



# PHD SCHOOL IN PHYSICS, ASTROPHYSICS AND APPLIED PHYSICS

The 1<sup>st</sup> year students workshop of our PhD School  
will take place on 7<sup>th</sup> and 8<sup>th</sup> October 2021 using ZOOM  
<https://zoom.us/my/aula.dottorato>

## 7 OCTOBER

- 09:00 Welcome (M. Paris)**  
*Chairperson: Marco Gherardi*
- 09:10** Simone Rota: Infrared Dualities in 3d Supersymmetric Chern-Simons-Matter Theories.
- 09:30** Simone Ceppi: Differential accretion in hierarchical triple systems.
- 09:50** Alessia Segati: Black holes microstates counting from exact supersymmetry.
- 10:10** Cristiano Longarini: Kinematics and dynamics of self-gravitating protostellar discs.
- 10:30** Pietro Curone: Planet formation around very low mass stars.
- 10:50 Break**  
*Chairperson: Francesca Baletto*
- 11:20** Christian Apostoli: Unitary quantum dynamics on classical computers.
- 11:40** Pietro Carrara: Ferromagnetic Resonance in Nickel thin films driven by optically-excited Surface Acoustic Waves in a Transient Grating setup.
- 12:00** Massimo Frigerio: Generalized quantum-to-classical correspondence for continuous-time random walks and its applications.
- 12:20** Eleonora Pasino: Interferometry with antiprotons.

## 8 OCTOBER

- 09:00 Chairperson: Carlo Barbieri**
- 09:10** Marina Silvia Cagliari: Image extraction of the cosmological parameters with convolutional neural networks.
- 09:30** Giovanni Granata: Using strong lensing by galaxy clusters to test the Standard Cosmological Model.
- 09:50** Giacomo Colombi: Nuclear structure studies at the FIPPS instrument at ILL.
- 10:10** Francesco Marino: Nuclear energy density functionals grounded in ab initio calculations.
- 10:30 Break**  
*Chairperson: Valeria Rondelli*
- 10:50** Giorgio Guerini Rocco: Development of ultra-low thermal emittance photocathodes for future high-Brightness electron sources.
- 11:20** Sally Abdalla: Extracellular vesicles characterization and interaction with model membranes.
- 11:40** Matteo Brizioli: The yielding transition in soft amorphous solids under oscillatory shear: from microscopic rearrangements to macroscopic failure.
- 12:00** Federica Crova: In-depth investigation of atmospheric aerosol properties and sources.
- 12:20 Conclusions (M. Paris)**

more information at  
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