



PHD SCHOOL IN PHYSICS, ASTROPHYSICS AND APPLIED PHYSICS

The 1st year students workshop of our PhD School
will take place on 27th and 30th September 2024
at Sala Consiglio, Dept. Physics, via Celoria 16-Milano

27th SEPTEMBER 2024

- 09:00** **Welcome (A.Mennella)**
Chairperson: A.Mennella
- 09:30** Enrico Augusto Maraboli: Mass profiles and orbits in clusters of galaxies.
- 9:50** Viviana Pezzotta: Planet-forming environments: investigating protoplanetary disks using gas kinematics.
- 10:10** Luna Rampinelli: The astrochemical journey of building blocks of planets.
- 10:30** **Coffee Break**
Chairperson: A.Pullia
- 11:00** Alessandro Ruzza: Planet hunting with DBNets: simulation-based inference of protoplanetary discs and embedded planets.
- 11:20** Luigi Zallio: Geometries, gas sizes and evolutionary scenarios of proto-planetary discs.
- 11:40** Matilde Barberi Squarotti: Mapping the large-scale structure of the Universe with neutral hydrogen intensity mapping.
- 12:00** Simone Contu: Application of magneto-optical methods for the study of nanostructures with magnetic properties.
- 12:20** **LUNCH BREAK**
Chairperson: B.Caccianiga
- 14:00** Leticia Finger Basso: NO and CO mapping on metallic nanoparticles: A step towards catalysis of harmful gases.
- 14:20** Ankita Ganguly: Detection of organic tissue discriminator using non-destructive approach in VIS-NIR range.
- 14:40** Luca Nigro: Quantum computing for energy applications.
- 15:00** **Coffee Break**
Chairperson: M.Zaro
- 15:30** Jacob Yohanna Baro: Electronic friction and other non-adiabatic effects in sliding contacts via classical simulations.
- 15:50** Alessandro Zambon: Sampling the solutions space of artificial neural networks.
- 16:10** Paolo Zentilini: Emulating QAOA via Graph Neural Networks.
- 16:30** Sofia Zinzani: Towards automated structural analysis: coalescence of metallic nanoalloys.

30th SEPTEMBER 2024

- Chairperson: C.Barbieri*
- 09:00** Silvia Bressan: Electrical response of nanostructured devices to analog inputs.
- 09:20** Simone Codispoti: Liquid-liquid phase separation of nucleic acids and peptides: linking macroscopic properties to molecular features.
- 09:40** Davide Ripamonti: Studies of the effects of microbiological growth on stone-air interface of cultural heritage (STAINS) and artificial protectives.
- 10:00** Marco Maria Messa: Multiwavelength studies of binary millisecond pulsars.
- 10:20** **Coffee Break**
Chairperson: F.Giavazzi
- 10:50** Concetta Santangelo: Characterization of lipid aggregates with Differential Dynamic Microscopy.
- 11:10** Valeria Trabattoni: Study and characterization of electronics circuits at cryogenic temperature for the next generation neutrino experiment DUNE.
- 11:30** Lorenzo Apollonio: Amplifying UHECR arrival direction information at the Pierre Auger Observatory.
- 11:50** Stefano Brolli: Diagrammatic Monte Carlo for atomic nuclei.
- 12:10** **LUNCH BREAK**
Chairperson: M.Giliberti
- 14:00** Massimiliano Luciani: Searching for shape coexistence in Ca isotopes.
- 14:20** Elisa Percalli: JUNO: an experiment on neutrino mass ordering.
- 14:40** Riccardo Zanzottera: Silicon pixel detectors for future high energy physics experiments.
- 15:00** **Coffee Break**
Chairperson: A.Mennella
- 15:30** Andrea Afify: Autonomous Agents in Unstructured Virtual Environments.
- 15:50** Michele Dradi: Standard Model renormalization at $O(\alpha^2)$.
- 16:10** Pietro Glorioso: Microstates of holographic black holes.
- 16:30** Paolo Luppi: Multi-time statistics and non-markovianity in open quantum systems.

more information at
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