



COST ACTION CA18223

SYMAT

FUTURE COMMUNICATIONS WITH
HIGHER-SYMMETRIC ENGINEERED
ARTIFICIAL MATERIALS



Report of SyMat (CA18223) COST Action Activities November 2021 – October 2022

Main Chair: Prof. Guido VALERIO

Convened Sessions and Booth at EuCAP 2022, Madrid, Spain

SyMat organized two convened sessions at EuCAP. Chairwomen of a nine-paper sessions were Prof. Eva Rajo-Iglesias (University Carlos III of Madrid, Spain) and Prof. Francesca Vipiana (Politechnic of Turin, Italy). Chairmen of a six-paper session were Prof. Francisco Mesa (University of Seville, Spain) and Prof. Guido Valerio (Sorbonne University, France).

The 15 papers submitted and presented at the session are available in the reserved area of the SyMat website.

A dissemination booth was also organized and managed by Mr. Boris Ficher (Sorbonne University, France), Ms. Pilar Castillo-Tapia and Mr. Oskar Zetterstorm (KTH, Sweden).

Scientific and MC meeting, Granada, Spain

21-22 April 2022

A scientific meeting and an MC meeting took place in Granada, Spain, organized by Prof. Pablo Padilla (University of Granada, Spain). The minutes of the MC meeting and the presentations of the scientific meeting are available in the reserved area of the SyMat website.

Scientific and MC meeting, La Valletta, Malta

1-2 September 2022

A scientific meeting and an MC meeting took place in La Valletta, Malte, organized by Prof. Kristian Zarb Adami (University of Malta, Malta). The minutes of the MC meeting and the presentations of the scientific meeting are available in the reserved area of the SyMat website.



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Invited paper and Booth at METAMATERIAL 2022, Siena, Italy

12-17 September 2022

SyMat organized again a booth at the METAMATERIAL conference managed by Prof. Guido Valerio (Sorbonne University, France) and Prof. Oscar Quevedo-Teruel (KTH, Sweden).

Prof. Valerio gave an invited paper on “Understanding Glide Symmetry by Modelling Strongly Coupled Metasurfaces”, September 15 at 11:30.

Grants November 2021 – October 2022

5 STSM took place in the period between November 2021 and October 2022.

1. Prof. Adam Narbudowicz (Budapest University of Technology and Economics, Hungary) visited Dr. Mauro Ettore (CNRS, France), 14/02/2022 to 19/02/2022.
Title: “Higher-symmetries for PHY-layer security in near-field communication”.
2. Mr. Davide Comite (Sapienza University, Italy) visited Prof. Guido Valerio (Sorbonne University, France), 23/06/2022 to 07/07/2022.
Title: “Planar-lens leaky-wave antenna in glide technology”.
3. Ms. Iram Nadeem (University of Siena, Italy) visited Prof. Eva Rajo-Iglesias (University Carlos III de Madrid, Spain), 21/04/2022 to 31/08/2022.
Title: “Parity Time-reversal duality (PTD) symmetric Gap-Waveguide type transmission lines”.
4. Mr. Jose Rico (University of Oviedo, Spain) visited Prof. Oscar Quevedo Teruel (KTH, Sweden), 01/04/2022 to 30/06/2022.
Title: “Design of lens antennas using higher symmetries (Glide Symmetry) combined with Additive Manufacturing”.
5. Mr. Miguel Angel Balmaseda Marquez (University Carlos III de Madrid, Spain) visited Prof. Guido Valerio (Sorbonne University, France), 29/05/2022 to 04/06/2022.
Title: “Mode-matching technique for circuit model extraction in higher-symmetric all-metal 3D structures”.

2 ITC Grant were given in the period between November 2021 and October 2022.

1. Mr. Asif Bilal (University of Cyprus, Cyprus) attended the 52nd European Microwave Conference 2022 (Italy), 25/09/2022 to 30/09/2022.
Paper presented: “Dynamically Reconfigurable Broadband SP3T Switch Powered by WPT for Antenna Switching Applications”.
2. Mr. Sulayman Joof (Istanbul Technical University, Turkey) attended the 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (US), 10/07/2022 to 15/07/2022.
Paper presented: “Analysis of Calibration Procedure for Open-Ended Coaxial Probe”.