



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

Winter Term 14/15

Introduction to String Phenomenology

Jan Louis

Course Description:

After a brief introduction/review of string theory the course aims at developing the connection between string theory, particle physics and cosmology. Concretely the following topics are covered:

- Introduction to string theory and its effective action,
- Calabi-Yau compactifications,
- Supersymmetry breaking and moduli stabilization,
- D-brane model building,
- Flux compactifications and generalized geometries
- Dualities among string theories, M-theory, F-theory
- String cosmology

Prerequisites:

Basic knowledge in particle physics, general relativity and quantum field theory. Basic knowledge in string theory is beneficial but not necessary.

Date and Place:

Fr, 11:00 – 12:30, SR 2/2a, Bldg. 2a, Campus Bahrenfeld
biweekly: Mon, 11:00 – 12:30, SR 2/2a, Bldg. 2a, Campus Bahrenfeld

Starting on:

16 Oct 2014
