DIPARTIMENTO DI FISICA "E.Fermi"
UNIVERSITÀ DI PISA
CORSO DI DOTTORATO IN FISICA
Largo B.Pontecorvo, 3 - Edificio B-C
56127 PISA - ITALY

DIPARTIMENTO DI FISICA E. Fermi
UNIVERSITA' D1 PISA

SEMINARIO

Venerdi 13 Marzo 2009
ore 15.00
INFN - Sezione di Pisa
L.go B.Pontecorvo, 3 - Edificio C
Aula 133 (Primo Piano)

dott. Peter Loch
INFN Pisa & University of Arizona

terra un seminario dal titolo

"Prospects for Discoveries with ATLAS"

Abstract: The ATLAS experiment at the Large Hadron Collider (LHC) features a general purpose detector system not only designed for the discovery of the main missing constituent of the Standard Model, the Higgs boson, but also for physics beyond the Standard Model, like SUSY and exotic physics models. This talk focuses on a discussion of the prospects for the Higgs discovery with ATLAS. An overview on the production mechanisms in the Standard Model and its minimal extensions is given together with the corresponding expected final states, with an emphasis on the experimental sensitivities. Recently developed analysis strategies to overcome past limitations of the significance of the (Standard Model) Higgs signal are presented, in particular for the case of the two photon decay. In addition, the discovery potentials for selected physics models beyond the Standard Model are shown, again with an emphasis on the experimental issues.