

# Plan 19 September

## Guest Event I

### PHYSICS FOR SUSTAINABLE DEVELOPMENT

Chair: Guglielmo FORTUNATO, *IUPAP Italian delegate & CNR-IMM*  
Co-organized with CNR-IMM, IUPAP, IYBSSD 2022



#### Welcome Greetings

09:00 -09:30

Guglielmo FORTUNATO, *Italian delegate, IUPAP & CNR-IMM*  
Michel SPIRO, *President, IUPAP*  
Stefano FANTONI, *General Secretary for Administrative Affairs, IUPAP*

#### ENERGY

Chair: Guglielmo FORTUNATO, *Italian delegate, IUPAP & CNR-IMM*

09:30 -10:00

Aldo DI CARLO, *CNR-ISM & University of Rome "Tor Vergata", Italy*  
**Halide Perovskite Photovoltaics**

10:00 -10:30

Stefania PRIVITERA, *CNR-IMM, Italy*  
**Green Solar Fuels: Hydrogen and Ammonia**

10:30 -11:00

Daniela FARINA, *CNR-ISTP, Italy*  
**Status and perspectives of controlled thermonuclear fusion research**

#### CLIMATE CHANGE AND NATURAL HAZARDS

Chair: Pietro UBERTINI, *INAF, Rome*

11:30 -12:00

Angelo VULPIANI, *Sapienza University of Rome, Italy*  
**The Climate as Problem in Theoretical Physics**

12:00 -12:30

Simona BORDONI, *University of Trento, Italy*  
**Future projections of regional climate change: challenges and perspectives**

12:30 -13:00

Roberto BATTISTON, *University of Trento, Italy*  
**Satellite constellations observatories for geohazards monitoring and early warning applications**

#### MICROELECTRONICS, PHOTONICS AND INFORMATION TECHNOLOGIES

Chairs: Raffaella CALARCO, *CNR-IMM, Rome* & Matteo CIRILLO, *University of Rome Tor Vergata, Rome*

14:00 -14:30

Fabrizio ROCCAFORTE, *CNR-IMM, Italy*  
**Sustainability with energy efficient wide band gap semiconductors power devices**

14:30 -15:00

Valeria BRAGAGLIA, *IBM Research Europe-Zurich, Switzerland*  
**Brain Inspired Computing for the post Von-Neumann Era**

15:00 -15:30

Oleg MUKHANOV, *SEEQC, USA*  
**Highly Energy-Efficient Superconducting Quantum and Classical Information Processing**

15:30 -16:00

Hugo THIENPONT, *Vrije University Brussel, Belgium*  
**Photonics as a Sustainable technology and the Innovation Perspectives Offered by PhotonHub and ACTPHAST4R for Researchers and Enterprises**

#### NEW MATERIALS FOR SUSTAINABLE DEVELOPMENT

Chair: Elisabetta AGOSTINELLI, *CNR-ISM, Rome*

16:30 -17:00

Oliver GUTFLEISCH, *TU Darmstadt, Germany*  
**The Energy transition is a material transition**

17:00 -17:30

Federico ROSEI, *INRS, Canada*  
**Sustainable Development: A contradiction in terms?**

17:30 -18:00

Giuliana IMPELLIZZERI, *CNR-IMM, Italy*  
**Selective removal of pharmaceuticals from water by nanomaterials for a sustainable development**

**Nano** Rome, 19-23 September  
**2022 Innovation**  
Conference & Exhibition

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