

Introduction

This proceedings contains the lectures given at the 2001 Trieste Spring School on String Theory. Several important and active areas of research in string theory related topics were covered in this school. One of the main topics of the School was the recently conjectured duality between gauge theory living on D-branes and gravity (or more precisely string theory) living in the near horizon geometry around the D-branes. J. Maldacena gave a set of lectures on the gauge theory/gravity duality in different examples. M. Strassler's lectures dealt with a very interesting generalization of the gauge theory/gravity duality for the case of a confining gauge theory. D. Kutasov's lectures dealt with Little String Theories (LST) that are supposed to describe the physics of the NS5-branes. Using the holographic principle, interesting features of LST were deduced by describing the string theory in the background of NS5-branes.

E. Verlinde gave a set of lectures on holographic principle in the context of radiation dominated FRW universe. Other topics included lectures by R. Gopakumar on the solitons in non-commutative gauge theories that are relevant in the context of D-branes in the background on anti-symmetric tensor field, and lectures by M. Douglas on D-branes on Calabi-Yau spaces.

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