

School Program



The 42nd Edition of the Distributed Doctoral School on Metamaterials will be held in virtual mode on March 8-12, 2021 in Rome, Italy. The School is part of the Distributed School on Metamaterials run by [EUPROMETA](#), the Education Department of the [METAMORPHOSE VI](#).

The lectures will be given online.

Monday, 8th March 2021

Time	Title of the Lecture	Lecturer
8:30	Opening Ceremony	
9:00-10:00	Metasurfaces 3.0: a Key Enabling Technology for the Development of beyond-5G Communication Systems	Prof. Filiberto Bilotti RomaTre University, Italy
10:00-11:00	A new generation of intelligent surface-wave based metasurface antennas	Prof. Stefano Maci University of Siena, Italy
11:00-11:30	Coffee Break	
11:30-12:30	Signal processing metasurfaces and antenna systems	Dr. Davide Ramaccia RomeTre University, Italy
12:30-14:00	Lunch	
14:00-15:00	Wavefront shaping in the RF domain with tunable metasurfaces: from the concepts to the startup– Part I	Dr. Geoffroy Lerosey Greenerwave, France
15:00-16:00	Wavefront shaping in the RF domain with tunable metasurfaces: from the concepts to the startup– Part II	Dr. Geoffroy Lerosey Greenerwave, France

Tuesday, 9th March 2021

Time	Title of the Lecture	Lecturer
9:00-10:00	Wave Control for Wireless Communications: From Time-Reversal to Reconfigurable Intelligent Metasurfaces	Prof. Mathias Fink ESPCI, France
10:00-11:00	Glide symmetries for millimeter-wave metasurfaces – Part 1	Prof. Oscar Quevedo-Teruel KTH, Sweden
11:00-11:30	Coffee Break	
11:30-12:30	Glide symmetries for millimeter-wave metasurfaces – Part 2	Prof. Oscar Quevedo-Teruel KTH, Sweden
12:30-14:00	Lunch	
14:00-15:00	Information metasurfaces and their applications	Prof. Tie Jun Cui Southeast University Nanjing, China
15:00-16:00	Reconfigurable Intelligent Metasurfaces	Prof. Andrea Alù ASRC/CUNY New York, USA

Wednesday, 10th March 2021

Time	Title of the Lecture	Lecturer
9:00-10:00	Massive MIMO and MTS: a new communications paradigm for beyond 5G systems	Prof. Andrea Abrardo University of Siena, Italy
10:00-11:00	Some perspectives on space-time coding digital metasurfaces	Prof. Vincenzo Galdi University of Sannio, Italy
11:00-11:30	Coffee Break	
11:30-12:30	Metasurfaces-enabled Holographic MIMO communications	Prof. Luca Sanguinetti University of Pisa, Italy
12:30-14:00	Lunch	
14:00-15:00	Holographic radio using intelligent surfaces (Moved to Friday 12 th March 2021 at 3:00 PM)	Prof. Davide Dardari University of Bologna, Italy
15:00-16:00	Metasurfaces for over-the-air security	Prof. Stefano Tomasin University of Padova, Italy

Thursday, 11th March 2021

Time	Title of the Lecture	Lecturer
9:00-10:00	On the Key Role of a Smart Electromagnetic Environment for Future Wireless Communications - Solutions and Perspectives	Prof. Paolo Rocca Eledia Research Center, University of Trento, Italy
10:00-11:00	Material-by-Design and AI for Advanced Metasurfaces and Field Manipulation Device Design	Prof. Giacomo Oliveri Eledia Research Center, University of Trento, Italy
11:00-11:30	Coffee Break	
11:30-12:30	Synthesizing unconventional sources for future communications systems through inverse scattering theory and system-by-design	Dr. Marco Salucci Eledia Research Center, University of Trento, Italy
12:30-14:00	Lunch	
14:00-15:00	Scattering from a finite size anomalous mirror	Prof. Sergei Tretyakov Aalto University, Finland
15:00-16:00	Reconfigurable Intelligent Surfaces - Where Wireless, Electromagnetics, and Metamaterials Meet	Prof. Marco Di Renzo CNRS, France

Friday, 12th March 2021

Time	Title of the Lecture	Lecturer
9:00-10:00	mm-wave Antennas – Main Requirements and Technologies	Dr. Claudio Massagrande HUAWEI Technologies, Italy
10:00-11:00	Systems and Technologies for 5G and Beyond mm-Wave Wireless Networks	Dr. Roberto Flamini HUAWEI Technologies, Italy
11:00-11:30	Coffee Break	
11:30-12:30	Reconfigurable Intelligent Surfaces - a wave chaos approach for modelling smart radio environments	Dr. Gabriele Gradoni Nottingham University, UK
12:30-14:00	Lunch	
14:00-15:00	Control of reflection and surface wave-to-leaky wave conversion using periodic metasurfaces: models and design approaches	Prof. Enrica Martini University of Siena, Italy
15:00-16:00	Holographic radio using intelligent surfaces	Prof. Davide Dardari University of Bologna, Italy
16:00-16:30	Closing Ceremony	