



# Oberwolfach Seminar

## Mathematical Modeling in Systems Biology

Organizers: Susanna Röblitz, Berlin  
Heike Siebert, Berlin  
Date (ID): 19 – 25 November 2017 (1747a)  
Deadline: 17 September 2017

The seminar will include tutorial courses and modeling exercises focusing on the following topics:

- different modeling paradigms (ODEs, discrete dynamical systems, stochastic models), their advantages and disadvantages, challenges, and potential applications
- property conservation across formalisms
- parameter estimation and uncertainty quantification

### Introductory Reading:

P. Deuffhard and S. Röblitz. *A Guide to Numerical Modelling in Systems Biology*. Springer, 2015.

B. P. Ingalls. *Mathematical Modeling in Systems Biology*. MIT Press, 2013.

D. J. Wilkinson. *Stochastic Modelling for Systems Biology*. CRC Press, 2011.

The seminar takes place at the Mathematisches Forschungsinstitut Oberwolfach. The Institute covers board and lodging. By the support of the Carl Friedrich von Siemens Foundation travel expenses can be reimbursed up to 150 EUR in average per person (against copies of travel receipts). The number of participants is restricted to 25.

### Applications including

- full name and university/institute address
- e-mail address
- short CV, present position, university
- name of supervisor of Ph.D. thesis
- a short summary of previous work and interest
- title, ID and date of the intended seminar

should be sent preferably by e-mail (with attachments in pdf format) to:

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