Contribution ID: **1** Type: **not specified**

BSM physics at the LHC (I)

Monday 9 February 2009 10:30 (1 hour)

These four lectures will provide a broad-brush, pedagogical overview of the present ideas on Beyond-the-Standard-Model (BSM) physics at the TeV scale, and what the Large Hadron Collider (LHC) can say about them. The target audience are PhD students and young postdocs in string theory, with only a basic knowledge of particle phenomenology. The plan of the lectures is the following: 1) critical review of the SM and of Higgs boson searches; 2) bottom-up approaches to BSM physics; 3) supersymmetry at the TeV scale; 4) other ideas for the TeV scale.

Suggested reading:</br>

-G.Altarelli, New Physics and the LHC, arXiv:0805.1992 [hep-ph]

-S.P.Martin, A Supersymmetry Primer, arXiv:hep-ph/9709356

-H.C.Cheng, Little Higgs, Non-standard Higgs, No Higgs and All That, arXiv:0710.3407 [hep-ph].

-C.Grojean, Electroweak symmetry breaking: to Higgs or not to Higgs, CERN Academic Training, January 2009

Author: ZWIRNER, Fabio (U. Padova)