EUROPEAN MICROWAVE ASSOCIATION

Internship Awards

List of Host Institutions

#	Host institution	Point of contact	Email	Topics

1	TNO*
	
	*a security screening is required before you can start
		Jaap Essing	jaap.essing@tno.nl	• *MMIC Technology*, Jaap Essing (jaap.essing@tno.nl)
				  ○ Highly linear IF amplifiers
				  ○ Ultra-low Phase Noise VCOs for Radar Transceivers
				  ○ GaN-based PTAT and bandgap circuits
				  ○ Continuous time sigma-delta ADC for Built-in-Test-Circuits
				  ○ Automatic Matching Network Layout Synthesis for RF Power Amplifiers
				• *Antennas*, S. Monni: (stefania.monni@tno.nl) A. Garufo (alessandro.garufo@tno.nl)
				  ○ Foldable Reflectarray for Small Satellite Applications
				  ○ Wide Scanning Impedance Matching for Antenna Arrays
				  ○ Compact Filters for Phased Arrays
				  ○ Frequency Selective Surfaces (FSS) for high power radar applications
				  ○ Integrated radome for lens antenna array systems

2	IEMN Lille	Tahsin Akalin	tahsin.akalin@univ-lille.fr	• Tahsin Akalin :
				  ○ On-chip Near Field Microscopy based on Planar Goubau Lines
				  ○ Original microwave and terahertz lenses based on metasurfaces
				  ○ Biosensing with metasurfaces and Planar Goubau Lines
				  ○ Terahertz antennas and RIS for 6G wireless communications and Sensing

3	XLIM* *a security screening is required before you can start	Denis Barataud	denis.barataud@xlim.fr	• reconfigurable antennas, antennas array and radar systems – Design and Measurements (additional contact: cyril.decroze@xlim.fr) • RF receivers and front-ends – Design and Noise characterization (additional contact: julien.lintignat@xlim.fr) • Microwave high-power amplifier subsystems (additional contact: pierre.medrel@xlim.fr) • Microwave filters (additional contact: stephane.bila@xlim.fr) • RF MEMS & Phase Change switches and circuits (additional contact: pierre.blondy@xlim.fr) • Nanotechnologies for RF, microwave and millimeter-wave systems (additional contact: pierre.blondy@xlim.fr) • Additive manufacturing for microwave devices (additional contact: nicolas.delhote@xlim.fr) • Bio-electromagnetics and lab-on-chip sensing devices (additional contact: arnaud.pothier@xlim.fr)

				• Phase-change and functional materials for reconfigurable mmW and THz devices – Design and characterization (additional contact: aurelian.crunteanu@xlim.fr) • Thermal modeling and measurements of active devices and circuits (additional contact: raphael.sommet@xlim.fr) • Nonlinear Measurements (additional contact: guillaume.neveux@xlim.fr) • Electromagnetic Compatibility and diffraction (additional contact: christophe.guiffaut@xlim.fr)
4	University of Pavia	Luca Perregrini Maurizio Bozzi	luca.perregrini@unipv.it maurizio.bozzi@unipv.it	• Components and systems in substrate integrated waveguide technology • Additive manufacturing of microwave components • Microwave sensors • Antennas for telecom and space communication • Numerical methods for analysis and design of passive components • Mm-wave imaging system for medical applications
5	Ferdinand-Braun-Institut (FBH)	Wolfgang Heinrich	wolfgang.heinrich@fbh-berlin.de	• Electromagnetic Simulation • Microwave Power Amplifiers: Digital Transmitters • Integrated Radar Receivers • VHF power converter design • Sub-THz rectifier design • Sub-THz switch-mode PA design • Intelligent amplifier control (signal processing) • Reconfigurable MMIC PAs design (design) • Large-signal mm-wave and THz measurements • THz camera measurements and imaging algorithms

