

**International Workshop on  
Quantitative Biology  
Bucharest, May 14 – 25, 2007**

**Supported by: the Romanian Cultural Institute and the  
International Centre of Biodynamics (Romania); and the  
Institute for Complex Adaptive Matter and the  
Aspen Center for Physics (USA)**

**P R O G R A M**

Monday, May 14:

- *Registration:* The International Centre of Biodynamics  
1B, Intrarea Portocalelor Street  
6 District, Bucharest  
Phone: (40)21.310.4354; (40)21.310.4364
- All sessions will be in the lecture room of The International Centre of Biodynamics

10:00 – 11:00	<b>Welcome and orientation</b>
<b>11:00 - 12:15</b>	<b>Prof. Octavian Popescu (U. Babes-Bolyai, Cluj): <i>Primer to Molecular and Cell Biology I</i></b>
12:15 - 14:15	Lunch
14:15 -	Afternoon free
19:00 - 21:00	Dinner

Tuesday, May 15

<b>9:30 - 10:45</b>	<b>Prof. Octavian Popescu (U. Babes-Bolyai, Cluj): <i>Primer to Molecular and Cell Biology II</i></b>
10:45 - 11:00	Coffee Break
<b>11:00 - 12:15</b>	<b>Prof. Octavian Popescu (U. Babes-Bolyai, Cluj): <i>Primer to Molecular and Cell Biology III</i></b>

- 12:15 - 14:15 Lunch
- 14:15 - 15:30 **Prof. Ioan Andricioaei (U. of Michigan, USA):**  
*Dynamics and Thermodynamics of DNA and Protein-DNA Complexes I*
- 15:30 - 15:45 Coffee Break
- 15:45 - 17:00 **Prof. Ioan Andricioaei (U. of Michigan, USA):**  
*Dynamics and Thermodynamics of DNA and Protein-DNA Complexes II*
- 19:00 - 21:00 Dinner

Wednesday, May 16

- 9:30 - 10:45 **Prof. Ioan Andricioaei (U. of Michigan, USA):**  
*Dynamics and Thermodynamics of DNA and Protein-DNA Complexes III*
- 10:45 - 11:00 Coffee Break
- 11:00 - 12:15 **Prof. Ronald Levy (Rutgers, USA):**  
*Computational Models of Protein Biophysics I*
- 12:15 - 14:15 Lunch
- 14:15 - 15:30 **Prof. Ronald Levy (Rutgers, USA):**  
*Computational Models of Protein Biophysics II*
- 15:30 - 15:45 Coffee Break
- 15:45 - 17:00 **Prof. Ronald Levy (Rutgers, USA):**  
*Computational Models of Protein Biophysics III*
- 19:00 - 21:00 Banquet

Thursday, May 17

- 9:30 - 10:45 **Prof. Lewis Wolpert (University College, London):**  
*Topics in Development I: The Fly*
- 10:45 - 11:00 Coffee Break
- 11:00 - 12:15 **Prof. Lewis Wolpert (University College, London):**

***Topics in Development II: Vertebrates and Cell Differentiation***

12:15 - 14:15 Lunch  
14:15 - Free Evening  
19:00 - 21:00 Dinner

Friday, May 18

**9:30 - 10:45 Prof. Lewis Wolpert (University College, London):  
*Topics in Development III: The Limb and the Nervous System***

10:45 - 11:00 Coffee Break

**11:00 - 12:15 Prof. Laszlo Barabasi (Notre Dame & Northeastern U.,  
USA): *From Cellular Networks to Human Diseases I***

12:15 - 14:15 Lunch

**14:15 - 15:30 Prof. Laszlo Barabasi (Notre Dame & Northeastern U.,  
USA): *From Cellular Networks to Human Diseases II***

15:30 - 15:45 Coffee Break

**15:45 - 17:00 Prof. Laszlo Barabasi (Notre Dame & Northeastern U.,  
USA): *From cellular networks to human diseases III***

19:00 - 21:00 Dinner

Monday, May 21:

