HiggsBounds: confronting models with an arbitrary number of neutral Higgs bosons with LEP & Tevatron results

Tuesday 1 July 2008 12:00 (30 minutes)

From the Higgs search at LEP and the Tevatron, limits on topological cross sections, which can be applied to a large class of models, have been derived or, in the case of the Tevatron, are still updated. Developed in collaboration with P. Bechtle, S. Heinemeyer, G. Weiglein, K. Williams, our code can decide for models with an arbitrary number of neutral Higgs bosons, with given deviations from the Standard Model Higgs production cross sections and decay branching ratios, whether it is excluded at the 95% C.L. or not. This is a very useful tool for phenomenologists and model builders alike, allowing on the one hand to have easy access to up-to-date parameter restrictions, e.g. for the MSSM, and on the other hand to confront new models of the Higgs sector with detailed constraints. There is a FORTRAN version of the code, useful to obtain individual plots or model parameter scans, and an on-line version which is currently being set up. For the MSSM we also provide interfaces to the spectrum calculators FeynHiggs and CPsuperH.

Presenter: Dr BREIN, Oliver (IPPP, Durham) **Session Classification:** Session 2