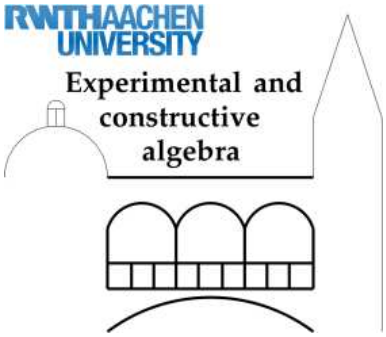
Graduiertenkolleg

Experimentelle und konstruktive Algebra



Vortrag

Donnerstag, 3. Juli 2014, 17:00 Uhr, Theoretische Teilchenphysik, Physikzentrum RWTH-Melaten , Raum 26C 402

Martin Bies (Ruprecht-Karls-Universität, Heidelberg):
The Standard Model from string theory

The modern understanding of physics is based on general relativity and the Standard Model of particle physics. Both models are verified to high accuracy in experiments. Despite this success a unification of these two setups poses a very challenging task. String theory is a very promising candidate of such a unified theory of quantum gravity. Its consistency requires a 10-dimensional spacetime as well as supersymmetry. To make contact with the 4-dimensional world that we observe every day, it is necessary to compactify this 10-dimensional spacetime and to make sure that only the observed 4-dimensional physics remains. As an example of compactification I will present so-called intersecting D6-brane models and discuss how one obtains the Standard Model from such compactifications. Intersecting D6-brane models admit a dual description in terms of so-called magnetised D7-branes. This duality is in fact nothing but the famous mirror symmetry. I will briefly comment on this.

Wir laden alle Interessierten herzlich ein.