

IMPRS EPP

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

January 16th to 19th, 2018

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 these 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.