

Výbor pro spolupráci ČR s CERN
Česká fyzikální společnost, sekce JČMF

zvou všechny zájemce na dvě veřejné přednášky
v rámci akcí připomínajících 20. výročí členství České republiky v CERN

ve čtvrtek 25. října 2012 v 15:30
v refektáři MFF UK, Malostranské náměstí 25, Praha 1 (1.p.)

Obě přednášky budou prosloušeny anglicky, bez tlumočení, po skončení přednášek bude podáváno občerstvení.

Hunting for the Higgs Boson and more at the LHC (Recent results from ATLAS and CMS)

Peter Jenni, European Organization for Nuclear Research (CERN), Geneva, Switzerland

Abstract:

Since three years experiments at the Large Hadron Collider (LHC) have started exploring the physics at the high energy frontier. A rich harvest of initial physics results has been obtained by the ATLAS and CMS Collaborations that allow one already to test, at highest energies ever reached in a laboratory, the Standard Model (SM) of elementary particles, and to make searches Beyond the SM (BSM). Most exciting is the recently announced discovery of a new particle that may well be the long-awaited Higgs Boson, and which would establish the postulated electro-weak symmetry breaking mechanism in the SM. Other, far-reaching results can be reported for BSM physics searches like Supersymmetry (SUSY) and its implication for Dark Matter in the Universe, Extra Dimensions, and the production of new heavy particles. Besides these physics results, the history and technical challenges of the LHC project, its status, and the future physics prospects will also be covered briefly in this talk.

Heretical ideas that led to the search for the "Higgs Boson"

Gerald Guralnik, Brown University, USA

Abstract:

I give an overview of revolutionary ideas starting about 50 years ago that led to our current understanding of modern particle physics and the prediction of the Higgs Boson. I particularly focus on the evolution and sociology involved in the work, done by myself and collaborators, which now provides the cornerstone of the "Standard Model" of particle physics.

Rupert Leitner, předseda VS CERN

Alice Valkárová, předsedkyně ČFS