



LECTURE COURSE IN THE QUANTUM UNIVERSE RESEARCH SCHOOL

Winter Term 2019/2020

Phenomenology of Physics Beyond the Standard Model

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Course Description:

This lecture covers the following topics:

- Shortcomings of the Standard Model (SM), hierarchy problem and further motivations for physics beyond the SM (BSM)
- BSM physics: specific models versus effective field theories
- Precision tests of the electroweak and strong interactions
- Properties of supersymmetric theories
- Electroweak symmetry breaking
- Examples for BSM phenomenology at the LHC and beyond
- Axions
- Dark Matter: candidates, indirect and direct searches

Prerequisites:

Basic knowledge in Quantum Field Theory or Advanced Particle Physics

Date and Place: Tue, 9:15–10:45, SR 2, Building 2a, Bahrenfeld
Thu, 9:15–10:00, SR 2, Building 2a, Bahrenfeld
Problem Classes: Thu, 10:00–10:45, SR 2, Building 2a, Bahrenfeld
Starting on: 17 October 2019
