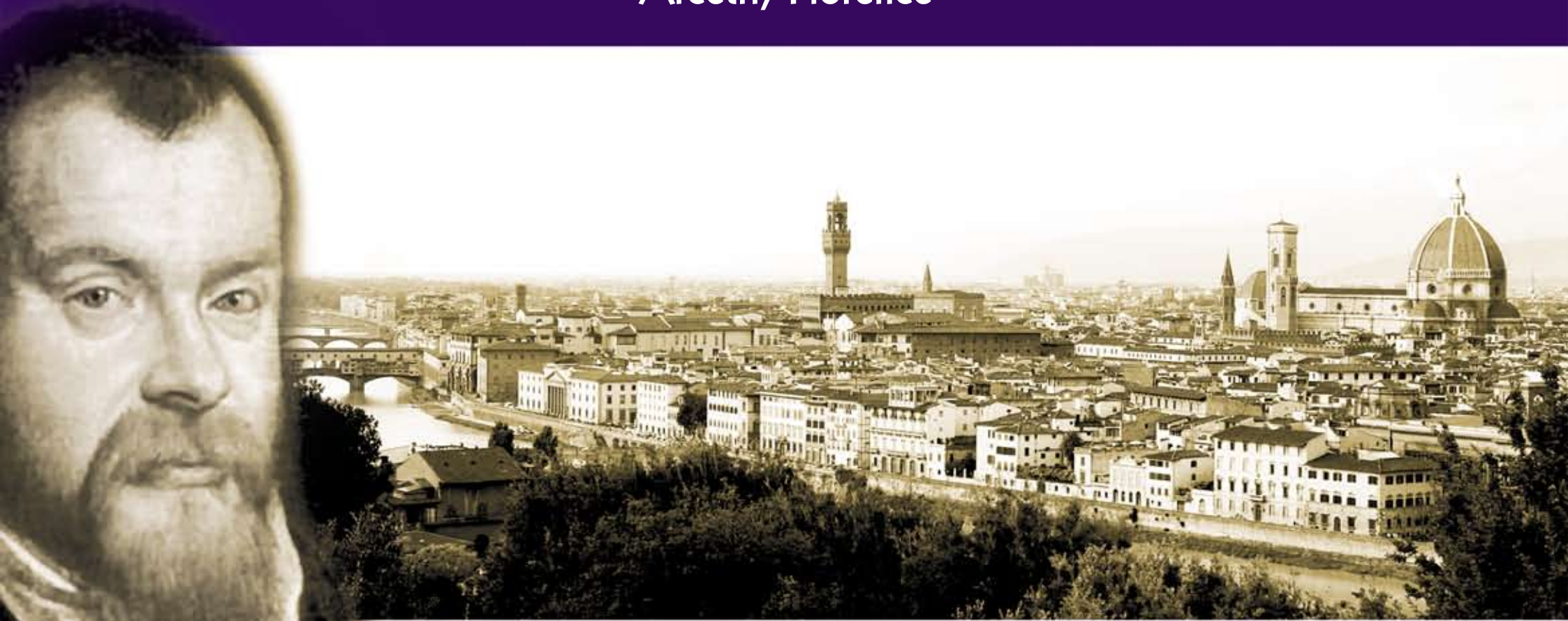




## The Galileo Galilei Institute for Theoretical Physics Arcetri, Florence



### Low-dimensional Quantum Field Theories and Applications

Sept. 1, 2008 - Nov. 7, 2008

*Galileo Galilei*

#### The main topics of the workshop include:

- Quantum dynamics in mesoscopic systems and cold atoms
- Conformal field theory and topological quantum computation
- Correlations and entanglement in lattice models and field theories
- Sigma models on noncompact groups and logarithmic conformal field theory
- Stochastic Loewner evolution and growth processes
- Integrability in the AdS/CFT correspondence

Exact methods in low-dimensional field theory and integrable systems are at the heart of many areas of physics and mathematics, spanning from condensed matter, statistical mechanics and string theory, to infinite dimensional algebras, topology and probability theory. More recently, they have opened the way to the comprehension of many fascinating experiments in strongly correlated systems and ultracold atoms. In the domain of fundamental interactions, integrable systems are playing an important role in the gauge/gravity correspondence, while in critical phenomena they have helped establishing a new relation with stochastic processes.

The aim of the workshops is to address the novel ideas and challenges coming from all these fields, bringing together researchers of different communities. A one week conference will take place on September 08-12, 2008.

#### Organizing Committee:

Andrea Cappelli (INFN, Florence), Giuseppe Mussardo (SISSA, Trieste),  
Hubert Saleur (CEA, Saclay), Paul Wiegmann (EFI, Chicago),  
Jean-Bernard Zuber (Paris VI, Paris).