

SIX DAYS ■ THREE CONFERENCES ■ TWO FORUMS ■ ONE EXHIBITION

CALL FOR PAPERS

The 23rd European Microwave Week combines three conferences:

- The European Microwave Conference (EuMC)
- The European Microwave Integrated Circuits Conference (EuMIC)
- The European Radar Conference (EuRAD)

And in addition:

- Many Student and Young Professionals Activities
- Workshops, Short Courses and Special Sessions
- The Forum on Defence, Security and Space
- The Automotive Forum
- The European Microwave Exhibition

EUROPEAN MICROWAVE WEEK
JAARBEURS UTRECHT
THE NETHERLANDS
13-18 SEPTEMBER 2020
www.eumweek.com

EuMA

European Microwave Association

Official Publication:



Organised by:



Supported by:



Co-sponsored by:



Co-sponsored by:



The 15th European Microwave Integrated Circuits Conference

Co-sponsored by:



The 50th European Microwave Conference

Co-sponsored by:



The 17th European Radar Conference

Co-sponsored by:



Submit preliminary papers online at www.eumweek.com
by 14 February 2020, 23:59hrs, Central European Time (CET) UTC+1

The 23rd European Microwave Week

The 2020 European Microwave Week (EuMW 2020) continues the yearly series of successful microwave weeks that started in The Netherlands in 1998. The EuMW 2020 will consist of:

- **The European Microwave Integrated Circuits Conference (EuMIC, Monday - Tuesday)**
- **The European Microwave Conference (EuMC, Tuesday - Thursday)**
- **The European Radar Conference (EuRAD, Wednesday - Friday)**

In addition, the EuMW 2020 will include The Forum on Defence, Security and Space, The Automotive Forum and a huge exhibition.

Meet colleagues. These events are a superb place to learn about the global state-of-the-art, meet the people who perform this work and exchange thoughts on any topic supporting this work. To enable this, there will be plenty opportunities to join in technical sessions and to attend workshops, short courses, and special sessions. For Ph.D. and graduate students, special competitions will take place and doctoral sessions, and lectures, on microwave theory and techniques will be offered.

Meet industry. The annual European Microwave Exhibition, which is by far the largest trade show on RF and microwaves in Europe, is held in conjunction with the conferences from Tuesday until Thursday. The exhibition includes a series of technical seminars describing microwave products and processes (exhibitor workshops). This exhibition is an excellent opportunity to meet with all these industries in just one trip.

Make friends. An extensive social programme will be organised to make sure that you can meet with colleagues, become friends with like-minded people around the world, enjoy the beautiful city of Utrecht and engage in professional and volunteering activities that strengthen your network. Don't hesitate: it is both useful as well as fun!

Where and how? The 2020 European Microwave Week will take place in Utrecht at the Jaarbeurs Convention Centre, Jaarbeursplein, 3521 AL Utrecht. The venue is easy to reach from the Amsterdam Schiphol Airport – with a wide range of public transport options available to travel to and from the airport: Railway (NS), Metro and Bus connections. See <https://www.9292.nl/en> and <https://www.ns.nl/en>. It is also easy to reach by car.

Come and join us in Utrecht and enjoy both the EuMW, Europe's prime microwave event in 2020, the historical Utrecht downtown as well as the famous city Amsterdam to make 2020 a truly prime year in your calendar.

Important Dates

13 December 2019, 23:59 CET

Deadline for proposals of workshops, short courses, focussed and special sessions

