Physics and Biological Systems

June 14-17, 2011

Université Paris-Sud 11
Orsay, France

Poster Sessions

Poster Session I (June 14, 2011):

1. **Cecile APPERT-ROLLAND:** Scenarios for efficient intracellular bidirectional transport
2. **Valentina BALDAZZI:** Bringing the gap between ecophysiology and molecular system biology: The « Fruit Integrative Modeling » project
3. **Georg BASLER:** Randomization of metabolic networks: a measure of evolutionary significance
4. **Anne-Florence BITBOL:** Dynamical membrane curvature instability controlled by intermonolayer friction
5. **Carla BOSIA:** Gene autoregulation via intronic microRNAs and its functions
6. **Sarah BOULINEAU:** Diauxic shift in single cells
7. **Martin CASTELNOVO:** Modulation of HIV-1 pleomorphism by the presence of PSI-RNA: an Atomic Force Microscopy study
8. **Carlus DENEKE:** Theoretical aspects of mRNA degradation
9. **Meriem EL KAROUI:** Double strand break repair in single Escherichia coli cells
10. **Andre ESTEVEZ-TORRES:** Engineering reaction networks outside the cell: reactions and reactors
11. **Mark FLEGG:** The Two Regime Method for optimizing stochastic reaction-diffusion simulations
12. **Ana Maria FLORESCU:** Dynamical model for DNA-protein interactions and facilitated diffusion
13. **Aurelie FOUCQUIER:** A first principles calculation of oxygen consumption in strong exercise
14. **Anette FUNFAK:** Investigation of the ciliary beat frequency (CBF) and wave propagation on wildtype cells and RNAi-mediated striatine 6 mutants of Paramecium tetraurelia using microfluidics
15. **Ashok GARAI:** Stochastic simulations of a bistable frustrated unit
16. **Chloe GERIN:** A model to move a low-grade glioma back in time
17. **Tanay GHOSH:** Gene regulatory networks in development and evolution of the mammalian neocortex
18. **Stephane GHOZZI:** Nonlinear Fitness Landscape of a Molecular Pathway

Poster Session II (June 15, 2011):

19. **Enrico GIAMPIERI:** Stochastic analysis of a miRNA-protein toggle switch
20. **Arach GOLDAR:** Out of equilibrium dynamic of DNA replication
21. **Francois GRANER:** Mechanical studies of morphogenesis at cellular and tissue levels validate a description of an epithelium as a continuous medium
22. **Thomas GUERIN:** Motion Reversal of Molecular Motor Assemblies due to Weak Noise
23. **Haiping HUANG:** Combined local search strategy for learning in networks of binary synapses
24. **Masayo INOUE:** Weber's Law in Autocatalytic Reaction Networks
25. **Stefan KLUMPP:** Growth rate dependence of gene expression in bacteria
26. **David LACOSTE:** Modified fluctuation-dissipation theorem and applications to molecular motors
27. **Chiu Fan LEE:** Spatial organization of the cell cytoplasm: Protein gradients and liquid-liquid phase separation in the C. elegans embryo
28. **Amelie LEFORESTIER:** Architecture of the Bacteriophage Genome: Polymorphism and Phase Transitions
29. **Anze LOSDORFER BOZIC:** Electrostatics of a partially formed, charged spherical shell in salt solution: the weak and strong coupling limits
30. **Marta LUKSZA:** Statistics for clustering in gene expression data: from statistical significance to biological relevance
31. **Bruno MARTINS:** Trade-offs and constraints in allosteric sensing
32. **Philippe NGHE:** Epistasis in signalling cascades
33. **Thomas NIEDERMAYER:** Intermittent depolymerization of actin filaments is caused by local transitions at random sites
34. **Mor NITZAN:** A Mathematical Model of 6S RNA Regulation of Gene Expression
35. **Matteo OSELLA:** Exploring the links between nucleoid physical state, growth rate and gene expression
36. **Benjamin PFEUTY:** Robustness of circadian clocks to daylight fluctuations

Poster Session III (June 16, 2011):

37. **Antonio POLITI:** From a to alpha surfing microtubules: quantitative insight into budding yeast mating
38. **Jean-Francois SADOC:** A phyllotactic approach to the structure of collagen fibrils
39. **Ayaka SAKATA:** Replica symmetry in evolution under thermal noise
40. **Marion SALSAC:** Biological functionalisation of polymer surfaces for use in microresonator based biosensors
41. **Areejit SAMAL:** Environmental versatility promotes modularity in genome-scale metabolic networks
42. **Barbara SARRI:** Imaging domains and protein-lipid interactions in mixed lipid vesicles
43. **Steffen SCHAPER:** Fragmented neutral spaces lead to contingency in evolution
44. **Margarita SCHLACKOW:** RNA Polymerase II Dynamics and Effects of Cohesin in Fission Yeast
45. **Antonio SCIALDONE:** How do cells perform arithmetic division?
46. **Bianca SCLAVI:** DnaA and the timing of DNA replication in E. coli as a function of growth rate
47. **Param Priya SINGH:** Long-term Evolutionary Constraints on Signaling Pathways Implicated in Cancer
48. **Deepak Kumar SINHA:** Photocontrol of protein activity in a single cell of a live organism
49. **Gautier STOLL:** Path Influence Quantification for signaling networks and its application for mathematical modeling of Ewing sarcoma
50. **Petr SULC:** Learning the nonlinear interactions from particle trajectories
51. **Ala TRUSINA:** NF-kB inflammatory response and excitable media
52. **Olga VALBA:** Matching of RNA-type sequences and statistical analysis of random RNA