				• Mixed-signal design in InP HBT (Mux, Demux) • MIMO radar system implementation • THz scanner conveyor belt measurements • Design of an electronic comb generator • Mm-wave and sub-mm-wave spectroscopy for biomedical applications
7	Manchester Metropolitan University	Sunday Ekpo	S.Ekpo@mmu.ac.uk	• Multiphysics Characterisation of mmWave 5G/5G+ Transceiver Sensitivity, Linearity and Efficiency; • Wireless RF-Perovskite Energy Harvesting for Passive and Ultra-Low-Energy 5G/Wi-Fi 6/6E/7/Halow Use Cases and Applications; • Regenerative Transponder and Reconfigurable Transceiver Satellite-Cellular Convergence Ecosystem Subsystems Development; • Machine Learning-based Radio Frequency Propagation Modelling • Reconfigurable Holographic Beamforming Metasurfaces for 5G/6G Satellite-Cellular Convergence Applications.
8	Università di Bologna	Alberto Santarelli Corrado Florian Gian Piero Gibiino Alberto Maria Angelotti	alberto.santarelli@unibo.it corrado.florian@unibo.it gianpiero.gibiino@unibo.it alberto.angelotti@unibo.it	• RF/Microwave Device Characterization & Compact Modelling • Hybrid/MMIC RF PA/LNA Design • RF/Microwave Instrumentation and Measurement Techniques • Behavioral Modelling & Digital Predistortion for Power Amplifiers and Beamforming Arrays

9	Chalmers University of Technology	Jan Stake Christian Fager Helena Rodilla Gregor Lasser	jan.stake@chalmers.se christian.fager@chalmers.se rodilla@chalmers.se gregor.lasser@chalmers.se	• Jan Stake: • Terahertz electronics • Christian Fager: • Advanced Wireless Communication Transmitters • Helena Rodilla: • Terahertz technology for life sciences • Gregor Lasser: • Monolithically integrated wideband electronics
10	THALES (The Netherlands)	Winston van Oosterhout	Winston.VANOOSTERHOUT@nl.thalesgroup.com	• Radar system and suite related concepts • Distributed sensor systems • RF front-ends • Algorithms, signal and data processing including e.g. machine learning for classification • Quantum computing
11	University of Glasgow	Mahmoud Wagih	mahmoud.wagih@glasgow.ac.uk	• Rectenna design on sustainable materials • Recyclable and circular microwave components • Liquid metal and polymer-based antennas and RF sensors • 3D many-layered mmWave passive devices and networks

				• Flexible and large-area mmWave-THz metamaterials • RF system-in-package, including mmWave antenna/active systems
12	University of Stuttgart	Ingmar Kallfass	ingmar.kallfass@ilh.uni-stuttgart.de	• D-Band Wideband Low-Power Up-Converter Mixer Design in SiGe HBT Technology • Sub-THz IMD Measurement Evaluation • Load and Source Pull Investigation in mm-Wave Frequency Converting Circuits • Efficient SIW-Rectangular Waveguide Transitions for Hetero-integration in Sub-THz Systems • Design of a detection circuit for monopulse multimode tracking systems • Analysis and Design of Doppler- Compensation techniques for E-Band VLEO Satellite Communication • Design of a Phase Equalizer for 300 GHz Analog Pre-Distortion Circuits • FPGA Programming for a Real-time signal evaluation and correction with Xlinx MPSoC • Longterm Operation of THz-Communication Link
14	Technical University of Denmark (DTU)	Vitaliy Zhurbenko	vz@elektro.dtu.dk	• RF detector coils for MRI
16	University of Birmingham	Yi Wang	y.wang.1@bham.ac.uk c.bartlett@bham.ac.uk	• Yi Wang:

		Chad Bartlett Michail Antoniou	m.antoniou@bham.ac.uk	• Reconfigurable/programmable microwave devices and antennas (e.g. liquid metals, shape morphing structures, phase change materials etc) • Flexible, wearable circuits and antennas • Filters and multiplexers • <u>Chad Bartlett:</u> • RF glass-based devices, including filters, antenna and lenses. • High-frequency feedthroughs, polarizers, and interconnects for space and harsh environments. • High-precision filter devices for >60 GHz applications • <u>Michail Antoniou</u> • Distributed and intelligent radar sensing • Radar-based drone surveillance • Drone-based radar imaging
17	Ruhr University Bochum	Jan Barowski	jan.barowski@rub.de	• Signal Processing in Millimeterwave Radar and Radar Imaging • Antenna Design for Radar Sensors • Joint Communication and Sensing in 6G • Measurement Methods for Mobile Material Characterization

18	AGH University, Krakow, Poland	Jakub Sorocki Ilona Piekarz	jakub.sorocki@agh.edu.pl ilona.piekarz@agh.edu.pl	• Microwave biosensors, methods, and systems • Microwave agrisensors, methods, and systems • Microwave narrow- and broadband sensors and systems • Broadband material characterization techniques • Broadband dielectric spectroscopy sensors, methods, and systems • Additive manufacturing of microwave components • Hybrid fabrication techniques for integration of passive and active microwave components • High-performance passive microwave components
21	Warwick University, UK	Emma MacPherson Abigail Meadows	e.macpherson@warwick.ac.uk A.Meadows@warwick.ac.uk	• Terahertz in vivo imaging • THz spectroscopy of tissue phantoms.
22	University College Cork & Tyndall National Institute, Ireland	Dimitra Psychogiou	DPsychogiou@ucc.ie	• 3D Printed RF filters and antenna subsystems • Inkjet-based additive manufacturing technologies for multi-mode transmission lines and self-packaged RF components • Tuneable RF filters, MMIC RF passive/active components
23	Airbus, Germany	Volker Ziegler	volker.ziegler@airbus.com	• Software-def, radios • 5G/6G comms systems • Wireless power beam • Advanced antennas • RF-System-on-chip

