I-PHOQS Doctoral School Week on "Extreme Plasmonics and Optical Metamaterials"

May 20-24 2024

We are happy to inform you of the upcoming I-PHOQS Doctoral School Week on "Extreme Plasmonics and Optical Metamaterials" which will be open to all PhD students enrolled in Programmes within the I-PHOQS Network. The aim of the school will be to improve not only these young researchers' knowledge in the field of Plasmonics, but also their "science communication" skills.

To start, as shown in Table 1, the I-PHOQS Doctoral School Week has invited a series of experts to provide in-depth discussions and updates on various topics, starting with the latest advances in optics of nanostructured materials and their applications, with special attention to metamaterials, to the most advanced optical nanofabrication techniques, to state-of-the-art techniques in X-Ray Tomography, to the impact that Artificial Intelligence might have on scientific activities. These lectures will be organized in the first half of the morning (Table 2) while the second part of the morning will be dedicated to the analysis of case studies and publications on the same topics. In addition to these lessons and case-study workshops, half of the time throughout the week will be devoted to developing students' skills in "cross-contaminating, networking and science-communication". These afternoon sessions will help students appreciate the importance of networking and the potential of "cross-contamination" for basic research. Students will also present preliminary results from their own research and receive feedback for improving their science-communication skills.

The I-PHOQS Doctoral School Week will take place from 20 to 24 May 2024 at the CNR Institute of Nanotechnology in the University of Calabria Campus in Rende (CS).

- Participation in the school will be free for students from I-PHOQS Network Institutions as well as lunches and social events.

- Note, however, that participants will need to cover their own expenses related to travel, dinners and accommodation.

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Table 1. Topics of the I-PHOQS Doctoral School & Respective Lecturers	
TOPIC	**Lecturers**
Plasmon Nanoparticles	Dr. Loredana Ricciardi Prof. Massimo La Deda
X-Ray Tomography	Prof. Alberto Bravin Dr. Alessia Cedola Prof. Vincenzo Formoso
Artificial Intelligence & Optics	Dr. Eugenio Vocaturo
Metamaterials and Metasurfaces	Prof. Costantino De Angelis Prof. Antonio De Luca Prof. Giuseppe Strangi
Optical Anisotropy	Prof. Lorenzo Marrucci Dr. Bruno Zappone Prof. Maria Penelope De Santo
Nano-Micro Fabrication	Dr. Antonio Ferraro Dr. Jacques Leng
Scientific Communication Laboratory	Prof. Teresa Ting

TABLE 2. Schedule (subject to slight modifications)

Time	Monday 20th	Tuesday 21st	Wednesday 22 th	Thursday 23 th	Friday 24 th
8.30-9.00	Registration				
9:00-11:00	Plasmon Nanoparticles **(Prof. M. La Deda)**	Visit to "Beyond Nano & Star" laboratories	Metamaterials and Metasurfaces **(Prof. C. De Angelis)**	Optical Anisotropy and Singularities **(Prof. L. Marrucci)**	Nano-Micro Fabrication **(Dr. Leng)** **(Dr. Ferraro)**
11:00-11:30	Break	Break	Break	Break	Break
11:30-13:30	Applications **(Dr. L. Ricciardi)**	Applications **(Dr. F.Palermo)** **(Prof. V. Formoso)**	Applications **(Prof. G. Strangi)** **(Prof. A. De Luca)**	Applications **(Prof. M.P. De Santo)** **(Dr. B. Zappone)**	Artificial Intelligence & Optics **(Dr. E. Vocaturo)**
13:30-15:00	Lunch	Lunch	Lunch	Lunch	Closing Remarks and Lunch
15:00-18:00	Scientific Communication Laboratory **(Dr. T. Ting)**	Scientific Communication Laboratory **(Dr. T. Ting)**	X Ray Tomography **(Prof. A. Bravin)**	Scientific Communication Laboratory **(Dr. T. Ting)**	
18:00-19:00	Ice Breaking Aperitif	Ice Breaking Aperitif	Cultural Trip in Cosenza and Dinner	Ice Breaking Aperitif	