2025 55th European Microwave Conference (EuMC 2025)

Utrecht, Netherlands
23-25 September 2025

Pages 1-597

IEEE Catalog Number: CFP25455-POD
ISBN: 979-8-3315-1260-6

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IEEE Catalog Number:	CFP25455-POD
ISBN (Print-On-Demand):	979-8-3315-1260-6
ISBN (Online):	978-2-87487-081-1

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EuMW01 : EuMW/EuMC Opening

Chair: Mark Bentum, Technische Universiteit Eindhoven, The Netherlands
Co-Chair: Ioan E. Lager, Technische Universiteit Delft, The Netherlands
10:50–12:30, Tuesday 23rd September 2025, Beatrix Theatre

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Chair: Anthony Ghiotto, IMS (UMR 5218), France
Co-Chair: Ke Wu, Polytechnique Montréal, Canada
08:30–10:10, Tuesday 23rd September 2025, Auditorium

EuMC02 : Novel Antenna Solutions for Wireless Communications

Chair: Gabriele Federico, Technische Universiteit Eindhoven, The Netherlands
Co-Chair: Francesco Caminita, Wave Up, Italy
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Co-Chair: David Marpaung, Universiteit Twente, The Netherlands
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[1]FAU Erlangen-Nürnberg, Germany; [2]Rohde & Schwarz, Germany

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[1]Fraunhofer HHI, Germany; [2]Fraunhofer IAF, Germany; [3]LG Electronics, Korea; [4]Technische Universität Berlin, Germany

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Chair: Nuno Borges Carvalho, Instituto de Telecomunicações, Portugal
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Chair: Marianna Ivashina, Chalmers University of Technology, Sweden
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[1]FBH, Germany; [2]Fraunhofer HHI, Germany

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[1]LNE, France; [2]IEMN (UMR 8520), France

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[1]SRON, The Netherlands; [2]Technische Universiteit Delft, The Netherlands

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Chair: Simon Hemour, IMS (UMR 5218), France
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[1]Université de Bordeaux, France; [2]European Innovation Council, Belgium; [3]DARPA, USA; [4]Japan Space Systems, Japan; [5]Xidian University, China; [6]Space Solar, UK; [7]Universidade de Aveiro, Portugal

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Chair: Denis Barataud, XLIM (UMR 7252), France
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[1]Ampleon, The Netherlands; [2]Siemens, Hungary

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[1]IEMN (UMR 8520), France; [2]STMicroelectronics, France; [3]Università di Perugia, Italy

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[1]Technische Universiteit Delft, The Netherlands; [2]Technische Universität Dresden, Germany; [3]Chalmers University of Technology, Sweden; [4]Infineon Technologies, Germany; [5]OTE, Greece; [6]Ericsson, Sweden

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[1]Bergische Universität Wuppertal, Germany; [2]IHP, Germany

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[1]Tianjin University, China; [2]Carleton University, Canada

723 **An Adaptive Frequency Sweep Algorithm Employing Additive Perturbation in the Loewner Matrix Model for Electromagnetic Simulations**
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727 **A 3D TCAD Thermal vs Electro-Thermal Analysis of Large Area Discrete RF Power Transistors**
Gabriele Formicone, Integra Technologies, USA

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Dariia O. Herasymova, NASU, Ukraine

735 **Novel Design Dimension Reduction Technique for Internal Acceleration of 3-D EM Topology Optimization for Waveguide Structures**
Jiali Zhang [1], Feng Feng [1], Jing Jin [2], Ke Liu [1], Jianguo Xue [1], Qi-Jun Zhang [3]
[1]Tianjin University, China; [2]Central China Normal University, China; [3]Carleton University, Canada

EuMC40 : Machine Learning and Optimization

Chair: Tom Dhaene, Ghent University, Belgium
Co-Chair: Luca Perregrini, Università di Pavia, Italy
08:30–10:10, Thursday 25th September 2025, Quest

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EuMC41 : Integration and Reconfiguration Approaches for Non-Planar Filters

Chair: Michael Höft, CAU, Germany
Co-Chair: Eric Rius, Université de Brest, France
08:30–10:10, Thursday 25th September 2025, Expedition

EuMC42 : Reconfigurable Intelligent Surfaces

Chair: Alejandro Jiménez-Sáez, Technische Universität Darmstadt, Germany
Co-Chair: Dirk Heberling, RWTH Aachen University, Germany
08:30–10:10, Thursday 25th September 2025, Spark

779 **A Broadband Liquid Crystal Reconfigurable Intelligent Surface with 750 Elements Operating Around 60GHz**
Robin Neuder, Julia Schwarzbeck, Marc Späth, Alejandro Jiménez-Sáez, Technische Universität Darmstadt, Germany

783 **Water-Controlled 1-Bit Reconfigurable Surface**
Rasoul Fakhteh, Yi-Wen Wu, Yi Wang, University of Birmingham, UK