24	Technical University of Munich, Germany	Benjamin Nuss	benjamin.nuss@tum.de	• Near-field effects in angle estimation for large antenna arrays • Antenna array design and direction of arrival estimation for coherent radar networks • High-accuracy range estimation
25	Eindhoven University of Technology, The Netherlands	Ulf Johannsen	U.Johannsen@tue.nl	• Active antenna systems from MHz to THz - Antenna integration (Antenna-in-Package, Antenna-on-Chip) - Antenna-amplifier co-design - Antenna arrays for communication, radar and radio astronomy • Microwave/millimeter-wave (reconfigurable) filters • Over-the-air testing • Computational electromagnetics
26	CNIT RaSS (Radar and Surveillance Systems) National Laboratory	Laura Anitori Amerigo Capria	laura.anitori@cnit.it amerigo.capria@cnit.it	• Electromagnetic Propagation • Antennas and metamaterials (Ago fammi sapere) • Multistatic Radar systems concept and processing • AI applied to radar for target detection and classification • Target tracking • Radar imaging (SAR/ISAR) • Passive radar • Radar for Space Situational Awareness
29	Miguel Hernandez	Germán Torregrosa	gtorregrosa@umh.es	• Microwave imaging systems for medical applications • Additive manufacturing of microwave devices • Microwave sensors for medical and industrial applications

	University of Elche			• Dielectric characterization of materials • Antennas, circuits and systems for telecommunications
30	UNIVERSITE DE RENNES, IETR, INSA-RENNES	María García Vigueras	Maria.Garcia-Vigueras@insa-rennes.fr	• Space RF components from UHF to W-band (feeds, filters, beamforming networks, multiplexers). • Additive manufacturing (3D-printing) of RF components and antennas for industrial applications. • Electronically steered antennas and active beamforming. • Antennas for airborne platforms. • Full-metal 3D surfaces for space applications. • Innovation in pedagogy: connecting research with RF undergraduate students.
31	University of Bristol	Xiaoqiang (Sean) Gu	sean.gu@bristol.ac.uk	• Resilient RF front-end design • Backscattering technologies • Software Defined Radio for RF transceivers • AI/ML for RF design • Wireless power transfer/harvesting
32	Politecnico di Torino (Italy)	David Rodriguez-Duarte	david.rodriguez@polito.it	• Applied Microwave imaging and sensing. • Microwave near-field Antennas/sensors for biomedical and agritech applications. • Preclinical and clinical feasibility testing of a microwave-based device. • Multi-physical and multi-domain inversion imaging. • Dielectric characterization of materials. • Augmented imaging using physics-assisted machine learning algorithms • Design of custom RF front end. • Projection and realization of EM mimicking phantoms. • High-fidelity EM modelling.

				• Physics-assisted machine learning algorithms. • Imagining kernel calibration techniques. • Functional Microwave Biomedical Imaging.
33	Maxwell Applied Technologies (Televes Corporation), Spain	Ana Peláez	apelaez@maxwell.team	• Phased array antennas for SATCOM • MMIC front-ends in III-V technologies • Advanced Antenna in Package and System in Package modules • Power Amplifier modules • Low Noise Amplifier modules
34	University of Alcalá (UAH), Spain	Roberto Gómez-García Mohamed Malki	roberto.gomezg@uah.es m.malki@uah.es	• RF Filters and Multiplexers • Reconfigurable RF Devices • Multi-Functional RF Circuits • Emerging Technologies for RF Passive Circuit Design
35	KTH Royal Institute of Technology, Sweden	Oscar Quevedo-Teruel	oscarqt@kth.se	• Lens antennas • Periodic structures • Physical optics • Multimodal analysis
36	German Aerospace Center (DLR)	Divya Jayasankar Michael Gensch	divya.jayasankar@dlr.de Michael.Gensch@dlr.de	• Terahertz Schottky mixer measurements • Characterization of 3-5 THz Quantum-cascade lasers