



Lecture Course in the Integrated Research Training Group (IRTG)  
of the SFB 676 "Particles, Strings and the Early Universe"

Summer Term 2018

# Physics of the Standard Model

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## Course Description:

The course covers basics of gauge theories, QED, Yang-Mills theories, QCD phenomenology, Electroweak interactions and the Higgs mechanism, Renormalization of the SM, finite width effects and the running of couplings. The drawbacks of the Standard Model will be discussed in detail. Collider phenomenological aspects, spin physics, phase space and kinematics will be discussed as well.

## Prerequisites:

Basic knowledge from the courses 'Quantenmechanik, Kern- und Teilchenphysik, Quantum Field Theory I or Advanced Particle Physics' is recommended.

<b>Date and Place:</b>	Thu, 9:00 – 10:30, SR 2, Building 2a, Bahrenfeld Fri, 9:15 – 10:00, SR 2, Building 2a, Bahrenfeld
<b>Problem Classes:</b>	Fri, 10:00 – 10:45, SR 2, Building 2a, Bahrenfeld Starting on: 13 April 2018
<b>Starting on:</b>	12 April 2018