787 **The Choice of Time Gating Parameters for Characterization of the Reconfigurable Intelligent Surfaces with Continuous Amplitude and Phase Control**
Pavlo S. Krasov, Oleg A. Iupikov, Yuqing Zhu, Marianna V. Ivashina, Chalmers University of Technology, Sweden

791 **Design and Analysis of Phase Configuration in RIS-Assisted Communication Systems**
Ga-Yeong Park, Hyo-Won Lee, Young-Jun Lim, Chanhee Lee, Ji-Young Kim, Jong-Won Yu, KAIST, Korea

795 **N78 Frequency Band Modular RIS Design and Implementation**
Sefa Kayraklık [1], Recep Baş [2], Hasan Oğuzhan Çalışkan [2], Samed Şahinoğlu [1], Sercan Erdoğan [2], İlhami Ünal [3], İbrahim Hökelek [1], Kıvanç Nurdan [1], Ali Görçin [1]
[1] TÜBİTAK BİLGEM, Türkiye; [2] TÜBİTAK MAM, Türkiye; [3] University College Dublin, Ireland

EuMC43 : Sustainable Technologies for Microwave Systems

Chair: Jean-Pierre Raskin, UCLouvain, Belgium
Co-Chair: Bertrand Parvais, imec, Belgium
08:30–10:10, Thursday 25th September 2025, Flash

(NA) **Life Cycle Assessment (LCA)-Driven Design for the Microwave Engineer: How to Develop Sustainable Wireless Systems?** *(Industrial Keynote)*
Mahmoud Wagih, University of Glasgow, UK

800 **On the Carbon Footprint of D-Band Point-to-Point Radio Links for 6G**
Wolfgang Heinrich [1], Andreas Wentzel [1], Lutz Stobbe [2]
[1] FBH, Germany; [2] Fraunhofer IZM, Germany

804 **Sustainable Wireless Technologies with SUSTAIN 6G**
Olivier Bouchet, Marie-Hélène Hamon, Rodolphe Legouable, Bruno Jahan, Orange Innovation, France

808 **Advancing the Circular Economy: Enhancing Black Plastic Recycling Through Sub-THz Technology**
S. Leuchs, C. Krebs, Dirk Nüßler, C. Ludwig, M. Gräf, C. Schwäbig, J. Perske, S. Wickmann, S. Gütgemann, Fraunhofer FHR, Germany

812 **Thermal Analysis of a Transmission Line Made on a Bio-Sourced Substrate Using an Analytical Model**
R. Berro, N.-H. Nguyen, T.-P. Vuong, N. Corrao, V. Grennerat, P. Xavier, CROMA (UMR 5130), France

EuMC44 : Microwave Sensing Techniques for Biological and Medical Systems

Chair: Luciano Tarricone, Università del Salento, Italy
Co-Chair: Robin Augustine, Uppsala University, Sweden
08:30–10:10, Thursday 25th September 2025, Glow

816 **Solenoid Transceive Coil for Rodent Imaging with 3T Deuterium MRI**
Rasmus A. Jepsen, Kristina Pilgaard Jacobsen, Wenjun Wang, Jan Henrik Ardenkjær-Larsen, Vitaliy Zhurbenko, Technical University of Denmark, Denmark

820 **Feasibility Study of UWB Radar for Non-Invasive Fluidothorax Monitoring**
Ondrej Fiser, Jakub Kollar, Marek Novak, Tomas Drizdal, David Vrba, Jan Vrba, CTU, Czechia

824 **Active UWB-Based Microwave Catheter Tracking: An In Silico Study for MWA Navigation**
Jakub Kollar, Barbora Smahelova, Marek Novak, Jan Vrba, Ondrej Fiser, CTU, Czechia

828 **Detection of Dielectrically Heterogeneous 3D Multicellular Objects with Microwave Dielectric Spectroscopy**
Y. Li, O. Peytral-Rieu, D. Dubuc, K. Grenier, LAAS-CNRS, France

832 **Single-Channel Continuous-Wave Radar for Multi-Target Vital Sign Detection via Spatio-Spectral Mapping with Space-Time Coding Array**
Shuping Li [1], Donglin Gao [1], Shaghayegh Vosoughitabar [2], Chung-Tse Michael Wu [3]
[1]Rutgers University, USA; [2]Apple, USA; [3]National Taiwan University, Taiwan

EuMC45 : Special Session: Computational Electromagnetics in the Netherlands and Belgium

Chair: Kristof Cools, Ghent University, Belgium
Co-Chair: Martijn van Beurden, Technische Universiteit Eindhoven, The Netherlands
10:50–12:30, Thursday 25th September 2025, Quest

(NA) **Effective Forward and Inverse Numerical Solution Procedures in Computational Electromagnetics**
Rob F. Remis, Technische Universiteit Delft, The Netherlands

(NA) **The Future of Electromagnetic Engineering Research and Education: A NL-B Perspective**
Adrianus P.M. Zwamborn [1], Martijn C. van Beurden [2]
[1]TNO, The Netherlands; [2]Technische Universiteit Eindhoven, The Netherlands