14 February 2020, 23:59 CET

Deadline for submission of papers

27 April 2020, 23:59 CET

Notification of acceptance

8 May 2020, 23:59 CET

Deadline for grant and fellowship requests

12 June 2020, 23:59 CET

Deadline for final paper submissions

Addresses

General Chair

Frank van Vliet
TNO
general.chair@eumw2020.org

General Co-Chair

Bart Nauwelaers
KU Leuven
general.cochair@eumw2020.org

Operational Officer

Marcel van der Graaf
TNO
operations@eumw2020.org

General TPC Chair

Alexander Yarovoy
Delft University of Technology
tpc.chair@eumw2020.org

General TPC Co-Chair

Ronny Harmanny
Thales Nederland BV
tpc.chair@eumw2020.org

Workshops/Short Courses Chair

Laura Anitori
TNO
workshops@eumw2020.org

Focussed/Special Sessions Chair

Stefania Monni
TNO
focussed.sessions@eumw2020.org

Local Arrangements

Marc van Heijningen
TNO
local.arrangements@eumw2020.org

Treasurer

Hansi Lager
Delft University of Technology
treasurer@eumw2020.org

Student Activities Chair

Ulf Johannsen
Eindhoven University of Technology
student.activities@eumw2020.org

Awards and Prizes Chair

Marion Matters-Kammerer
Eindhoven University of Technology
awards@eumw2020.org

EuMW 2020 Exhibit

For exhibition enquiries, please contact Richard Vaughan

Tel: +44 20 7596 8742, Fax: +44 20 7596 8749

rvaughan@horizonhouse.co.uk

Horizon House Publications, 16 Sussex Street, London SW1V 4RW, UK

THE ART OF MICROWAVES
EUMW2020

General Instructions for Authors

Authors are requested to submit a 4-page preliminary paper in the standard conference proceedings layout, in English. Word and Latex templates, as well as instructions for paper submission, can be found on the EuMW 2020 website: www.eumweek.com. The paper must be uploaded in pdf format. The maximum file size is 3 MB. It is essential to emphasise the novel aspects of your paper. One author information form per paper must be completed when uploading the paper. The week comprises three conferences. A paper can only be submitted to a single conference. Do not upload the same paper to more than one conference. The deadline for submission of preliminary papers is 14 February 2020. Late submissions will not be accepted. Each preliminary paper will be reviewed by the Technical Programme Committee (TPC) of the conference to which the paper has been submitted by the author(s). The TPC Chair decides whether a paper is accepted and assigns it to an oral or poster session. The General TPC Chair reserves the right to redirect a paper, which does not fit with the conference selected by its authors, towards the most appropriate conference. Authors will be notified on the status of their submission by 27 April 2020. The final digest paper will be required by 12 June 2020. Authors of accepted papers will find instructions for publication and presentation on the EuMW 2020 website. Authors are responsible for obtaining publication approval by their employer or sponsor.

Workshops and Short Courses

More than 25 workshops and short courses, on a variety of popular topics of current or emerging interests, will be organised during EuMW 2020. Do you have any suggestions for a workshop or a short course? Your proposal is very welcome and should be sent by e-mail to the Workshops and Short Courses Chair, Laura Anitori (workshops@eumw2020.org), by 13 December 2019. Proposals should be submitted on the templates which will be available from www.eumweek.com, or you can request them directly from Laura Anitori. Proposers will be informed about the TPC's decision by 27 April 2020.

Student Grants, Fellowships and Visas

EuMIC, EuMC and EuRAD will provide several competitive student grants. In addition, the GAAS Association offers three Ph.D. student fellowships for the European Microwave Integrated Circuits Conference. Applications should be sent to the Grants Chair between 1 January 2020 and 8 May 2020 (grants@eumw2020.org). For assistance in obtaining a visa letter, please contact visa@eumw2020.org.

Focussed and Special Sessions

The EuMW sets the spotlight on specific topics by hosting Focussed Sessions and Special Sessions. Focussed Sessions concern new or emerging topics that are of interest for the microwave community. The topic can also encompass multiple perspectives to a particular theme with the aim of broadening the scope or advancing general understanding. Papers for a Focussed Session may be solicited and unsolicited. Special Sessions should reflect specific (historical or recent) events of interest to the microwave community or recognise lifetime achievements. They may also highlight technical achievements made in a specific geographical region of the world. Would you like to suggest a Focussed or Special Session? Your proposal is very welcome and should be sent by e-mail to the Focussed and Special Sessions Chair, Stefania Monni (focussed.sessions@eumw2020.org), by 13 December 2019. Proposals should be submitted on the templates which will be available from www.eumweek.com, or you can request them directly from Stefania Monni. Proposers will be informed about the TPC's decision by 27 April 2020.

