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]