(NA) **Modelling Quantum Effects in Metallic Nanoantennas with Deep-nanometric Features**
Xuezhi Zheng, Christos Mystilidis, Guy A.E. Vandenbosch, KU Leuven, Belgium

(NA) **Differential Surface Admittance Boundary Integral Equation Modeling of Advanced Interconnects**
M. Huynen, D. De Zutter, D. Vande Ginste, Ghent University, Belgium

(NA) **Domain Decomposition Methods for the Flexible and Efficient Modelling of EM Fields**
Paul Olyslager, Hendrik Rogier, Kristof Cools, Ghent University, Belgium

EuMC46: Non-Planar Passive Components and Channel Filter Approaches

Chair: Raafat R. Mansour, University of Waterloo, Canada
Co-Chair: Jordi Verdú, Universitat Autònoma de Barcelona, Spain
10:50–12:30, Thursday 25th September 2025, Expedition

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EuMC47: Metasurfaces

Chair: Erio Gandini, ESA-ESTEC, The Netherlands
Co-Chair: Alejandro Jiménez-Sáez, Technische Universität Darmstadt, Germany
10:50–12:30, Thursday 25th September 2025, Spark

EuMC48: mm-Wave Antenna Arrays and Applications

Chair: Mark Bentum, Technische Universiteit Eindhoven, The Netherlands
Co-Chair: Thomas Musch, Ruhr-Universität Bochum, Germany
10:50–12:30, Thursday 25th September 2025, Flash

(NA) **Antenna Arrays for Satellite Communications** *(Industrial Keynote)*
M. Carolina Viganó, Viasat, Switzerland

890 **A K/Ka Band 5G Satellite Payload for LIDE Mission**
Francesco Adamo [1], Simone Pauletto [1], Nicholas Sesto Gorella [1], Fabio Zanchetta [1], Andrea Loppi [1], Ivan Zebochin [1], Guendalina Simoncini [1], Mario Fragiacomo [1], Anna Gregorio [1], Sergio Carrato [2]
[1]PICOSATS, Italy; [2]Università di Trieste, Italy

894 **Coverage Estimation of 5G mmWave in Indoor Environment Considering Human Body Shadowing**
Hyeon-Jeong Cho, Ji-Hoon Lee, Ji-Young Kim, Dong-Min Seo, Yeong-Ju Seo, Jong-Won Yu, KAIST, Korea

898 **A 60GHz Precise Reflection-Type Phase Shifter with Extremely Small Phase Shift, Based on GeTe Phase-Change Switches**
A. Naoui [1], C. Hellion [1], M. Allain [1], J. Denizart [1], Rémi Velard [1], Loïc Vincent [2], B. Reig [1], E. Perret [2], F. Podevin [2]
[1]CEA-Leti, France; [2]Université Grenoble Alpes, France

902 **Carrier Phase Noise Impact on OFDM Performance at D-Band: Concepts and Experimental Assessment**
Yalin Zhou, Zichuan Zhou, Zhixin Liu, Izzat Darwazeh, University College London, UK

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EuMC49: Planar Sensors

Chair: Alexander Kölpin, Technische Universität Hamburg, Germany
Co-Chair: Ilona Rolfes, Ruhr-Universität Bochum, Germany
10:50–12:30, Thursday 25th September 2025, Glow

(NA) **Tunable Microwave Sensor for High-Sensitivity Detection of Minor Impurities in Liquids**
Mohammadmahdi Javanmardi [1], Vahid Nayyeri [1], Adib Abrishamifar [1], Ugur C. Hasar [2]
[1]IUST, Iran; [2]Gaziantep University, Türkiye

910 **Low Profile and High Sensitivity Phase-Variation Sensor Applied to Relative Humidity Measurements**
Xavier Canalias, Paris Vélez, Pau Casacuberta, Lijuan Su, Nazmia Kurniawati, Ferran Martín, Universitat Autònoma de Barcelona, Spain

914 **Planar Low-Cost Microwave Ring Resonator Temperature Sensor Using a PDMS Active Layer**
Zabdiel Brito-Brito [1], Jesús Salvador Velázquez-González [1], Fermín Mira [1], Yi Wang [2], Ignacio Llamas-Garro [1]
[1]CTTC, Spain; [2]University of Birmingham, UK

918 **Terahertz Wave Profile Imaging Based on Phase-Shifting Interferometry**
Mahdi Montazery [1], Mohammad Neshat [2]
[1]University of Tehran, Iran; [2]University of Sussex, UK

922 **Highly Sensitive Capacitive Proximity Sensor Based on Microwave Technology**
Amirhossein Karami-Horestani [1], Ferran Paredes [1], Karl Adolphs-Saura [1], Amir Ebrahimi [2], Ferran Martín [1]
[1]Universitat Autònoma de Barcelona, Spain; [2]RMIT University, Australia

EuMC50: EuMC Interactive Poster Session 2

Chair: Kamil Yavuz Kapusuz, Ghent University, Belgium
Co-Chair: Mark S. Oude Alink, Universiteit Twente, The Netherlands
10:50–12:30, Thursday 25th September 2025, Hall 7

