAD13 Focussed Session: Novel Processing and Applications of Synthetic Aperture Radar
Mission 1	EuMC/EuRAD03 Design of (MIMO) Radar Antenna Arrays	EuRAD09 Radar-Based Target Detection and Recognition	EuRAD11 Synthetic Aperture Radar Imaging Techniques	EuRAD14 Distributed and MIMO Radar Systems
Mission 2			EuMC54 Periodic Structures and Metamaterials	EuRAD15 Waveform Diversity in Radar Detection
Quest	EuMC40 Machine Learning and Optimization	EuMC45 Special Session: Computational EM in the Netherlands and Belgium	EuMC51 Multiphysics Simulation Techniques	
Expedition	EuMC41 Integration and Reconfiguration Approaches for Non-Planar Filters	EuMC46 Non-Planar Passive Components and Channel Filter Approaches	EuMC52 MTT-S ISTP Panel Session: Microwaves for a Sustainable Future - Innovations and Challenges in Technology, Energy, and Resources	
Polar	WTh-03 IEEE YP Industrial Workshop: Active Phased Arrays - Bridging Design and Measurement for Young and Industry Professionals			EuMW03 EuMW/EuMC Closing and Awards Ceremony
Auditorium	EuMC/EuRAD04 Special Session: Space Microwave Technology - The ESA Experience	EuMC/EuRAD05 Recent Developments in Antenna Measurements	EuMC53 EurAAP Special Session: Beam Forming Networks for Active Array Antennas	
Spark	EuMC42 Reconfigurable Intelligent Surfaces	EuMC47 Metasurfaces	WTh-03 IEEE YP Industrial Workshop: Active Phased Arrays - Bridging Design and Measurement for Young and Industry Professionals	
Flash	EuMC43 Sustainable Technologies for Microwave Systems	EuMC48 mm-Wave Antenna Arrays and Applications		
Glow	EuMC44 Microwave Sensing Techniques for Biological and Medical Systems	EuMC49 Planar Sensors	EuMC55 Wireless Communications and Sensing	
Media Arena	EuMC-PP2 1-Minute Poster Pitch: EuMC	EuRAD-PP 1-Minute Poster Pitch: EuRAD		
Flame Foyer		Career Platform Company Pitches - Polar - 11:30 to 12:30 Company Booths Job Dating		
Juliana 1	STh-01 Basics of Systems Engineering for the Microwave Engineering Community			
Juliana 2	WTh-01 Automotive Radar Research Trends			
Juliana 3	WTh-02 Multistatic/Distributed Radar Systems		STh-02 Synchronization in Distributed Radar - Prospective and Problems	
Hall 7		EuMC50 EuMC Interactive Poster Session 2	EuRAD12 EuRAD Interactive Poster session	
Croese 1	Exhibitor Workshop ANSYS			




Metrolines

-  A. Juliana area
-  B. Auditorium
-  C. Polar area
-  D. Supernova





[Click here for map "Conference Rooms and Routes"](#)

Room	Evening programme 
TransitZone A	EuRAD APERIRADAR Aperitivo
TransitZone B	Microwave Nightfever Time - 20:30 to 00:00

