'BioPreDyn: The systems biology modeling cycle — building mechanistic dynamical models'

Event date: 12-15 May 2014, http://www.ebi.ac.uk/training/course/BioPreDyn2014

The purpose of this course is to give a detailed overview of the state of the art regarding modelling methods and tools in computational systems biology. The course will be focused on dynamic (mechanistic) models.

PRELIMINARY TOPICS:	proposed speaker	proposed title
1- Exploting and integrating databases for dynamic modelling (FTELE.IGM, EMBL, CRG, CSM)		
1.1-Subtopic TBD...		
1.2-Subtopic TBD...		
2- Visualization tools for dynamic model building using Gaussian processes (USFD)		
2.1-Subtopic TBD…		
2.2-Subtopic TBD...		
3- Reverse engineering: from inference to parametric identification in dynamic models		
3.1- Inference methods for biological networks (FTELE.IGM)		
3.2- Parameter estimation in dynamic models (UNIMAN, CSIC)		
3.3- Optimal experimental design and uncertainty quantification (CWI,CSIC)		
3.4- Spatial and multi-scale modelling in systems biology (CRG, UvA)		
3.5- Software integration for reverse engineering (CSM)		
4- Case studies in biotechnological applications		
4.1 Kinetic modelling of CHO cells (INSIL)		
4.2 Large-scale kinetic models of microorganisms (UNIMAN, CSIC, INSIL)		
4.3 Metabolic engineering (EV, CSIC, UniMAN)		