926 **Intermodulation Based Non-Linear Behavior Prediction Towards Electronic Waste Reduction**
Till Schmidt, Raphaël Dauny, Corinne Dejous, Valerie Vigneras, Laurent Oyhenart, Simon Hemour, IMS (UMR 5218), France

930 **Analytical Expressions for Antenna On-Chip Efficiency at mm-Wave and Sub-THz Frequencies**
Louis Delait, Christophe Craeye, Jean-Pierre Raskin, Dimitri Lederer, UCLouvain, Belgium

934 **Characterization of D- and Y-Band Filters with a Photonic THz System Continuously Tunable from 130 to 510GHz**
Garrit Schwanke, Milan Deumer, Sebastian Lauck, Lars Liebermeister, Mehmet Ahad Yurtoglu, Ramez Askar, Michael Peter, Martin Schell, Robert B. Kohlhaas, Fraunhofer HHI, Germany

938 **Sub-THz PA EVM Measurements with Ultra-Wideband Test Signals**
Jean-Pierre Teyssier [1], Vincent Gillet [1], Johan Ericsson [1], Gerhard Schoenthal [2]
[1] Keysight Technologies, USA; [2] Virginia Diodes, USA

942 **Ultra-Wide Band THz Directional Coupler**
Nikolaos Xenidis, Joachim Oberhammer, Dmitri Lioubtchenko, KTH, Sweden

945 **Filtering Power Divider with Reflectionless Response at All Ports Based on Cascaded Building Blocks**
Minahil Shirazi [1], Adnan Nadeem [1], Symeon Nikolaou [1], Kexin Li [2], Dimitra Psychogiou [2], Photos Vryonides [1]
[1] Frederick University, Cyprus; [2] University College Cork, Ireland

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949 **8-Port Network Analysis up to 110GHz Using Multi-VNA Port Extension**
Jens Löffler, Manuel Koch, Sascha Breun, Robert Weigel, Norman Franchi, FAU Erlangen-Nürnberg, Germany

953 **Statistical Analysis on Interlaboratory Comparison Case Study of Dielectric Measurements**
Yuhui Luo [1], Xiaobang Shang [1], Liam Ausden [1], Nick Ridler [1], Djamel Allal [2], Marcin Wojciechowski [3]
[1] NPL, UK; [2] LNE, France; [3] GUM, Poland

957 **Passive Intermodulation Products Radiated from an Antenna Reflector: Theory and Experiments**
J. Sombrin [1], I. Albert [2], N. Fil [2], C. Feat [3], J. Sinigaglia [3]
[1] TéSA, France; [2] CNES, France; [3] Thales, France

961 **Compensation of Fano Resonances in Microwave Resonators**
Felix Bachbauer, Gerald Gold, FAU Erlangen-Nürnberg, Germany

965 **Design of Multimode Horn Feed for Parallel Plate Waveguide-Based Offset Dual-Reflector Antenna**
Thi-Kim-Ngan Nguyen [1], Artem R. Vilenskiy [2], David González-Ovejero [1], Ronan Sauleau [1], Marianna V. Ivashina [3]
[1] IETR (UMR 6164), France; [2] XPANCEO, UAE; [3] Chalmers University of Technology, Sweden

969 **Investigation of the Radiation Characteristics of Circular Open-End Polymer Microwave Fibers**
Stefan Wögerbauer [1], Helmut Paulitsch [1], Siegfried Krainer [2], Michael Ernst Gadringer [1]
[1] Technische Universität Graz, Austria; [2] Infineon Technologies, Austria

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EuMC51 : Multiphysics Simulation Techniques

Chair: Alessandro Galli, Università di Roma "La Sapienza", Italy
Co-Chair: Andrea Neto, Technische Universiteit Delft, The Netherlands
13:50–15:30, Thursday 25th September 2025, Quest

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EuMC52 : MTT-S ISTP Panel Session: Microwaves for a Sustainable Future — Innovations and Challenges in Technology, Energy, and Resources

Chair: Jasmin Grosinger, Technische Universität Graz, Austria
Co-Chair: Peter Siegel, Caltech, USA
13:50–15:30, Thursday 25th September 2025, Expedition

EuMC53: EuMC/EurAAP Special Session: Beamforming Networks for Active Array Antennas

Chair: Bart Smolders, Technische Universiteit Eindhoven, The Netherlands
Co-Chair: Maria Carolina Viganó, Viasat, Switzerland
13:50–15:30, Thursday 25th September 2025, Auditorium

(NA) **Mutual Coupling Between Antennas: A Simple Modal Representation**
Jean Cavillot, Christophe Craeye, UCLouvain, Belgium

(NA) **All Digital Beamforming Concepts for RADAR Applications**
Gilberto Rossi, Jürgen Rauscher, HENSOLDT Sensors, Germany

