



universität  
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Fakultät für Mathematik

## Mathematisches Kolloquium

Mittwoch, 7. Juni 2017

Sky Lounge

### EINLADUNG

**Marie Doumic-Jauffret**

(INRIA, WPI)

**"Modelling protein polymerisation: results and open questions"**

## **"Modelling protein polymerisation: results and open questions"**

### **Abstract:**

*Mathematical modelling of protein polymerisation is a challenging topic, with wide applications, from actin filaments in myocytes (muscle tissues) to the so-called amyloid diseases (e.g. Alzheimer's, Parkinson's or Creutzfeldt-Jakob's diseases). In this talk, we will give an overview of recent results for both deterministic - where statistical mechanical fluctuations arising from intrinsic noise are negligible - and stochastic approaches, envisaged as giving complementary insights on the still largely mysterious intrinsic mechanisms of polymerisation. A data assimilation approach is developed in parallel of more specific methods for fragmentation estimation.*

*The results we will present are partly joint work with A. Armiento, J. Calvo, S. Eugène, M. Escobedo, P. Moireau, B. Perthame, H. Rezaei, P. Robert, M. Tournus and W.F. Xue.*

**15.45 Uhr: Kaffeejause**

**16.15 Uhr: Vortrag**

**vinum cum pane im Anschluss**

Christian Schmeiser  
Christian Krattenthaler