FRIDAY OVERVIEW

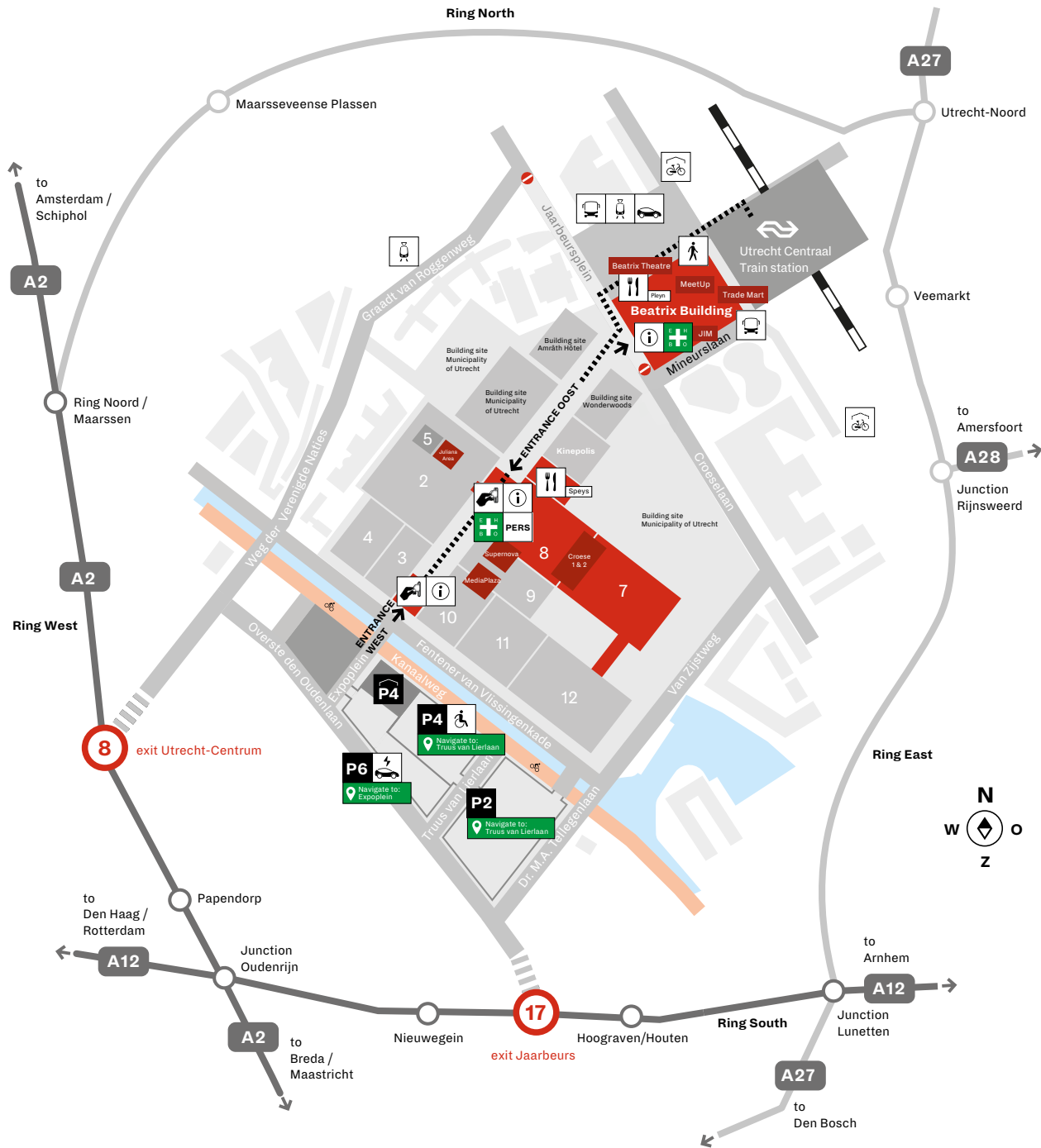
Room	08:30 – 10:10 	10:50 – 12:30 	13:50 – 15:30 	16:10 – 17:50
Progress	EuRAD16 Focussed Session: Machine Learning in mm-Wave Radars	EuRAD19 EuRAD Closing		
Mission 1	EuRAD17 Signal Processing for Radar			
Mission 2	EuRAD18 Passive Radar Systems and Array Techniques			
TransitZone A			EuRAD Lunch	
Juliana 1	SF-01 Integrated Sensing and Communications: Fundamentals, State-of-the-Art and the Road Ahead			
Juliana 2	SF-02 Nonlinear Radar: From Concepts to Applications			

Metrolines

-  A. Julina area
-  B. Auditorium
-  C. Polar area
-  D. Supernova

[Click here for map "Conference Rooms and Routes"](#)

Venue Overview



Royal Jaarbeurs

- Taxi
- Bus
- Express Tram
- First Aid
- Restaurant
- Press
- Information
- Bicycle Parking
- Charging Point
- Disabled Parking
- Pedestrian Route
- Parking Meter