(NA) **Reconfigurable Photonics Integrated Multibeam Beamformer Networks**
Ronis Maximidis [1], Roel Botter [2], Paul van Dijk [2], Chris Roeloffzen [2]
[1]Stellar Phronesis Technology, Greece; [2]LioniX International, The Netherlands

(NA) **Integrated Microwave Photonic Functionalities on a Hybrid Integrated InP-Si3N4 PIC Platform: Photonic Components for Beamforming Array Antennas**
Chris Roeloffzen, Paul van Dijk, Ilka Visscher, Marcel Hoekman, Roelof Bernardus Timens, Charoula Mitsolidou, Ahmad Mohammad, Robert Grootjans, Roel Botter, Carlos Ruiz Pineda, Sadoon Al-Obaidi, LioniX International, The Netherlands

(NA) **Over-the-Air Testing of Front-End Losses in Active Array Antennas**
A.J. van den Biggelaar, Marc Vanden Bossche, ANTENNEX, The Netherlands

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EuMC54: Periodic Structures and Metamaterials

Chair: Antoine Calleau, Swissto12, Switzerland
Co-Chair: Erio Gandini, ESA-ESTEC, The Netherlands
13:50–15:30, Thursday 25th September 2025, Spark

1040 **Design of a Topological Waveguide Using Two Types of Rhombic Unit Cell Structures with Exchanged Microstrip-Line Arrangements**
Tsutomu Nagayama, Kagoshima University, Japan

1044 **A Two-Dimensional Active Magnetic Metamaterial Cell**
Hongtao Zhong, Shian Su, David S. Ricketts, North Carolina State University, USA

1048 **Active Metamaterial Mini-Array Using Inter-Cell Stability Compensation**
Shian Su, Hongtao Zhong, David S. Ricketts, North Carolina State University, USA

1052 **Single-Layer, Dual-Passband, High-Reject, Beam-Pointing FSS for SatCom Applications**
Ashifa [1], Elmine Meyer [2], Ulf Johannsen [2], Diego Caratelli [1]
[1]Antenna Company, The Netherlands; [2]Technische Universiteit Eindhoven, The Netherlands

1056 **Analysis of Forward and Backward Modes in One-Dimensional Periodic Bounded Structures**
Oskar Zetterstrom [1], Raúl Rodríguez Berral [2], Francisco Mesa [2], Oscar Quevedo-Teruel [1]
[1]KTH, Sweden; [2]Universidad de Sevilla, Spain

EuMC55: Wireless Communications and Sensing

Chair: Padmanava Sen, Barkhausen Institut, Germany — Co-Chair: Fabian Lurz, OvG Universität Magdeburg, Germany
13:50–15:30, Thursday 25th September 2025, Glow

(NA) **Industrial Applications of THz-Technology: A Fraunhofer View** *(Industrial Keynote)*
Dirk Heberling[1], Dirk Nüßler[2], Christoph Reising[2]
[1]RWTH Aachen University, Germany; [2]Fraunhofer FHR, Germany

1061 **Point-to-Multipoint Wireless Communication at 100GHz with a Photonic Switched-Beam Transmitter**
Simon Nellen[1], Garrit Schwanke[1], Sara Vega[2], Oliver Stiewe[1], Sebastian Lauck[1], Milan Deumer[1], Robert Elschner[1], Colja Schubert[1], Ronald Freund[1], María C. Santos[2], Martin Schell[1], Robert B. Kohlhaas[1]
[1]Fraunhofer HHI, Germany; [2]Universitat Politècnica de Catalunya, Spain

1065 **A Distributed Radar Architecture above 100GHz Using Lens Arrays for Sensing Applications**
A. Nair[1], G. Carluccio[2], W.H. Syed[2], H. Nandagopal[2], M. Alonso-delPino[1], D. Cavallo[1], Kostas Doris[2], N. Llombart[1]
[1]Technische Universiteit Delft, The Netherlands; [2]NXP Semiconductors, The Netherlands

1068 **Performance and Potentials of 6G-Based Joint Communication and Sensing for Low-Level Airspace Monitoring**
Shikhar Chandra[1], Nunzio Sciammetta[1], Markus Klügel[1], Vlad C. Andre[2], Xinyang Li[2], Holger Boche[2], Dominic A. Schupke[1]
[1]Airbus, Germany; [2]Technische Universität München, Germany

1072 **Harmonic Response Characterization of Mobile Devices for Application in Avalanche Rescue**
Moritz Schabinger[1], Thomas Schaechtle[1], Georg K.J. Fischer[2], Fabian Höflinger[1], Stefan J. Rupitsch[1]
[1]Albert-Ludwigs-Universität Freiburg, Germany; [2]Fraunhofer EMI, Germany

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EuMW03: EuMW/EuMC Closing and Awards Ceremony

Chair: Ioan E. Lager, Technische Universiteit Delft, The Netherlands
Co-Chair: Ann Franchois, Ghent University, Belgium
16:10–17:50, Thursday 25th September 2025, Polar

(NA) **Session Welcome**
Ioan E. Lager[1], Ann Franchois[2]
[1]Technische Universiteit Delft, The Netherlands; [2]Ghent University, Belgium

