



# SCUOLA DI DOTTORATO IN FISICA, ASTROFISICA E FISICA APPLICATA

Presso la Sala Consiglio del Dipartimento di Fisica  
gli allievi del I° anno della Scuola di Dottorato  
terranno nelle giornate del 15 e 16 Ottobre 2012  
il seminario di fine anno nei seguenti orari:

## 15 OTTOBRE

9:00 Welcome (Marco Bersanelli)

*Chairperson: Emanuela Meroni*

9:10 Claudia Benedetti: Quantum correlations and decoherence in systems of interest for the quantum information processing.

9:30 Giulia Alice Fornaro: Characterization of diffractive optical elements for improving the performance of an endoscopic TOF-PET detector head.

9:50 Marco Stellato: Proposal for a didactic path on oscillations and waves for the secondary school: the normal modes of oscillation. Results of the preliminary experimentation.

10:10 Federica Rigoni: Sub-ppm ammonia detection in urban environments with carbon nanotubes gas sensors: possible strategies to enhance the sensitivity.

10:30 Gabriele Salvinelli: Buried SiO<sub>x</sub> interfaces in CNT/Silicon heterojunctions unraveled by Angle-Resolved X-ray Photoelectron Spectroscopy.

10:50 Cerimonia conferimento del "Premio Davide Colosimo 2012"

11:00 Coffee break

*Chairperson: Stefano Forte*

11:30 Marco Morelli: New methods for solar energy plants monitoring using satellite optical imagery.

11:50 Maria Concetta Di Tuccio: Thermodynamics for Cultural Heritage.

12:10 Simone Bottoni: Gamma spectroscopy of n-rich <sup>95,96</sup>Rb nuclei by the incomplete fusion reaction of <sup>94</sup>Kr on <sup>7</sup>Li.

12:30 Laura Collica: Mass Composition Study At Pierre Auger Observatory.

## 16 OTTOBRE

*Chairperson: Tommaso Bellini*

9:00 Nicoletta Krachmalnicoff: A step forward in studying Cosmic Microwave Background polarized signal: the LSPE/STRIP balloon experiment.

9:20 Francesca Borghi: Nanometer-scale morphology and surface charge density influence on protein adsorption.

9:40 Marina Samoylova: Quantum Theory of Collective Atomic Recoil in Ring Cavities.

10:00 Filippo Tramonto: Quantum Monte Carlo simulations of low temperature many-body systems.

10:20 Simone Peli: Non-equilibrium spectroscopy on correlated materials.

10:40 Coffee break

*Chairperson: Giovanni Onida*

11:10 Stefano Carrazza: Parton distributions with LHC data.

11:30 Samuele Chimento: Fake Supergravity.

11:50 Marta Leoni: Testing the AdS/CFT correspondence.

12:10 Elisa Mariani: Single top production at the LHC.

12:30 Pietro Rotondo: Schramm-Loewner Equation and connections with Statistical Mechanics.

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