TECHNISCHE UNIVERSITÄT DRESDEN

**Bereich Mathematik und Naturwissenschaften** Fachrichtung Physik

# PHYSIKALISCHES KOLLOQUIUM

*Referent:* **Prof. Dr. Markus Schumacher**
Experimentelle Teilchenphysik,
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*Thema:* **The Higgs boson: status of deciphering its nature four years after its discovery**

*Zeit und Ort:* Dienstag, 5.7.2016, 16:40 Uhr
Physikgebäude, Hörsaal PHY/C213, Haeckelstr. 3

*Leiter:* Prof. Dr. Arno Straessner

*Kurzfassung:* On July 4th 2012, the ATLAS and CMS Collaborations at the Large Hadron Collider announced the discovery of a new particle in the search for the Higgs boson of the Standard Model of particle physics. Since then, significantly more data have been collected at a center-of-mass energy of 8 TeV until the end of 2012 and also at the new energy frontier of 13 TeV since June 2015. These data sets allow to address questions like: is it a Higgs boson? Are the properties consistent with the expectations in the Standard Model or do we see hints for „New Physics“? The Colloquium will review our current knowledge about the nature of the Higgs boson four years after its discovery.