





The Galileo Galilei Institute for Theoretical Physics Arcetri, Florence

String Theory from a Worldsheet Perspective March, 25 2019 - May, 10 2019

Jo Guilia Galia Topics:

- Superstring amplitudes in the RNS formalism and super-moduli space
- Superstring amplitudes in the pure spinor formulation and the relation to the RNS formulation
- Ambitwistor string at the quantum level
- Topological amplitudes and their connection to supersymmetric gauge theories
- Quantum aspects of closed and open superstring field theory
- Open string physics and D-branes.
 Solutions of open superstring field theory

In the recent years there has been a renewed interest on fundamental aspects of superstring theory in its original perturbative definition on the world-sheet. On the one hand superstring perturbation theory has been a guiding light for important developments in the study of certain types of scattering amplitudes in supersymmetric gauge theories. On the other hand, also thanks to the development of string field theory, some important aspects of the standard on-shell construction of string theory (such as the issue of infrared divergences) have been finally tackled. We are now in a new interesting phase where these new constructions can be finally put to test on concrete examples and this will have important impacts for a top-down approach to string phenomenology and the study of topological string amplitudes. The aim of the proposed workshop is to bring together experts in the world-sheet formulation of String Theory to develop new tools and get new results on fundamental microscopic aspects.

Organizing Committee:

C. Angelantonj (University of Torino) I. Antoniadis (LPTHE - Paris and Bern University) N. Berkovits (ICTP-SAIFR - Sao Paolo) M.B. Green (DAMTP - Cambridge) C. Maccaferri (University of Torino) Y. Okawa (University of Torino) R. Russo (Queen Mary University of London) M. Schnabl (Czech Academy of Science - Prague) B. Zwiebach (MIT - Cambridge, MA, USA)

Local organizer: Domenico Seminara (University of Firenze)

Contact persons: carlo.angelantonj@unito.it - maccafer@to.infn.it