1076 **Applications of Exceptional Degeneracy Points in Nonlinear Circuits, Oscillators and Arrays**
Filippo Capolino, University of California, Irvine, USA

(NA) **Awards Ceremony: EuMW 2025 Awards, EuMC Prize, EuMC Young Engineer Prizes**
Andrea Neto, Ioan E. Lager, Technische Universiteit Delft, The Netherlands

(NA) **Closing Remarks and Invitation to EuMW 2026**
Mark Bentum[1], Stephen Harman[2]
[1]EuMW 2025 General Chair; [2]EuMW 2026 General Chair

EuMIC/EuMC01 : Load-Modulated High-Efficiency Power Amplifiers

Chair: José Carlos Pedro, Instituto de Telecomunicações, Portugal, Portugal
Co-Chair: Mark Ingels, imec, Belgium
08:30–10:10, Tuesday 23rd September 2025, Mission 1

1079 **RF-Input Sequential Circulator Load Modulated Amplifier with Back-Off Efficiency Enhancement**
Han Zhou, Haojie Chang, Christian Fager, Chalmers University of Technology, Sweden

1083 **A Single-Driver Doherty Power Amplifier Module with Harmonic Load Insensitivity**
Ioannis Peppas [1], Mustazar Iqbal [2], Marco Pitton [2], Peter Singerl [2]
[1] Technische Universität Graz, Austria; [2] Infineon Technologies, Austria

1087 **GaN-Based Digital Class-E Doherty Power Amplifier for 5G FR1 Frequency Band**
Giulia Bartolotti [1], Anna Piacibello [1], Vittorio Camarchia [1], Deguang Sun [2], Thomas Hoffmann [2], Andreas Wentzel [2]
[1] Politecnico di Torino, Italy; [2] FBH, Germany

1091 **High Efficiency 2-Stage MMIC GaN Doherty Power Amplifiers with More Than 38% Fractional Bandwidth in C Band**
Victor Dufrene [1], Wilfried Demenitroux [1], Michel Campovecchio [2], Denis Barataud [2], Julien Ceugnart [1], Pablo Rochas [1], Olivier Jardel [1], Pierre-Yves Mailloux [1], Nicolas Berthou [1]
[1] Thales, France; [2] XLIM (UMR 7252), France

1095 **Design of a Fast-Switchable Three-Stage GaN Doherty PA for High DC-to-RF Efficiency**
Maximilian Gottfried Becker, Robert Krämer, Marco Gunia, Frank Ellinger, Technische Universität Dresden, Germany

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EuMIC/EuMC02 : Panel Session: On-Going R&D and Industrial Projects Towards More Sustainable Microwave Engineering

Chair: Ann Franchois, Ghent University, Belgium
Co-Chair: Jean-Pierre Raskin, UCLouvain, Belgium
13:50–15:30, Tuesday 23rd September 2025, Auditorium

(NA) **EIC Engagement with the European Sustainable Electronics Ecosystems**
Isabel Obieta, European Innovation Council, Belgium

(NA) **Pitches by Panelists from Industry and RTOs**
Bertrand Parvais [1], Gregory Clark [2], Duncan Platt [3], Moritz Schlagmann [4], Hugues Ferreboeuf [5]
[1] imec, Belgium; [2] Qorvo, USA; [3] RISE, Sweden; [4] Infineon Technologies, Germany; [5] The Shift Project, France

(NA) **Panel Discussion**
Jean-Pierre Raskin, UCLouvain, Belgium

EuMIC/EuMC03 : EuMIC/EuMC Interactive Poster Session

Chair: Piyush Kaul, Technische Universiteit Eindhoven, The Netherlands
Co-Chair: Mark S. Oude Alink, Universiteit Twente, The Netherlands
13:50–15:30, Tuesday 23rd September 2025, Hall 7

1099 **X-Band GaN Low Noise Amplifier with Oscillation Suppression Techniques**
Bohyeon Kim, Hyojin Yoon, Jaeyong Lee, Changkun Park, Soongsil University, Korea

1103 **Interference and Blockage Mitigation Through Direct RF System-on-Chip Receiver**
Francesco Raimondo, Xiaoqiang Gu, Mark A. Beach, University of Bristol, UK

1107 **An Integrated W-Band Dual-Polarization Receiver Front-End Featuring Ultra-Low Noise Figure**
P. Neininger [1], Fabian Thome [1], S. Chartier [1], R. Henneberger [2], B. Thomas [3], Oilid Bouzekri [3], E. Richard [3]
[1]Fraunhofer IAF, Germany; [2]RPG Radiometer Physics, Germany; [3]ESA-ESTEC, The Netherlands

1111 **GaN/Si 26–30GHz T/R Chip MMIC for 5G Communications**
A. Al Hajjar, V. Deremaux, M. El Kaamouchi, A. Gasmi, MACOM, France