Incentives for Authors

Presenting at the EuMW 2020 gives you the opportunity to meet your peers, expose your work to an international audience, receive feedback and exchange ideas with academia as well as industry. Your paper will be published on the IEEE Xplore digital library, contributing to your professional development, visibility, credibility and proper exposure of your work. Selected papers will also be nominated by the Technical Programme Committee for a Special Issue of the International Journal of Microwave and Wireless Technologies, published by Cambridge University Press. Each conference will award a best paper conference prize and one or two young engineer's prizes. Prize winners will receive a financial award. All participants in one or more of the conferences will receive an electronic version of the conference proceedings.

Women in Microwave Engineering

Despite continued emancipation, the participation of women in microwave engineering remains well below 50%. To strengthen and cordially invite this community, the EuMW 2020 will organise a dedicated Women in Microwave Engineering event, blending scientific with social activities. Although not primarily targeted, men are of course welcome as well. If you have any suggestions for the program of this event, please e-mail your proposal by 13 December 2019 to the Women in Microwaves Chair, Marion Matters-Kammerer (women.microwaves@eumw2020.org).

Student Activities

Students will shape the future of our profession, and are particularly targeted throughout the Week's programme. Activities to be organised include Design Competitions, a Doctoral School (targeting particularly Ph.D. students) and a very cool radar-prototyping event. Would you like to suggest an additional activity? Your ideas are very welcome and can be proposed as early as possible to Ulf Johannsen (student.activities@eumw2020.org).

The City of Utrecht

The city of Utrecht, located in the centre of The Netherlands, features a rich past and a dynamic present. This 2000 year old city features a wide range of interesting museums and cultural events. Its rich history began about twenty centuries ago. In 47 A.D. the Romans built a fortress as part of reinforcements along the Rhine where the Cathedral square (Domplein) is situated today. It is here where the Union of Utrecht was signed in 1579, which is seen as the beginning of the Dutch Republic. Nowadays, Utrecht is a lively city with a pleasant and intimate atmosphere. The medieval city centre with its canals, wharfs, quaint streets and museum quarter is small enough to explore on foot. Featuring a large student population and many cafés and restaurants it is the ideal place to relax and make new friends. Through its central location, Utrecht serves as the perfect base from which to explore additional must-see Dutch attractions.

More information can be found at <https://www.visit-utrecht.com>



Photograph: Jurjen Drenth



The Jaarbeurs Convention Centre

The Jaarbeurs is in the heart of the historical city centre and next to Utrecht Central train station. The Royal Dutch Jaarbeurs Exhibition and Convention Centre was established in 1916 with the aim to support trade and stimulate the economy in the Dutch province of Utrecht. The venue benefits from the central location of the city of Utrecht and the well-developed public transport network, which makes it easily accessible, nationally as well as internationally, and is host to numerous national and international events.

More information at <https://www.jaarbeurs.nl/en>

Amsterdam Airport + 30 Minutes

By plane

Utrecht is located South-East of Amsterdam. From Amsterdam Airport it can be reached in 30 minutes by a direct train to the city centre.

By train

Utrecht is also very easily accessible by train from neighbouring countries. Connections with Paris (3½hrs) and Brussels (2hrs) are rapid and frequent. Many trains from Germany and the countries beyond stop in Utrecht.

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

By car

Jaarbeursplein
3521 AL, Utrecht
The Netherlands

Ample paid parking facilities available.





European Microwave Conference 2020 Utrecht 15 – 17 September 2020

Are you engaged in RF microwave technologies and systems? Would you like to learn about the latest developments in microwave technology, or share and discuss your own results with peers? Do you want to be part of the golden 50th edition of Europe's largest conference dedicated to microwaves? Then you should attend the 2020 European Microwave Conference!

