



## **SFB-Seminar, "Deformations: classical and modern" (Research Project C3)**

### **TIME:**

25 Oct 2016, 15:00 - 18:00

### **LOCATION:**

FU Pflanzenphysiologie

### **PROGRAM:**

15:00 - 16:00 Coffee break (Place: Arnimallee 3, Foyer of Lecture Hall)

16:00 - 17:00 **PD. Dr. David Ploog (FU Berlin)**

#### **Classical deformation theory**

The concept of deforming a mathematical object, such as a variety, a bundle on a manifold, an algebra, or a complex structure, is very old. In many cases, infinitesimal deformations can be understood very well through homological methods.

In the first talk, we will give a gentle introduction to this topic, and explain in concrete examples the concept of functors on Artin rings. These capture the concept of infinitesimal deformations in a crucial way.

17:00 - 18:00 **Dr. Will Donovan (Kavli IPMU)**

#### **Non-commutative deformations and flops**

The second talk presents recent research by Will Donovan and Michael Wemyss: the idea is to allow non-commutative rings as bases for deformations. This has surprising applications and allows, for example, to understand geometric problems about flops that have been open for decades.

### **Contact:**

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