1115 **Design of High-Power Harmonic Controlled Doherty Power Amplifier Using Internally Matched 350-W GaN HEMT for RF Plasma Source**
Jisu Park [1], Minjae Ahn [1], Dongsu Kim [2], Yunsik Park [2], Hyunchul Ku [1]
[1]Konkuk University, Korea; [2]KETI, Korea

1119 **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 Gatti, Giulio Brancali, Ethan Bernardini, Guendalina Simoncini, Giacomo Schiavolini, Giulia Orecchini, Federico Alimenti, Università di Perugia, Italy

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1123 **Frequency-Dependent Power Consumption Modeling of CMOS Transmitters for WNoC Architectures**
Mohammad Shahmoradi [1], Korkut Kaan Tokgöz [2], Eduard Alarcón [1], Sergi Abadal [1]
[1]Universitat Politècnica de Catalunya, Spain; [2]Sabanci University, Türkiye

1127 **An Iterative Electro-Thermal Model for an Active Antenna Element and its Application to Arrays**
Feza Turgay Celik [1], Christian Fager [2], Alexander Yarovoy [1], Yanki Aslan [1]
[1]Technische Universiteit Delft, The Netherlands; [2]Chalmers University of Technology, Sweden

(NA) **A 9W Low-Cost GaAs MMIC Power Amplifier for X-Band Communications**
Carlo Poledrelli, Michael Ciardullo, Joseph Merenda, Mini-Circuits, USA

(NA) **A 0.4–2GHz MMIC LNA with Integrated Limiter**
Sergio Colangeli [1], Antonio Serino [1], Patrick Ettore Longhi [1], Walter Ciccognani [1], Francesco Vitulli [2], David Cuadrado-Calle [3], Valerie Dutto [3], Ernesto Limiti [1]
[1]Università di Roma "Tor Vergata", Italy; [2]Thales, Italy; [3]ESA-ESTEC, The Netherlands

(NA) **X-Band Asymmetric GaN HEMT SPDT Switch Using LC Resonator and Quarter-Wave Stub for High Power Handling Capability and High Isolation**
Seungjong Moon, Jaehyun Kwon, Jaeyong Lee, Changkun Park, Soongsil University, Korea

(NA) **Thermal Resistance Estimation for AlGaN/GaN HEMTs with Trapping Effects**
Zhijian Yu, A. Mirza Gheytaghi, Ampleon, The Netherlands

(NA) **Machine Learning Assisted Design of Frequency Variants of Low-Noise Amplifiers Using Hybrid of NN with Bayesian Optimization**
Mikko Kaikkonen, Sumra Batool, Muditha Ranaweera, Janne P. Aikio, Timo Rahkonen, Mikko Hietanen, Olli-Erkki Kursu, Olli Silvén, Aarno Pärssinen, University of Oulu, Finland

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EuMIC/EuMC03 continued…

EuMC/EuRAD01 : Special Session: Dutch Ecosystem for Defence Radar

Chair: R.I.A. Harmanny, Thales, The Netherlands
Co-Chair: Frank E. van Vliet, TNO, The Netherlands
16:10–17:50, Wednesday 24th September 2025, Mission 1

(NA) **Excellence in Radar Systems: The Netherlands in the Lead**
Frank E. van Vliet, TNO, The Netherlands

(NA) **Anticipating the Threat**
Dolf Verhoeven, Ministry of Defence, The Netherlands

(NA) **Radar Systems at Thales Nederland, Past, Present and the Future**
Hans Schurer, Thales, The Netherlands

(NA) **Radar Research and Education at Dutch Academia**
Alexander Yarovoy, Technische Universiteit Delft, The Netherlands

(NA) **Radar Innovation at TNO's Department of Radar Technology**
Jacco J.M. de Wit, TNO, The Netherlands

EuMC/EuRAD02 : EuMC/EuRAD Interactive Poster Session

Chair: Francesco Fioranelli, Technische Universiteit Delft, The Netherlands
Co-Chair: Mark S. Oude Alink, Universiteit Twente, The Netherlands
16:10–17:50, Wednesday 24th September 2025, Hall 7

(NA) **A 10W, High Gain, Multi-Octave Bandwidth Driver Amplifier for HF Radar's Transmitter Application**
Chiranjit Majumder [1], Nagaditya Poluri [1], Basudev Majumder [2]
[1] IIT Kanpur, India; [2] IIST, India

1195 **Power Amplifier Modeling and Active Antenna Simulation**
Jeremy Michel [1], Guillaume Neveux [1], Cyrille Menudier [1], Marc Thevenot [1], Clément Hallépée [1], Damien Pithon [2], Faycel Fezai [2], Michel Stanislawiak [2]
[1] XLIM (UMR 7252), France; [2] Thales, France

(NA) **Active Backscatter Modulation Using FMCW Radar Sensor for V2X Communication**
Christoph Domnik, Michael Meuleners, Christoph Degen, Hochschule Niederrhein, Germany

1203 **A Local Interferometric Technique to Distinguish Between Different Radio-Vortices at 15GHz**
Lorenzo Scalcinati, Bruno Paroli, Mirko Siano, Marco A.C. Potenza, Università di Milano, Italy