The European Microwave Conference is Europe's premier conference on microwave, millimetre-wave and terahertz devices, systems and technologies. The conference is held from 15 to 17 September 2020 in Utrecht, The Netherlands, in the middle of the European Microwave Week. A broad range of high frequency related topics, from materials and technologies to integrated circuits, systems and applications will be addressed in all their aspects: theory, simulation, design and measurement. Examples include the latest developments of filters and passive components, modelling and design of RF MEMS and microsystems, high frequency and high data rate microwave photonics, highly stable and ultra low-noise microwave and millimetre-wave sources, new linearization techniques, 5G, IoT and the impact of new

packaging technologies on development applications. The European Microwave Conference provides ample opportunities for networking and interaction with international experts in a wide variety of specialties, attracting delegates with academic as well as industrial backgrounds. With carefully selected papers in more than 40 oral and poster sessions, the conference represents an exciting forum for the presentation and discussion of the most recent advances in the microwave arena. In addition to scientific papers, contributions on industrial applications are also encouraged, covering the fields of instrumentation, medical, telecommunication, radio astronomy, radar, space, automotive and defence systems.

A special reason to attend the 2020 European Microwave Conference is to celebrate its golden 50th edition. We will pay special attention to the history of the conference and the technological development driven by this conference.

Plenty of reasons why you do not want to miss the 2020 European Microwave Conference!

EuMC 2020 Conference Topics

Passive Components, Circuits and Subsystems

- E01 Planar Passive Components and Circuits
- E02 Planar Filters and Multiplexers
- E03 Non-Planar Passive Components and Circuits
- E04 Non-Planar Filters and Multiplexers
- E05 Smart Materials, RF MEMS, MOEMS and NEMS
- E06 Metamaterials, Frequency Selective Surfaces and Electromagnetic Bandgap Structures
- E07 Interconnects, Packaging
- E08 Additive Manufacturing and Emerging Materials

Active Components, Circuits and Subsystems

- E09 Low Noise Circuits and Modules
- E10 Frequency Generation, Conversion and Control
- E11 Front-End and Transceiver Modules, System-in-Package Technologies
- E12 Power Amplifiers
- E13 Power Amplifier Behavioural Modelling and its Applications
- E14 Sub-THz and THz Circuits and Modules
- E15 Microwave Photonic Components, Circuits and Systems

Field and Circuit Analysis, Simulation and Characterisation Techniques

- E16 Electromagnetic Field Theory and Numerical Techniques
- E17 Electromagnetic Compatibility and Interference, Signal Integrity
- E18 Interaction of Electromagnetic Waves with Matter, Biological Effects, Electromagnetic Scattering
- E19 Measurement Techniques and Systems from RF to THz
- E20 Channel Characterisation
- E21 Antenna and Array Characterisation Techniques

Antennas and Propagation

- E22 Microwave and mmwave Antenna Design
- E23 Sub-THz and THz Integrated Antennas
- E24 Array Antennas, Smart Antennas, MIMO Antennas and Related Tx/Rx Module Technologies
- E25 Integrated Antennas

Systems and Applications

- E26 Microwave Systems
- E27 Millimetre-wave Systems
- E28 Sub-THz and THz Systems
- E29 Biological and Medical Applications
- E30 Wireless Power Transfer and Energy Harvesting
- E31 RFID, Near-Field Communication
- E32 IoT Nodes and Applications
- E33 Wireless Sensor Networks
- E34 Smart Antennas, Digital Beam-Forming and MIMO Antennas for Future Networks
- E35 Wireless High Data Rate Communications and Cognitive Radio
- E36 Smart Factory, Mobility and Logistics

General Topics

- E37 Education and RF Engineering





Conference Highlights

The European Microwave Conference is the ideal event to keep up to date with the most recent achievements in the field of microwave theory, technology, systems and applications. Through its multi-disciplinary and highly interactive character, it offers second-to-none opportunities to network and interact with international experts from the industrial and academic fields. High quality contributions, selected through a rigorous reviewing process, offer an unparalleled perspective on the state-of-the-art in the field. Keynotes and invited papers, presented by well-known specialists, as well as a variety of workshops, short courses and special sessions on “hot topics” will complement the programme.

