# *Physics Department, University of Pisa*
# *Plasma Physics, recent results and future perspectives*

September 18th, AULA MAGNA Pontecorvo

## PROGRAMME

9.50 E. Vicari, head of the Department - *Welcome*

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| 10:00 | S. Bulanov | *Nonlinear Waves, Instabilities, Charged Particle Acceleration* |
| 10:30 | G. Bertin | *Open problems in the dynamical evolution of globular clusters* |
| 11:00 | PL. Veltri | *Rugged invariants conservation and coherent structures formation in 2D MHD* |
| 11:30 | T. Andreussi | *Stability criteria of ideal magnetohydrodynamic plasmas with flows* |
| 12:00 | P. Morrison | *Lagrange, Dirac, and the imposition of constraints on fluid flow* |
| 12:30 | B. Coppi | *Facing the discoveries of New Heavens and New Earths: relevant plasma physics issues* |

*13:00 – 14:30 lunch*

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| 14:30 | S. Cowley | *Ballooning Modes: from Pegoraro and Schep to the present day* |
| 15:00 | T. Antonsen | *Adjoint Methods in Charged Particle Dynamics* |
| 15:30 | F. Porcelli | *Hybrid kinetic-fluid plasma modeling and applications* |
| 16:00 | L. Sugiyama | *Lyapunov Exponents and Plasma Dynamics* |
| 16:30 | D. Grasso | *The skeleton of magnetic chaos* |
| 17:00 | M. Faganello | *Theory and simulations of the magnetized Kelvin-Helmholtz instability* |
| 17:30 | M. Velli | *Exploring the Plasma Physics of the Inner Heliosphere with Parker Solar Probe* |

18:00 ***open discussion about hot future topics of plasma physics***