1207 **A Multi-Band Full-Duplex Prototype for Integrated Sensing and Communication**
Bixing Yan, André B.J. Kokkeler, Yang Miao, University of Twente, The Netherlands

1211 **Extraction of Target Poles with High Accuracy Matrix Pencil Method Based on Ultra-Wideband Radar**
Junyi Huang, Yu Ji, Yang Wu, Ang Liu, Yafeng Wang, Yuqi Tan, Shen Dong, Guangxin Wu, Yuhao Yang, Linghao Xia, NRIET, China

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EuMC/EuRAD03 : Design of (MIMO) Radar Antenna Arrays

Chair: Reinhard Feger, Johannes Kepler Universität Linz, Austria
Co-Chair: Rob van der Meer, Robin Radar Systems, The Netherlands
08:30–10:10, Thursday 25th September 2025, Mission 1

EuMC/EuRAD04 : Special Session: Space Microwave Technology — The ESA Experience

Chair: Iain Davies, ESA-ESTEC, The Netherlands — Co-Chair: Elisa Cipriani, ESA-ESTEC, The Netherlands
08:30–10:10, Thursday 25th September 2025, Auditorium

(NA) **Q-Band Front End Radiating Module for Next Generation Active Antennas at Thales Alenia Space**
Vincent Oullion [1], David Serres [1], Benoît Lejay [1], Nicolas Ferrando [1], Julien Rotureau [1], Claire Giraudeau [1], Benoît Lefebvre [1], Fabrice Delahaye [1], Olivier Vendier [1], Václav Valenta [2]
[1] Thales, France; [2] ESA-ESTEC, The Netherlands

(NA) **GaN MMIC Based Solid State Power Amplifier for X-Band for Long Range High Capacity Communication**
Benoît Lefebvre [1], Aymeric Le Brun [1], Nicolas Poitrenaud [2], Véronique Serru [2], Martin Kuball [3], James Pomeroy [3]
[1] Thales, France; [2] UMS, France; [3] University of Bristol, UK

(NA) **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-Universität Bochum, Germany; [2] Fraunhofer FHR, Germany

(NA) **Characterization of a V-Ka Band Receiver Module with Ultra-Low Noise Figure, High Gain and Linearity for Geostationary Satellite Communication**
Sascha Krause, Øystein Jensen, Bård Eirik Nordbø, Grunde Joheim, Deokki Min, Sigmund Bardal, Stein Hollung, Kongsberg Defence & Aerospace, Norway

(NA) **Characterization Method for a GaN Based Amplifier, Controlled in Amplitude and Phase Through IQ Modulator and Drain Bias Regulation**
Elia Pancini, Fabrizio Marrese, Alessandro Piana, Gianluigi Cassani, Massimo Maspero, Juri Romano, Matteo Squinzi, Omar Leoni, Leonardo, Italy

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EuMC/EuRAD05 : Recent Developments in Antenna Measurements

Chair: Marco Spirito, Technische Universiteit Delft, The Netherlands
Co-Chair: A.J. van den Biggelaar, ANTENNEX, The Netherlands
10:50–12:30, Thursday 25th September 2025, Auditorium

1276 **Realtime 3D Radiation Pattern Measurement: Experimental Demonstration**
Mohammad Azadifar [1], Carlos Romero [2]
[1] HEIG-VD, Switzerland; [2] armasuisse, Switzerland

1280 **Amplitude-Only Measurement Based Calibration for Phased Arrays with Limited Power Detection Range**
Young-Jun Lim [1], Chanhee Lee [1], Hyeon-Jeong Cho [1], Ji-Young Kim [1], Hyuk-Ja Kwon [2], Jong-Won Yu [1]
[1] KAIST, Korea; [2] Hanwha Systems, Korea

1284 **Near-Field Test of Millimeter-Wave Patch Antenna Arrays with Dielectric Probes**
Athanasios Papanikolaou [1], Jan Hesselbarth [1], Jose Moreira [2]
[1] Universität Stuttgart, Germany; [2] Advantest, Germany

1288 **Performance Characterization of an Active Phased Array Antenna by Simultaneously Measuring the Radiation Pattern and the Error Vector Magnitude**
Máté L. Iványi [1], Gaetano Chirico [2], Yanki Aslan [1], Alexander Yarovoy [1], Marco Spirito [1]
[1] Technische Universiteit Delft, The Netherlands; [2] UNICAS, Italy

1292 **Compact Multi-Probe Planar Near Field Antenna Measurement System**
Martin Obermaier [1], Johannes Lange [2], Thomas Deckert [2], Marc Vanden Bossche [3], Dirk Plettemeier [1]
[1] Technische Universität Dresden, Germany; [2] National Instruments, Germany; [3] National Instruments, Belgium

Additional Paper

1296 **CMOS Compact Concurrent Transceiver Pixel Arrays for Terahertz Imaging Applications**
Wooyeol Choi, Kenneth K. O