EuMC Microwave Prize

The EuMC Technical Programme Committee and the EuMW Steering Committee will award the EuMC Microwave Prize of €5,000 to the author(s) of the best paper at the 50th European Microwave Conference. An extended version of the winning paper will be considered for publication in the International Journal of Microwave and Wireless Technologies.

EuMC Young Engineers Prize

The Technical Programme Committee of the EuMC and the EuMW Steering Committee will award two EuMC Young Engineers' Prizes of €2,000 each to young engineers or researchers who have presented an outstanding paper at the European Microwave Conference. To be eligible, candidates must: (1) be under 30 years of age at date of award, (2) be the first author of the paper and (3) be the contribution presenter in an oral or a poster session. The first author must have made a major contribution to the work reported which must be described in an electronic statement signed by all authors of the paper (effectively co-authors state that their contribution was merely advisory). This statement has to include the date of birth of the first author and must be submitted together with the original submission. The number of co-authors of the paper is not limited. An extended version of the winning papers will be considered for publication in the International Journal of Microwave and Wireless Technologies.

Reduced Fees and Special Grants

Reduced registration fees are offered for students as well as senior persons aged 65 years or more. The European Microwave Association will also provide up to 14 student grants of €750 with free EuMC registration. Applicants for a student grant must be aged 30 or younger at the time of the European Microwave Week, be a full-time student (i.e., an undergraduate, graduate or a Ph.D. student) and they will be asked to provide a supervisor's written confirmation of their current student status. The European Microwave Association will also provide a number of grants for delegates coming from the Newly Independent States, from Russia and from low-income countries. The value of the grant is €750 in addition to a free EuMC registration. Applications should be sent to the Grants Chair (grants@eumw2020.org) by 8 May 2020.

50th EuMC Team

Chair

Wim van Cappellen
ASTRON
eumc.chair@eumw2020.org

TPC Chair

Dominique Schreurs
KU Leuven
eumc.tpc@eumw2020.org





European Microwave Integrated Circuits Conference 2020 Utrecht 14 – 15 September 2020

The 15th European Microwave Integrated Circuits Conference (EuMIC) will be held in Utrecht, The Netherlands, as part of the European Microwave Week 2020. Initiated by the GAAS® Association in 1990 and renamed in 2006, the conference visits Utrecht in 2020 for the first time.

The EuMIC conference is jointly organised by the GAAS® Association and EuMA. It is the premier European technical conference dealing with microwave integrated components whether based on silicon, III-V material or photonics. It has established itself as a key contributor to the success of the overall European Microwave Week and remains the largest scientific event in Europe related to microwave integrated circuits.

The aim of the conference is to promote the discussion of recent developments and trends, and to encourage the exchange of scientific and technical information covering a broad range of high-frequency related topics, from materials and technologies to integrated circuits and applications; encompassing all relevant aspects such as theory, simulation, design and measurement. Research and innovation in this field are at the core of the coming 5G communications networks, Internet-of-Things or sustainable electronics.

Technological innovations continue to drive challenges for ever more accurate modelling and simulation tools, as well as for the characterisation techniques used at both device and circuit levels.

Nowadays GaAs and silicon-based IC technologies are extensively used in microwave/millimetre-wave systems, while GaN is becoming commercially available, emerging technologies such as CNT or graphene-based devices could play a role in the coming years, with an expected huge impact on system performance. Moreover, new materials and devices push integrated circuit capability to millimetre-wave and even to THz bands, while high-speed digital and photonic integrated circuits represent other key areas of interest. In the modelling area, topics related to device and system small- and large-signal characterisation, test set-ups and modelling approaches up to the THz band are of interest. In the technology area, papers on nanotechnologies for microwaves, as well as wide-bandgap devices and technologies for integrated microwave photonics are specifically solicited. Topics related to semiconductor devices, IC reliability and 3D-interconnects in ICs are also invited to the conference. Finally, contributions are encouraged in the areas of circuit design and applications, RF and microwave ICs, millimetre- and submillimetre-wave ICs, photonic ICs, mixed-signal and high-speed digital ICs, tunable and reconfigurable ICs as well as integrated detectors, receivers, transmitters and transceivers.

