Host Institutions & Topics of Interest

Candidates will select their desired host Institution and corresponding topic of interest from the list provided below. A minimum of 2 hosts in a ranked order should be selected.

#	Host institution	Point of contact	Topics
1	TNO the Netherlands	Mario Coutiño	• Foldable Reflectarray for small cubesat applications • Compact Filters for Phased Arrays • Frequency Selective Surfaces (FSS) for high power radar applications • Integrated radome for lens antenna array systems • On-Chip RF Transformer Design Macro • Algorithm Development for Detect-and-Avoid Radar • Applying deep learning to time series of radar data • Exploiting attention to streamline the training of deep neural networks applied to radar data • Training of deep neural networks using radar measurements made with varying waveform settings • Recurrent deep learning applied to radar data • Target-matched radar waveforms • PARSAX Radar for Space Monitoring
2	IEMN Lille France	Kamel Haddadi Tahsin Akalin	Kamel Haddadi: • AI-driven nanorobotics and automated on-wafer probing station • Dielectric spectroscopy of food materials based on open-ended coaxial probe • Near-field scanning microwave microscopy in liquid • CW Microwave radar for hearth / respiratory rates monitoring using six-port technology • Microwave coaxial, free-space and guided set-ups for electromagnetic shielding based on 2-D materials

			• 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

3	XLIM France	Denis Barataud	• Reconfigurable antennas, antennas array and radar systems (additional contact: cyril.decroze@xlim.fr) • RF receivers and front-ends (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 (additional contact: aurelian.crunteanu@xlim.fr)) • Thermal modeling and measurements of active devices and circuits (additional contact: raphael.sommet@xlim.fr)

4	University of Pavia Italy	Luca Perregrini Maurizio Bozzi	• 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-Institute (FBH) Germany	Wolfgang Heinrich	• Electromagnetic Simulation • Microwave Power Amplifiers: Digital Transmitters • 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) • Radar measurements with drones • THz scanner conveyor belt measurements • Design of an electronic comb generator
6	Fraunhofer FHR Germany	Anna Bischof	• Radar Signal Processing for Space Surveillance • Detection of Space Objects & Parameter Estimation • Radar System Concepts and Signal Processing • Radar Imaging and 3D Imaging • Waveform Design with Artificial Intelligence • Forward Scattering Radar

			• Multi-function sensors and distributed radars • Gap-Waveguide Antennas • Propagation effects • Industrial imaging radars • Integrated Circuit Design (SiGe, CMOS) • Embedded Systems Design using FPGA
7	Manchester Metropolitan University UK	Sunday Ekpo	• 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; and • Reconfigurable Holographic Beamforming Metasurfaces for 5G/6G Satellite-Cellular Convergence Applications.
8	Università di Bologna Italy	Alessandra Costanzo Alberto Santarelli	Alessandra Costanzo: • Active mmwave antenna design for wireless power transfer in the field of next generation wearable systems. • Techniques for EM characterization of human tissues in the mmwave • Smart beaming of antenna array in the mmwave exployting SDR (software defined radio) and time-variable solutions • Exploitation of new devices and materials for THz energy harvesting

			• Wireless systems for intelligent transportation Alberto Santarelli: • RF/Microwave Device Characterization & Compact Modelling • Hybrid/MMIC RF PA/LNA Design • RF/Microwave Instrumentation and Measurement Techniques • Behavioural Modelling & Digital Predistortion for Power Amplifiers and Beamforming Arrays
9	Chalmers University of Technology Sweden	Jan Stake Christian Fager	Jan Stake: • Terahertz electronics Christian Fager: • Advanced Wireless Communication Transmitters
10	THALES the Netherlands	Winston van Oosterhout	• Radar system and suite related concepts • Distributed sensor systems • RF front-ends • Algorithms • Signal and data processing including e.g. machine learning for classification
11	University of Glasgow UK	Chong Li Mahmoud Wagih	Chong Li: • Characterisation and modelling InP transistors operating over 100 GHz • Design and characterisation of mm-wave metasurfaces • Noise evaluation of GaN transistors Mahmoud Wagih:

			• Long-range and high-datarate backscatter modulators • Large-area wearable metasurfaces • Sub-THz antennas and transmission lines on high-permittivity III-V substrates • Rectenna design for joint power harvesting and sensing • Wearable and implantable antenna co-design
12	University of Stuttgart Germany	Ingmar Kallfass	• Design and Fabrication of Collimating Lenses for Wireless THz Communication Links • Fast analog loop filter stacked with digitally implemented tracking for a wideband PLL • High Bandwidth Backhauling in THz-Spectrum • Power and Envelope Detector Design for 300 GHz Power Amplifier Pre-Distortion in THz Communication Transceivers
13	Maynooth University, Ireland	John Dooley	• Power Amplifier Behavioural Modelling and Digital Predistortion • AI/ML for Wireless Communications Systems and Networks • Software Defined Radios for 5G (FR1 & FR2) – FPGA, Mixed Signal, RF Frontends • RF/Microwave OTA Instrumentation and Measurement Techniques for mmWave 5G • Hybrid RF/Optical Wireless Communications • Quantum Communications and Networking
14	Technical University of Denmark (DTU)	Vitaliy Zhurbenko	• RF detector coils for MRI

15	RF Microtech Italy	Elisa Fratticcioli	• Components for Small/Nano satellites • Reconfigurable components for Satcom and/or Space applications
16	University of Birmingham	Yi Wang	• Reconfigurable or programmable microwave devices (e.g. liquid metal based) • Mm-wave and sub-THz filters (e.g. V/W band and above) • Cryogenic microwave circuits for quantum engineering
17	Ruhr University Bochum Germany	Jan Barowski	• 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 of Krakow Poland	Jakub Sorocki Ilona Piekarz	• microwave biosensors, 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
19	Filtronic UK	Tudor Williams	• Analog linearisation for high power. High linearity amplifiers

			• High Q tuneable filters • High power high efficiency power amplifiers
20	Ben-Gurion University of the Negev Israel	Igal Bilik	• Design and Electromagnetic simulation of the high-frequency TEM cell for investigation of EM exposure effects on red blood cells. • Electromagnet Simulation of the in-vehicle propagation multipath conditions for UWB radar-based vital signs estimation. • Electromagnetic simulation of the driver activities and breathing within moving vehicle in a presence of vehicle vibrations. • Electromagnetic simulation of the non-line of sight propagation conditions in urban environments
21	Warwick University UK	Emma MacPherson	• THz metrology • THz in vivo imaging
22	University College Cork & Tyndall National Institute Ireland	Dimitra Psychogiou	• 3D Printed RF filters and antenna subsystems • Tuneable RF filters, MMIC RF passive/active components • Acoustic filters • Antenna front-end components for full-duplex systems
23	Airbus Germany	Volker Ziegler	• Software-def, radios • 5G/6G comms systems • Wireless power beam • Advanced antennas • RF-System-on-chip