

BioModel Engineering - from Structure to Behaviour, a Petri net perspective on systems and synthetic biology

Rainer Breitling¹,
David Gilbert², Monika Heiner³

(1) r.breitling@rug.nl, Groningen Bioinformatics Centre, University of Groningen, Groningen, Netherlands

(2) david.gilbert@brunel.ac.uk, School of Information Systems, Computing and Mathematics, Brunel University, London, UK

(3) monika.heiner@informatik.tu-cottbus.de, Computer Science Department, Brandenburg University of Technology, Cottbus, Germany

Paris, 22nd June 2009

www-dssz.informatik.tu-cottbus.de/BME/PetriNets2009

Workshop schedule

09.00-10.30

- Introduction: Systems biology, synthetic biology [drg]
- Conceptual modelling framework [drg]
- BioModel Engineering [drg]
- From cell biology to Petri nets (1) [rb]

10.30-11.00 Break

11.00-12.30

- From cell biology to Petri nets (2) [rb]
- Static Petri net analysis (qualitative) [mh]

12.30-14.00 Lunch

14.00-15.30

- Conceptual modelling framework & paradigms in detail [mh] : (QPN), SPN, CPN
- Model checking (1) [drg]: Analytical vs simulative model checking, model checking in the 3 worlds

15.30-16.00 Break

16.00-17.30

- Model checking (2) [drg]: Model checking for BME: parameter fitting, database searching, model comparison
- Open problems & challenges for PN community [all]
- What we have not covered [all]