If you are interested in the subject of microwave and RF microelectronic devices and ICs, the EuMIC conference is a unique event to have a glimpse at the “wireless revolution”, learn about the latest advances in the field and meet internationally recognised experts from both industry and academia.

EuMIC 2020 Conference Topics

Modelling, Simulation of Devices and Circuits

- G01 Physics Based Device Modelling and Simulation
- G02 TCAD Device Modelling and Simulation
- G03 Small Signal, Large Signal and Noise Modelling
- G04 Linear, Nonlinear and Noise Characterisation Techniques
- G05 Linear and Nonlinear CAD Techniques for Devices and Circuits
- G06 Multi-Physics Device and IC Modelling and Simulation (Thermal, EM, Transport)

Technologies, Devices and IC-Processes

- G07 Nano-Materials, Technologies and Devices for Microwave to Terahertz Applications
- G08 Device and IC Manufacturing: Reliability, Processes and Testing
- G09 Passive Devices, Hetero-Integration and 3D-Interconnects in ICs
- G10 Si-Based Microwave and Millimetre-Wave Devices
- G11 Compound Semiconductor Technologies and Devices
- G12 New and Emerging Material and Device Concepts (Quantum electronics, CNT, Organic, etc.)
- G13 Devices for Terahertz Electronics and Integrated Microwave Photonics

Circuit Design and Applications

- G14 RF and Microwave Integrated Circuits
- G15 Millimetre-Wave and Submillimetre-Wave Integrated Circuits
- G16 Integrated Receivers, Transmitters and Transceivers
- G17 Power Amplifier ICs, including Efficiency Enhancement, Linearization
- G18 Integrated High-Speed Data Transceivers
- G19 Integrated Frequency Sources
- G20 ICs for Phased Array Antennas
- G21 Microwave Photonics Integrated Circuits
- G22 GB/s Data Converters
- G23 Design methodology for RF and Microwave Integrated Circuits



Conference Highlights

About 100 papers and poster papers will be presented with contributions from Europe, Asia, North America, the Middle East and a growing number of emerging countries. High-quality papers and posters will be accepted after a rigorous review process and made available in the Conference Proceedings. Lively industrial panel sessions will also be organised. Keynote speakers from industry and academia will present invited talks on hot topics. Tailored short courses and workshops will complement the programme.

EuMIC Microwave Prize

The EuMIC Technical Programme Committee and the EuMW Steering Committee will award the EuMIC 2020 Microwave Prize of €3,000 to the author(s) of the best paper at the 15th European Microwave Integrated Circuits Conference. An extended version of the winning paper will be considered for publication in the International Journal of Microwave and Wireless Technologies.

EuMIC Young Engineers Prize

The Technical Programme Committee of the EuMIC and the EuMW Steering Committee will award a EuMIC Young Engineers Prize of €2,000 to a young engineer or researcher whom has presented an outstanding paper at the European Microwave Integrated Circuits Conference. To be eligible, candidates must: (1) be under 30 years of age at date of award, (2) be the first author of the paper and (3) be the contribution presenter in an oral or a poster session. The first author must have made a major contribution to the work reported which must be described in an electronic statement signed by all authors of the paper (effectively co-authors state that their contribution was merely advisory). Further, rules are similar to EuMC and EuRAD.

Reduced Fees and Special Grants

Reduced registration fees are offered for students as well as senior persons aged 65 years or more. The European Microwave Association will also provide up to six student grants of €750 with free EuMIC registration. Applicants for a student grant must be aged 30 or younger at the time of the European Microwave Week, be a full-time student (i.e., an undergraduate, graduate or a Ph.D. student) and they will be asked to provide a supervisor's written confirmation of their current student status. The European Microwave Association will also provide a number of grants for delegates coming from the Newly Independent States, from Russia and from low-income countries. The value of the grant is €750 in addition to a free EuMIC registration. Applications should be sent to the Grants Chair (grants@eumw2020.org) by 8 May 2020.

