



## PHYSIKALISCHES KOLLOQUIUM

*Referent:*

**Prof. Dr. Stan Lai**

Georg-August-Universität Göttingen, Germany



*Thema:*

**The Precision Higgs Era and Beyond**

*Zeit und Ort:*

Dienstag, 2.7.2019, 16:40 Uhr  
Rechnagel-Bau, Hörsaal REC/C213, Haeckelstr. 3

*Leiter:*

Prof. Dr. Arno Straessner

*Kurzfassung:*

After the euphoria during the discovery of the Higgs boson, many measurements have been carried out by the LHC experiments, leading to an era of precision Higgs physics. These investigations have led to a detailed characterization of the Higgs boson, from its mass, its couplings, to other fundamental properties by the CMS and ATLAS experiments at CERN. This talk will discuss these measurements, focusing on those carried out with the ATLAS detector, and also discuss future opportunities to further our understanding of the Higgs sector. Prospects for discovering an extended Higgs sector beyond that predicted by the Standard Model will also be presented.

*Biographie:*

Stan Lai received his PhD in 2006 at the University of Toronto for particle physics research with the CDF detector at Fermilab. He then moved to the University of Freiburg and began his involvement with the ATLAS experiment at CERN. He played a leading role in establishing evidence for Higgs boson decays to tau leptons in data recorded with the ATLAS detector. In 2015 he accepted a professorship at the University of Göttingen where he continues to investigate the Higgs sector within the ATLAS collaboration.

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