



COST ACTION CA18223

SYMAT

FUTURE COMMUNICATIONS WITH
HIGHER-SYMMETRIC ENGINEERED
ARTIFICIAL MATERIALS



cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

Report of SyMat (CA18223) COST Action Activities November 2019 – September 2020

Main Chair: Prof. Guido VALERIO

Scientific Meeting and MC meeting in Prague, Czech Republic 12-14 February 2020

The first scientific meeting and the second MC meeting (after the kickoff one in Brussels) took place in Prague, Czech Republic, organized by Prof. Jan Krazek and his team at CVTU. The minutes of the MC meeting and the ten presentations of the scientific meeting are available in the reserved area of the SyMat website.

Convened Session at EuCAP 2020

Despite going fully on-line, SyMat maintained the convened session organized at EuCAP. Chairmen of the sessions were Prof. Francisco Mesa (University of Seville, Spain), Prof. Guido Valerio (Sorbonne Université, France), and Prof. Pablo Padilla (University of Granada, Spain).

The twelve papers submitted and presented at the session are available in the reserved area of the SyMat website.

Best Paper in Electromagnetics at EuCAP 2020

A paper on glide-symmetric lenses of SyMat participants won the best paper award in the category “Electromagnetics” at EuCAP 2020: <https://www.eucap2020.org/awards/eucap-best-paper-awards-and-best-student-paper-awards-winners>.

‘Elliptical Glide-Symmetric Holey Metasurfaces for Wideband Anisotropy’, A. Alex-Amor (Technical University of Madrid, Spain), F. Ghasemifard (KTH Royal Institute of Technology, Sweden), G. Valerio (Sorbonne Université, France), Pablo Padilla (Technical University of Madrid, Spain), J. M. Fernandez-Gonzalez (Technical University of Madrid, Spain), O. Quevedo-Teruel (KTH Royal Institute of Technology, Sweden), in *Proc. EuCAP 2020*, Copenhagen, Denmark, 15-20 March 2020.



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On-Line Scientific Meeting, Seville, Spain

23 September 2020

A second scientific meeting was organized on-line and chaired by Prof. Francisco Mesa (University of Seville, Spain). The presentations of the meeting are available in the reserved area of the website.

STSM November 2019 – September 2020

Due to the pandemic, only one STSM could take place in the period until September 2020:

Dr. Francisco Javier Rivero Campos, Politecnico di Torino, visiting Prof. Guido Valerio (Sorbonne Université), 01/02/2020 to 29/02/2020

Title: "Computation of Periodic Green's Functions in Higher-Symmetric Materials Using Method of Moments".

Results of the STSM have been submitted as a conference paper to the SyMat convened session organized at next EuCAP 2021 and will be presented there.

Journal Papers November 2019 – September 2020

O. Zetterstrom, G. Valerio, F. Mesa, F. Ghasemifard, M. Norgren, and O. Quevedo-Teruel, "Dispersion Analysis of Periodically Loaded Transmission Lines with Twist Symmetry Using the Mode-Matching Technique," *App. Sci.*, 10, 5990, Aug. 2020. doi:10.3390/app10175990

A. D'Arco V. Mussi, S. Petrov, S. Tofani, M. Petrarca, R. Beccherelli, D. Dimitrov, V. Marinova, S. Lupi, and D. C. Zografopoulos, "Fabrication and spectroscopic characterization of graphene transparent electrodes on flexible cyclo-olefin substrates for terahertz electro-optic applications," *Nanotechnology* 31, 364006, Jun. 2020. doi:10.1088/1361-6528/ab96e6