15th EuMIC Team

Chair

François Deborgies
ESA
eumic.chair@eumw2020.org

TPC Chair

Domine Leenaerts
NXP
eumic.tpc@eumw2020.org

Co-Chair

Stefan Heinen
RWTH Aachen University
eumic.cochair@eumw2020.org

TPC Co-Chair

Christian Fager
Chalmers University of Technology
eumic.tpc@eumw2020.org

GAAS® Ph.D. Student Fellowship

The GAAS® Association sponsors three student fellowships of €2,000 each, to be given to young full-time Ph.D. students each having an accepted paper at EuMIC 2020. The purpose is to recognise and provide financial assistance to international Ph.D. students who show promise and interest in pursuing a graduate degree in microwave electronics. Applications should be submitted between 1 January 2020 and 8 May 2020 to the EuMW Grants Chair (grants@eumw2020.org). For further details, see the GAAS® Association website: www.gaas-symposium.eu.





The 17th European Radar Conference

European Radar Conference 2020 Utrecht 16 – 18 September 2020

The 17th European Radar Conference (EuRAD 2020) will be held from 16 to 18 September 2020 in Utrecht, The Netherlands. This Radar Conference is the major European event for the present status and the future trends in the field of radar research, technology, system design and applications. The EuRAD conference will bring together a global network of researchers and institutes working on topics related to the following four focus areas:

The Radar Sub-systems and Phenomenology topics comprise radar electromagnetic phenomenology modelling and characterisation, antenna design (simulation and measurements) with main innovations on antenna characterisation, active/passive phased arrays and transceiver technologies as well as reconfigurable front-ends and sub-systems.

The Radar Signal and Data Processing topics aim at collecting innovative research contributions on digital beamforming, MIMO processing, interferometry, polarimetry, tomography, waveform diversity, tracking and target localisation, high-resolution radar signal processing techniques, classification, robust multi-dimensional signal processing techniques and compressive sensing. A specific focus is also expected on the use of machine learning and deep learning for radar application.

The Radar Architecture and Systems topics address the latest development of sensors from the classical designs such as CW, over-the-horizon, passive, noise and polarimetric radar, up to the most complex and sophisticated architectures, such as remotely piloted aircraft radar, multi-sensor and multifunctional systems, UWB systems and millimetre-wave and THz radars. New tools for radar simulation and system performance modelling, model based design, as well as new trends on cognitive, bio-inspired and software defined radars are encompassed.

The Radar Applications topics encompass various domains such as automotive radars, defence and security, ground/space radar, remote sensing, subsurface and ground penetrating radar, surveillance, traffic control, as well as other radar uses related to medical, industrial and system diagnostic applications. Novel applications spanning from multistatic radar systems, passive radar, short range and near-field radars, bio-medical imaging, millimetre-wave and THz technology or any other new emerging radar application are also included. A transversal focus is also expected on re-emerging electronic surveillance, attack, and defence for radar applications also in connection with the Internet-of-Things.

EuRAD 2020 Conference Topics

Radar Sub-Systems and Phenomenology

- R01 Phenomenology and Modelling
- R02 Radar Antenna Design and Characterisation
- R03 Radar Phased Arrays (Active/Passive),
Related Circuits and Components, Tx/Rx
Module Technologies
- R04 Radar Front-Ends

Radar Architectures and Systems

- R09 Radar Ultra-Wideband Technology and Systems
- R10 Large and Short Range Radar Systems
- R11 Multi-Sensor Architectures and Systems
- R12 Innovative Radar Concepts
- R13 Multifunctional Radar
- R14 Radar Millimetre-Wave, THz Technology and
Systems
- R15 System Simulation and Modelling

Radar Applications

- R16 Defence and Security
- R17 Electronic Surveillance, Defence and Attack
- R18 Subsurface Applications and Near-Field
Techniques
- R19 Automotive Applications
- R20 Industrial Applications and Emerging Radar
Applications
- R21 Geophysical Parameter Estimation

Radar Signal and Data Processing

- R05 Beam-Forming, MIMO and Exploiting
Diversity
- R06 Imaging Techniques
- R07 Tracking, Localisation and Classification
- R08 Robust Detection, Compressive Sensing and
Information Extraction





The 17th European Radar Conference

Conference Highlights

The conference is the ideal event to keep up to date with the latest achievements in the field of radar and to interact with international experts from industry and academia. The conference brings together researchers, radar designers and developers from all over the world to stimulate development of new trends, products and services. International experts will present keynote papers on topics of current importance and on the latest advances. Tailored short courses and workshops will complement the programme.