Event & Exhibition Centre

Hal 1 t/m 5 en 7 t/m 12
Speys

First Floor

Juliana Area
Media Plaza
Supernova

Beatrix Building

Beatrix Theatre
Expozaal
Jaarbeurs MeetUp
Jaarbeurs Offices
Trade Mart
Pley
JIM
Jaarbeurs Studio

Jaarbeurs

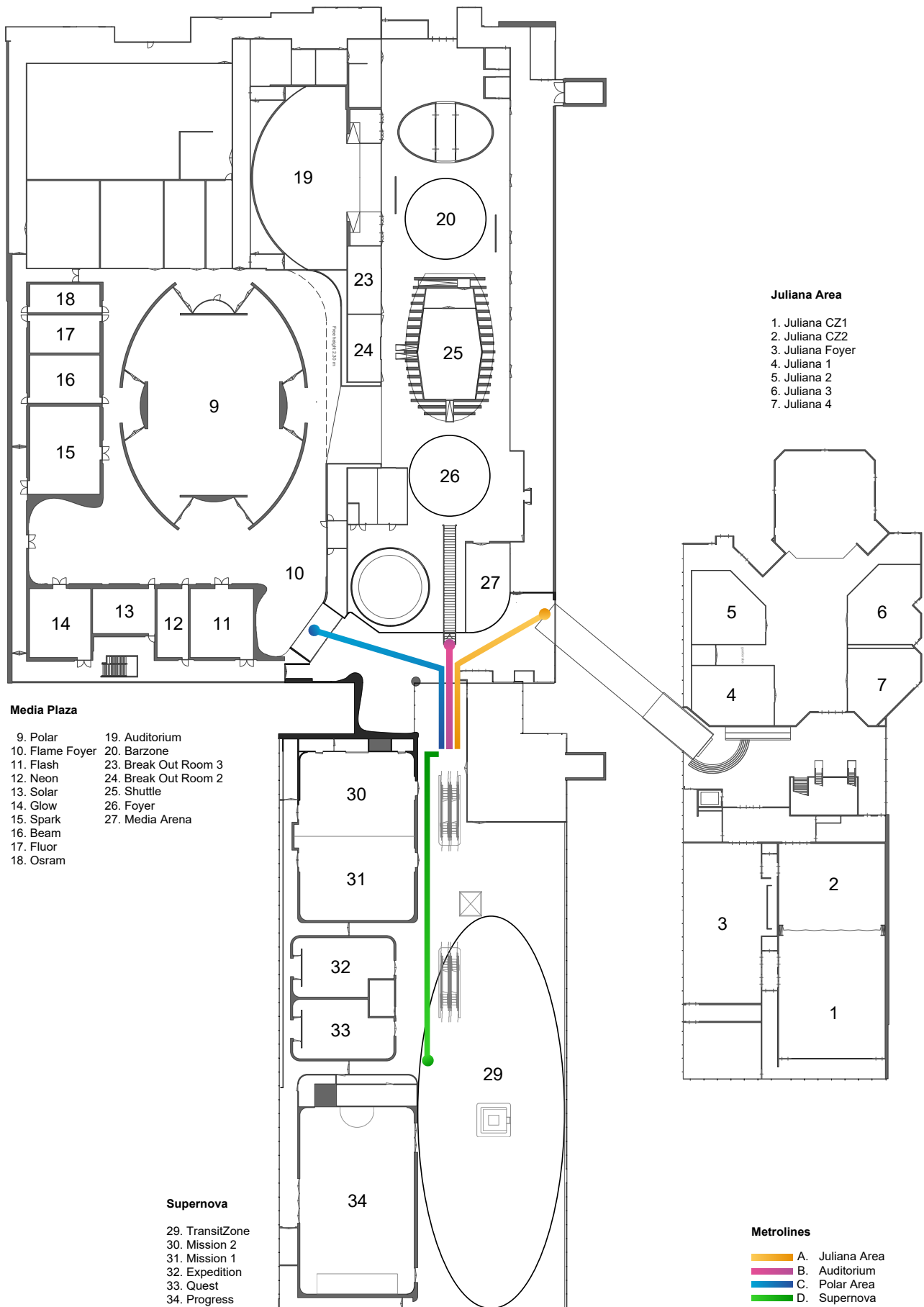
Jaarbeursplein | 3521 AL Utrecht
Jaarbeurs.nl

Navigating to our parking lots

Determine which parking lot is closed to your destination and use the indicated address to navigate to it.



