

# IMPRS EPP

**21st Block Course  
of the  
International Max Planck Research School  
on Elementary Particle Physics**

October 28th – October 31st, 2013

Max-Planck-Institut für Physik, Freimann

11:00 AM - 12.30 PM, Main Auditorium

**Prof. Wolfgang Hollik**

Max Planck Institute for Physics, Munich

## **Introduction to the Standard Model of Particle Physics**

In this lectures we discuss the basic ingredients for the Standard Model and its experimental tests. We give an introduction to the elements of quantum field theory, to the construction of the basic Lagrangian for a general gauge theory, and proceed with the formulation of QCD and the electroweak Standard Model with electroweak symmetry breaking via the Higgs mechanism. The phenomenology of  $W$ ,  $Z$ , and Higgs bosons is discussed and compared with data from experiments at electron-positron and hadron colliders.

No registration is needed.