EuMA Radar Prize

The EuRAD Technical Programme Committee and the EuMW Steering Committee will award the EuMA Radar Prize of €3,000 to the author(s) of the best paper at the 17th European Radar Conference. An extended version of the winning paper will be considered for publication in the International Journal of Microwave and Wireless Technologies.

EuRAD Young Engineers Prize

The Technical Programme Committee of the EuRAD and the EuMW Steering Committee will award a EuRAD Young Engineers Prize of €2,000 to a young engineer or researcher whom has presented an outstanding paper at the European Radar Conference. To be eligible, candidates must: (1) be under 30 years of age at date of award, (2) be the first author of the paper and (3) be the contribution presenter in an oral or a poster session. The first author must have made a major contribution to the work reported which must be described in an electronic statement signed by all authors of the paper (effectively co-authors state that their contribution was merely advisory). This statement has to include the date of birth of the first author and must be submitted together with the original submission. The number of co-authors of the paper is not limited. An extended version of the winning paper will be considered for publication in the International Journal of Microwave and Wireless Technologies.

Reduced Fees and Special Grants

Reduced registration fees are offered for students, senior persons aged 65 years or more as well as military personnel (with proof of affiliation). The European Microwave Association will also provide up to five student grants of €750 with free EuRAD registration. Applicants for a student grant must be aged 30 or younger at the time of the European Microwave Week, be a full-time student (i.e., an undergraduate, graduate or a Ph.D. student) and they will be asked to provide a supervisor's written confirmation of their current student status. The European Microwave Association will also provide a number of grants for delegates coming from the Newly Independent States, from Russia and from low-income countries. The value of the grant is €750 in addition to a free EuRAD registration. Applications should be sent to the Grants Chair (grants@eumw2020.org) by 8 May 2020.

17th EuRAD Team

Chair

Mayazzurra Ruggiano
Thales Nederland BV
eurad.chair@eumw2020.org

TPC Chair

Jacco de Wit
TNO
eurad.tpc@eumw2020.org



SIX DAYS ■ THREE CONFERENCES ■ TWO FORUMS ■ ONE EXHIBITION

CALL FOR WORKSHOPS/ SHORT COURSES

The European Microwave Week 2020 will take place from 13 to 18 September in Utrecht, The Netherlands. Besides the contributed papers, the programme will include workshops and short courses. If you have ideas for half- or full-day workshops or short courses, we invite you to e-mail your proposals to the Workshops and Short Courses Chair, Laura Anitori (workshops@eumw2020.org). Proposals should include the selected conference (EuMC, EuMIC, or EuRAD), the title and an abstract of the topic, complemented with details of the organisers and speakers. The template to be used for the proposals is available at www.eumweek.com. The submission deadline is 13 December 2019. We look forward to receiving your submission!

**EUROPEAN
MICROWAVE WEEK**
JAARBEURS UTRECHT
THE NETHERLANDS
13-18 SEPTEMBER 2020
www.eumweek.com

EuMA

European Microwave Association

Official Publication:



Organised by:



Supported by:



Co-sponsored by:



Co-sponsored by:



The 15th European Microwave Integrated Circuits Conference

Co-sponsored by:



The 50th European Microwave Conference

Co-sponsored by:



The 17th European Radar Conference

Co-sponsored by:



Submit Workshop / Short Course proposals by 13 December 2019, 23:59hrs,
Central European Time (CET) UTC+1 to workshops@eumw2020.org