

**From DNA to cell to organs:
regulatory networks and morphogenesis**

TUESDAY 19th

9h00 — 10h30

- Michel Morvan (ENS-Lyon)
Simulating emergent properties in complex systems
- James Tabony (INSERM U548, D.S.V, CEA Grenoble)
Self-organisation and other emergent properties in a simple biological system of microtubules
- Georgia Barlovatz (Université de Créteil)
From a simple regulation network to a critical state with one single molecule? Microenvironment and cell migration

Coffee break

11h00 — 12h30

- Jean-Pierre Françoise (Université Paris 6)
Methods from dynamical systems theory for identifying temporal organization in complex systems
- Philippe Tracqui (TIMC/DynaCell, Grenoble)
Dealing with mechanics: signal integration in morphogenesis of endothelial cells networks
- **General discussion**

Lunch at the Scientific Institute

15h00 — 16h30

- Paola Quaglia (Trento)
Biosystems as formal concurrent processes
- Debora Schuch de Rosa (Trento)
SBUML BIOAMBIENTS: from Metamodel to Process Algebra via Automatic Code Generator
- Daniel Mateus (CEA-LETI, Saclay)
Modelling and simulation of genetic regulatory networks using symbolic execution

Coffee break

17h00 — 18h30

- Yannick Kergosien (Université de Cergy-Pontoise)
- Julian Mattes (Innsbruck)
Computational multiscale analysis of complex spatio-temporal biomedical data
- **General discussion**

Dinner at the Scientific Institute

WEDNESDAY 20th

9h00 — 10h30

- Christian Carl (KIP, Heidelberg)
4pi microscopy: highest resolution to investigate the nano-cellular world
- Guillaume Legent (Université de Rouen)
Modelling the steady-state kinetic behaviour of functioning-dependent structures

Coffee break

11h00 — 12h30

- Josef Panek (Prague)
Computational statistical analysis of low-level protein data predicts complex cellular processes
- Christian Carl (KIP, Heidelberg)
Nanosopic methods, genome structure modelling, advanced labelling techniques for biophysics illumination research
- **General discussion**

Lunch at the Scientific Institute

15h00 — 16h30

- Yohann Grondin (Leicester)
Interpretation of networks
- Arndt Benecke (IHES & IRI – CNRS UMR8117 INSERM U417)
D[ace]cription of gene regulatory networks
- Andrei Zinovyev (Institut Curie, Paris)
Systems Biology at Institut Curie

Coffee break

17h00 — 18h30

- Julian Mattes (Innsbruck)
Experience from the GEMBRACE project
- **General discussion**