Conference Rooms and Routes



Exhibitor List (Stand Number)

A Aaronia AG (B026) · ABS Technics BV (F139) · ACST GmbH (F071) · Active Technologies SRL (A103) · AdTech Ceramics (F041) · Advance RF Pte Ltd. (D084) · AGC Inc. (B124) · AGC Multi Material Europe SASU (B124) · A-INFO Inc (E114) · Alaris - The RF Technology Group (B137) · Alaris Kuhne (B137) · Alaris Linwave (B137) · ALPHA-RLH (F135) · Alter Technology Tüv Nord S.A.U. (E088) · Altum RF (B084B) · American Standard Circuits Inc. (A041) · Amphenol Microwave (C072) · Ampleon Netherlands B.V. (E076) · Ansys Belgium SA (D132) · AntenneX BV (E025) · Anyarc (Kunshan) Technology Co. Ltd. (E108) · Anyfields (D102) · AO Technologies (B101) · Apex Microwave Co., Ltd (B115) · Artech House (C132) · ASB Inc. (B119) · Aspocomp Group (B139) · AT Microwave (F051) · ATEK MIDAS (E072) · Auriga PIV-Tech (B068) · AVIC Forstar S&T Co.,Ltd (A072)

B Becker Nachrichtentechnik GmbH (E029) · Beijing Guoyu Microwave Technology Co., Ltd (C145) · Beijing Hwa-Tech Information System Co. Ltd. (C138) · Bits&Chips (Pub Corner 1) · Blueshift (A110) · BSC Filters Ltd (B142) · bsw TestSystems & Consulting bv (B084A)

C Cadence Design Systems (D052) · CEMWorks (B125) · Ceyear Technologies Co. Ltd. (C068) · Changzhou Wujin Fengshi Connectors Col, Ltd. (D131) · Chengdu Bearing New Machinery Equipment Co. Ltd. (C137) · Chengdu Free-E Electronics Technology Co., Ltd (C136) · Chengdu Haoyi Chuangxiang Technology Co.Ltd. (A083) · Chengdu Huaxing Huiming Technology Co., Ltd (A152) · Chengdu Jiujin Technology Co. Ltd. (C149) · Chengdu Kinyea Technologies Co., LTD (B149) · Chengdu KSW Technologies Co.Ltd. (F079) · Chengdu Ponik Technology Co.,LTD (B152) · Chengdu Precision Rong Creation Technology Co.Ltd (A037) · Chengdu Ruixue Fengtai Precision Electronics Co. (D133) · Chengdu Simon Elektronika Teknologio Co. Ltd. (C120) · Chengdu Skylink Intellitech Co. Ltd. (E090) · Chengdu Wattsine Electronic Technology Co. Ltd. (D130) · Chengdu Yuexiang Technology Co. Ltd. (B146) · Chengdu Zysen Technology Co. Ltd (E137) · cicor - Reinhardt Microtech AG (E139) · CN Rood (E046) · CNRS RF-NET (F135) · Coilcraft (D112) · Comtest Engineering (B147) · Copper Mountain Technologies (B085) · CPE Italia S.P.A. (E133) · CPI TMD Technologies Ltd (E115)

D Dalian Dalicap Technology Co. Ltd. (E098) · Danyang Teruilai Electronics Co. Ltd. (B111) · Dassault Systemes (C051) · Dexin Digital Technology Corp. Ltd. (C129) · Diconex (D106) · Dongshin Microwave Absorbers Co.,LTD (F075) · DP Patterning AB (B138) · dSPACE GmbH (A068)

E Electronic Specifier Ltd (Pub Corner 1) · Elekonta Marek GmbH & Co. KG (E140) · ELVA-1 OU (D073) · Elvia Electronics (E146) · EM Labs, Inc. (E033) · Eravant (A084) · ERZIA (C084) · ESJ Technology Co., Ltd (C146) · ESSETI s.r.l. (C096) · EurAAP (A115) · European Microwave Association (EuMA) (F105) · European Microwave Week 2026 (E106) · Everbeing International Corp. (D136) · everything RF (Pub Corner 2) · Exens Group (D099)

