

MSCA PF 2022 @UniGe

Supervisor Expression of Interest

**MSCA domain
Physics (PHY)**

- 1. Paolo Canepa**
- 2. Diego Colombara**
- 3. Davide Comoretto**

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Supervisor Expression of Interest

1.

First Name	Paolo
Last Name	Canepa
Orcid ID	0000-0002-2205-286X
Other information	https://rubrica.unige.it/personale/VopBUlgv
MSCA domain	Physics (PHY)
Research focus area	1) Metal-based biomaterials development for osteointegration improvement and antimicrobial capabilities 2) Macromolecule/surface interaction studies for ecological smart packaging development 3) DNA-based biosensors development, with particular interests in low Limit of Detection improvement for disease biomarkers
Department	Physics Department
Short description of the department/laboratory/research group	<p>The physics department of Genova has been selected as one of the 180 best Department of State Universities (in the 2018-2022 five-years period) with strong financial support.</p> <p>The Biophysics research group is composed of 4 professors, 3 researchers, 1 technician, and some postdoctoral/Ph.D. students, with cultural backgrounds mainly in physics but also in chemistry, material science, and biology.</p> <p>In the laboratory, we have Atomic Force Microscopy (in particular a JPK Nanowizard IV with QI working mode, particularly suitable for studies on cells/soft materials), confocal fluorescence and Stimulated Emission Depletion (STED) microscopy (with the possibility of correlation with the JPK AFM), spectrofluorimetry, spectrophotometry, dynamic light scattering. We also</p>



	have full access to X-ray Photoemission Spectroscopy, Spectroscopic ellipsometry, and availability of Field-Emission Scanning Electron Microscopy and Fourier-Transform Infra-Red spectroscopy.
Candidate fellows must send their candidature with a short description of their profile to the following email address	paolocanepa@unige.it

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2.

First Name	Diego
Last Name	Colombara
Orcid ID	0000-0002-8306-0994
Other information	https://rubrica.unige.it/personale/UkNEWFgr
MSCA domain	Physics (PHY)
Research focus area	Chalcogenide semiconductors for photovoltaic applications
Department	Chemistry and Industrial Chemistry
Short description of the department/laboratory/research group	Particular interest is devoted to chalcogenide semiconductors for photovoltaic applications, from fundamental to industrial perspectives. This research line encompasses both thermodynamics and kinetics (synthesis, phase stability and compatibility, solid-gas equilibria), as they relate to point defects and device performance, with a special emphasis on extrinsic doping and associated solid state diffusion phenomena. Synthetic and characterization techniques include: thin film electroplating, reactive annealing, chemical vapour transport, liquid ammonia handling and electrochemical photocurrent spectroscopy. Collaborations includes: University of Bath, University of Luxembourg, Luxembourg Institute of Science and Technology, Max-Planck Institut fuer Eisenforschung, University of Versailles, International Iberian Nanotechnology Laboratory and National Renewable Energy Laboratory.
Candidate fellows must send their candidature with a short description of their profile to the following email address	diego.colombara@unige.it

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3.

First Name	Davide
Last Name	Comoretto
Orcid ID	0000-0002-2168-2851
Other information	https://rubrica.unige.it/personale/VUZEU1u
MSCA domain	Physics (PHY)
Research focus area	Organic and Hybrid Photonics. Photonic Crystals applications
Department	Department of Chemistry and Industrial Chemistry - DCCI
Short description of the department/laboratory/research group	RELY-PHOTONICS is a research team of Academics, Post-docs and Students working at the University of Genova and headed by Prof. Davide Comoretto. The group has a long history into research on design and fabrication of functional solution processed photonic crystals and spectroscopy. The main topics are related to fluorescence control, sensing, thermal shielding, engineering and fabrication of metamaterials as well as light harvesting enhancement in photovoltaics and Photocatalysis.
Candidate fellows must send their candidature with a short description of their profile to the following email address	davide.comoretto@unige.it