**9:30 - 10:45 Prof. John Reinitz (SUNY at Stony Brook, USA):  
*Transcriptional Regulatory Networks in Development I***

10:45 - 11:00 Coffee Break

**11:00 - 12:15 Prof. John Reinitz (SUNY at Stony Brook, USA):  
*Transcriptional Regulatory Networks in Development II***

- 12:15 - 14:15 Lunch
- 14:15 - 15:30 **Prof. John Reinitz (SUNY at Stony Brook, USA):  
*Transcriptional Regulatory Networks in Development III***
- 15:30 - 15:45 Coffee Break
- 15:45 - 17:00 **Prof. Michel Kerszberg (U. Pierre et Marie Curie, Paris):  
*Simulations of Development I***
- 19:00 - 21:00 Dinner

Tuesday, May 22

- 9:30 - 10:45 **Prof. Michel Kerszberg (U. Pierre et Marie Curie, Paris):  
*Simulations of Development II***
- 10:45 - 11:00 Coffee Break
- 11:00 - 12:15 **Prof. Michel Kerszberg (U. Pierre et Marie Curie, Paris):  
*Simulations of Development III***
- 12:15 - 14:15 Lunch
- 14:15 - 15:30 **Prof. Aviv Bergman (Albert Einstein School of Medicine,  
NY): *Evolutionary Causes and Consequences of  
Robustness***
- 15:30 - 15:45 Coffee Break
- 15:45 - 17:00 **Prof. Aviv Bergman (Albert Einstein School of  
Medicine, NY): *Functional and Evolutionary Inference in  
Gene Networks: Does Topology Matter?***
- 19:00 - 21:00 Dinner

Wednesday, May 23

- 9:30 - 10:45 **Prof. Aviv Bergman (Albert Einstein School of  
Medicine): *The Deterministic Mutation Hypothesis  
Revisited: Co-evolution of Robustness, Epistasis and  
Recombination Favors Asexual Reproduction***
- 10:45 - 11:00 Coffee Break
- 11:00 - 12:15 **Prof. Gyan Bhanot (Rutgers & Cancer Institute of NJ,**

**USA): *Population Genetics, Migrations and Complex Phenotypes***

- 12:15 - 14:15 Lunch
- 14:15 - 15:30 Dr. Gabriela Alexe (Broad Institute, Boston, USA):  
*Phylogeny Methods to Study Human Migrations***
- 15:30 - 15:45 Coffee Break
- 15:45 - 17:00 Prof. Gyan Bhanot (Rutgers & Cancer Institute of NJ,  
USA): *Introduction to the Biology of Cancer I***
- 19:00 - 21:00 Banquet

Thursday, May 24

- 9:30 - 10:45 **Prof. Gyan Bhanot (Rutgers & Cancer Institute of NJ,  
USA): *Introduction to the Biology of Cancer II***
- 10:45 - 11:00 Coffee Break
- 11:00 - 12:15 Dr. Gabriela Alexe (Broad Institute, Boston, USA):  
*Portraits of Cancer Initiation, Progression and  
Metastasis from Microarray Analysis I***
- 12:15 - 14:15 Lunch
- 14:15 - Free Evening
- 19:00 - 21:00 Dinner

Friday, May 25

- 9:30 - 10:45 Dr. Gabriela Alexe (Broad Institute, Boston, US):  
*Portraits of Cancer Initiation, Progression and  
Metastasis from Microarray Analysis II***
- 10:45 - 11:00 Coffee Break
- 11:00 - 12:15 Prof. Sorin Solomon (Hebrew University, Jerusalem):**

***The Importance of Being Discrete: Life Always Wins on the Surface***

12:15 - 14:15	Lunch
<b>14:15 - 15:30</b>	<b>Prof. Sorin Solomon (Hebrew University, Jerusalem): <i>Stochastic Logistic Dynamics and the Emergence of Scaling</i></b>
15:30 - 15:45	Coffee Break
<b>15:45 - 17:00</b>	<b>Prof. Sorin Solomon (Hebrew University, Jerusalem): <i>Microscopic Noise and Emergence of Adaptive Collective Objects</i></b>
19:00 - 21:00	Dinner