F Faraday Defense Corporation (E100) · Farran Technology

(B093) · Filtronic (D072) · Flexium Interconnect Inc. (F085) · Focus Microwaves Inc. (B068) · FormFactor Inc. (D026) · Fraunhofer FHR (B071) · Fraunhofer IAF (B071) · Fraunhofer Inst Reliability Microintegration IZM (F101) · Frontlynk Technologies Inc. (E136) · Fujipoly Europe B.V. (F095)

G Gapwaves (E095) · Gigatronix Ltd (B127) · Glenair GmbH (E054) · Golden Devices GmbH (E101) · Greenray Industries, Inc (F041) · Guizhou Space Appliance Co. Ltd. (C080)

H HAROGIC Technologies (D095) · Hebei Far-East Communication System Engineering Co (F115) · HeFei HTMicrowave Technology Co. Ltd. (A076) · HengDa Microwave (D146) · hf-Praxis (Pub Corner 1) · High Frequency Electronics (Pub Corner 2) · Huber + Suhner AG (F127) · HYMAG'IN (E116) · HYTEM (F111) · HzBeat (E086)

I IEEE Microwave Magazine (Pub Corner 2) · IEEE MTT-S IMS2026 (E128) · IHP GmbH-Leibniz Institute for High Performance (D080) · IHP Solutions GmbH (D080) · IMST GmbH (D138) · InCirT GmbH (D149) · iNPACK (D110) · Inspower Co. Ltd. (F131)

J JFW Industries Inc. (B131) · Johanson Technology (B134) · JQL Technologies Corp. (E111) · JunCoax RF Technologies Co. Ltd. (A099) · Junkosha Inc. (F053) · Junper Interconnection USA LTD (B130)

K KEYCOM Corporation (F040) · Keysight (C026) · Knowledge Resources GmbH (E091) · Knowles Precision Devices (A052) · Kunshan Dloorplf Electronic Technology Co. Ltd. (D116) · KVG Quartz Crystal Technology GmbH (E105) · KYOCERA AVX Components Ltd (A104)

L Liaoning Shunbang Microwave Technology Co., Ltd (D137) · Low Noise Factory (D091) · LPKF Laser & Electronics SE (C140)

M M.T.R S.r.l (E145) · MACOM (D068) · MathWorks (A094) · Maury Microwave (B046) · MCS SAS (D145) · Mesuro Limited (B068) · Mlcable Inc. (F038) · Mician GmbH (E104) · Microchip Technology Ireland Ltd (C150) · Microsanj (E046) · Microwave Amplifiers Ltd. (D142) · Microwave Factory Co. Ltd. (F054) · Microwave Journal (C130) · Microwave Product Digest (Pub Corner 2) · Microwaves & RF (Pub Corner 1) · Milexia (E066) · Miller MMIC Inc. (E034) · Mini-Circuits (C073) · Mitron (F038) · Molex LLC (D147) · MPI Corporation (E046) · Murata Electronics Europe B.V. (E073)

N Nanjing Lopu Technology Co. Ltd. (A107) · NGK Europe GMBH (F137) · NGK Insulators, Ltd. (F137) · NGTC (Institute of Microelectronics) (E132) · NI (now part of Emerson) (E051) · NINGBO KLS ELECTRONIC CO., LTD (C107) · Northern Waves AB (E131)

O OKTALE Synthetic Environment (E037) · Ophir RF (C147) · Optenni Ltd (F149) · Optiprint AG (A128) · Orbis Systems Oy (F052)

P Pasquali Microwave Systems SRL (E050) · Passive Plus Inc. (A134) · PEI-Genesis (UK) LTD (D120) · Perciv AI (B088A) · Pickering Interfaces Ltd. (D113) · Pico Technology (C115) · Plexsa Manufacturing Hungary Kft. (B087) · POLARIS NGF (C095) · Presidio Components (D104) · Procurement Pro (Pub Corner 1)

