

# International School on Bio hybrid interfaces, organic bio electronics and bio photonics

Lake Como School of Advanced Studies, September 5-9, 2022

[Home](#)

[Program](#)

[Speakers](#)

[Application](#)

[Venue and accommodation](#)

[Contact us](#)



## Home

The school aims to develop a solid background in materials and devices for the biotic-abiotic interface, which finds application in several technology platforms such as the human-device interfacing, prosthesis, hybrid robotic, neuroscience and medicine. The lectures have tutorial character, with an introduction suitable to newcomers, but also show recent achievements. Goal is to create a fertile environment where speakers and attendees have plenty of time and opportunities for debating and exchange of ideas. The suitable audience involves students and early stage researchers of different fields such as, chemistry, biology, material science and physics. The program concerns: i) the interface between materials and living cells/tissues, ii) the physics ruling the interface which ultimately underpin stimulation, enhancement and rescuing of biological functions and iii) relevant application for bio-electronic and bio-photonic.

Thus, the lectures will be organized in the above mentioned main topics:

- Materials: the toolbox for biological stimulation;
- Biology and biophysics at the abiotic/biotic interface;
- Real-life applications.

### School directors

- Prof. Guglielmo Lanzani, Director Department of Physics, Politecnico di Milano CNST-iit
- Prof. Róisín Owens, Director Department of Chemical Engineering and Biotechnology, University of Cambridge
- Dr. Giuseppe M. Paternò CNST-iit Milano
- Dr. Vito Vurro CNST iit Milano



# International School on Bio hybrid interfaces, organic bio electronics and bio photonics

Lake Como School of Advanced Studies, September 5-9, 2022

[Home](#)

[Program](#)

[Speakers](#)

[Application](#)

[Venue and accommodation](#)

[Contact us](#)



## Program

Times	05 Settembre	06 Settembre	7 Settembre	8 Settembre	9 Settembre
9-11AM	Arrival	prof. Bertarelli	prof. Farinola	prof. Fruk	Bio-Printing Tutorial
11-11.30		Break			FINAL REMARKS 12-12.30
11.30-12.30		prof. D'Andrea	prof. Munehiro	prof. Gorostiza	
12.30-14.30		Lunch			
14.30-16.30	prof. Salleo	prof. Parker	prof. Fraboni	POSTER SESSION	Departure
16.30-17	Break				
17-18	prof. Stavrinidou	Dr. Antognazza	prof. Payne	Free Afternoon	
				Social Dinner (TBC with funding)	

Speaker	Title
prof. Salleo	"Mixed conductors based on conjugated polymers: fundamental mechanisms and application in devices"
prof. Stavrinidou	"Plant bioelectronics and biohybrids"
prof. Fruk	"From Sustainable Manufacturing to Drug Delivery and Diagnostics: Bio-Nano Tools in Action"
prof. D'Andrea	"Time-resolved diffuse optical tomography and spectroscopy of biological tissue"
prof. Parker	TBA
Dr. Antognazza	"Photoelectrochemical processes at hybrid bio-polymer interface: an intriguing play of light and shadow"
prof. Fraboni	"Organic/hybrid semiconductors as high energy photon detectors for medical diagnostics and therapy"
prof. Asally	"Electrical and optical modulations of microbial membrane potential"
prof. Farinola	"Photonics and Electronics with photosynthetic microorganisms"
prof. Payne	"Understanding and utilizing the resting membrane potential of bacteria."
prof. Bertarelli	"Photoactive scaffolds and photoswitches: from design to biomedical applications"
prof. Gorostiza	"Photocontrol of neuronal activity: from single cells to brain waves"





# International School on Bio hybrid interfaces, organic bio electronics and bio photonics

Lake Como School of Advanced Studies, September 5-9, 2022

[Home](#)[Program](#)[Speakers](#)[Application](#)[Venue and accommodation](#)[Contact us](#)

## Speakers

- Kevin K. Parker – Harvard University, Boston, USA
- Munehiro Asally – University of Warwick, UK
- Ljiljana Fruk – University of Cambridge, UK
- Pau Gorostiza – Institute for Bioengineering of Catalonia-BIST-ICREA-CIBER
- Beatrice Fraboni – University of Bologna, IT
- Eleni Stavrinidou – Linköping University, SE
- Gianluca Farinola – University of Bari, IT
- Christine K. Payne – Duke University, USA
- Alberto Salleo – Stanford University, USA
- Chiara Bertarelli – Politecnico di Milano, IT
- Cosimo D'Andrea – Politecnico di Milano, IT
- Maria Rosa Antognazza – Italian Institute of Technology, IT