Q Qotana Technologies Co. Ltd. (D127) · QP Technologies (F102) · QRT Inc. (E142) · Qualwave Inc. (A081) · Quantic Electronics (D139) · QuantumTec GmbH (E152) · QuantumZ Inc. (F085) · QuSinus GmbH (B103)

R Radiall Nederland BV (A069) · Reactel Inc. (B131) · RF Com Limited (D109) · RF Lambda Europe GmbH (E026) · RF Miso Inc. (A146) · RF Morecom (B110) · RF SPIN (D088) · RFecho Co., Limited (A111) · RFHIC Corporation (B118) · RFMW (C046) · RFPL Electronic (D152) · Richardson RFPD (B052) · Rigol Technologies EU GmbH (A132) · Rogers BV (F044) · Rohde & Schwarz (A026) · Rosenberger Hochfrequenztechnik GmbH & Co. KG (C052) · RUPPtronik GmbH (C147)

S S2P Smart Plastic Products (C100) · Safari Microwave Tech. Ltd. (D140) · Samtec France LLC (B104) · Sandvik Osprey Ltd (C126) · SARAS Technology Ltd. (A045) · SCHOTT AG (A136) · Scientific Microwave Corp. (E084) · Semi Dice International B.V. (B131) · SERMA Group (E102) · Shaanxi Shinhom Enterprise Co. Ltd. (C135) · Shanghai Huaxiang Computer Communication Engineeri (D119) · Shanghai Xinxun Microwave Technology Co. Ltd. (D111) · Shenzhen iTest Technology Co., Ltd. (E147) · Shinto Electronics Technology Co., LTD. (A091) · Sichuan Keenlion Microwave Technology Co. Ltd. (A119) · SIEPEL (C088) · Siglent Technologies Germany GmbH (A100) · Signal Solutions Nordic OY (D150) · SLK Technologies Inc. (A025) · Smiths Interconnect (B074) · SomeFly Technologies Co. Ltd. (B130) · Southwest Microwave (E096) · Spectrum Control (C106) · Spinner GmbH (D096) · SSM Susumu Deutschland GmbH (B140) · STACEM (D100) · Sumitomo Electric Europe Ltd. (B051) · Sungsan Electronics & Communications (B107) · SuperApex LLC (F145) · Suzhou Eoulu System Integration Co. Ltd. (F039) · Suzhou Lair Microwave Inc. (F112) · Suzhou Semi-Mile Test and Control Co., Ltd (A114) · Swissto12 (A088) · Synopsis Corporation Group (E037) · SYNTONY (E037)

T Talent Microwave Inc. (E085) · TAP MW Co., Ltd (C139) · Tecnolambro s.a.s. (A142) · Tecnomec S.R.L. (A124) · TELECO RENTA (F147) · Teledyne (E129) · Temwell Group (E130) · Terahertz.NRW (A049) · Tianqiong Electronics (E149) · TMY Technology Inc. (C092) · TNO (B071) · TOPTEK PCB (B114) · Transline Technology Inc. (E084)

U UIY Inc (F089) · United Monolithic Semiconductors (UMS) (D046) · UNI-Trend Technology EU GmbH (D107) · University Carlos III de Madrid (F147)

V Varioprint AG (C128) · Ventec Central Europe GmbH (F129) · Virginia Diodes Inc. (D034) · Vishay Electronic GmbH (E127) · Vomic Technologies Co. Ltd. (C110)

W Watech Electronic (A053) · WAVEPIA Co. Ltd (C108) · WavePro, a Garlock Brand (D135) · Werlatone (C147) · WIN Semiconductor Corp (A046)

X Xaveo GmbH (E099) · Xi'an Branch, Chengdu Huaxing Huiming Technology Co., Ltd (A152) · Xi'an InterWiser Electronic Technology Co., Ltd (C152) · Xi'an Leihang Eleetronie Information Technology Co (B145) · Xi'an Longtrox RF Scien-Tech Co. Ltd. (C111) · Xinqiyuan Technology Co. Ltd. (E107) · XJEC GROUP (C114) · Xtal Ball Technologies (B135)

Y Y-TECH Co. Ltd. (A075) · Yun Micro Electronics Co. Ltd. (A118)

Z Zhejiang Jiakang Electronics Co. Ltd. (E103)