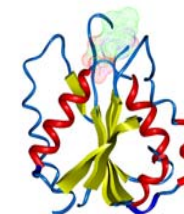


BIOLOGY AFTER THE GENOME: A PHYSICAL VIEW

BIFI 2004 – I International Conference, Zaragoza (SPAIN)



Prof. E. Shakhnovich and R. Monasson will not be attending the conference due to personal reasons.

Notice the changes affecting the talks of C. Verma, A. Trovato and R. Trippiccione

Wednesday, February 11, 2004

08:30 Registration at the Paraninfo building
10:00 Opening Act

PROTEIN FOLDING AND MACROMOLECULAR INTERACTIONS

Morning Session

Chairman: Antonio Rey (Complutense Madrid and BIFI)

10:45 – 11:40 **J. Onuchic** (San Diego) *Exploring the Protein Folding Funnel Landscape: Theory Meet Experiment.*

11:45 Break (Coffee)

12:20 – 12:45 **G. Favrin** (Lund) *Two-State Folding Over a Weak Free-Energy Barrier.*

13:30 Break (Lunch Hotel Goya)

Afternoon Session

Chairman: Pierpaolo Bruscolini (BIFI, Zaragoza)

16:00 – 16:55 **R. Trippiccione** (Ferrara) *What did we Learn in 20 Years of Dedicated Computing for Theoretical Physics*

17:00 – 17:25 **F. Piazza** (Lausanne) *Freezing Immunoglobulins to See Them Move.*

17:30 Break (Coffee)

Chairman: Victor Martin Mayor (Complutense Madrid and BIFI)

18:00 – 18:25 **J. Sancho** (BIFI, Zaragoza) *Stability of Native and of Partly Unfolded Proteins: New Concepts and Experiments.*

PHYSICS OF COMPLEXITY

18:30 – 19:25 **W. Kobb** (Montpellier) *On the Dynamics of a Rigid Rod in a Disordered Environment.*

21:00 Banquet and Aragon Musical at the Goya Hotel

Thursday, February 12, 2004

Morning Session

PHYSICS OF COMPLEXITY (CONTINUED)

Chairwoman: Liliana Arrachea (Dresden and BIFI)

09:30 – 10:25 **A.P. Young** (Santa Cruz) *Recent Developments in the Theory of Spin Glasses.*

10:30 – 10:55 **G.A. Appignanesi** (Bahía Blanca) *Activated Dynamics and Timescale Separation within the Landscape Paradigm: Signature of Complexity, Diversity and Glassiness.*

11:00 Break (Coffee)

Chairman: Francisco Guinea (ICMM, CSIC, and BIFI)

11:30 – 12:25 **E. Marinari** (Roma) *Critical Thermodynamics of 2D Ising Spin Glasses.*

12:30 – 12:55 **J.J. Ruiz-Lorenzo** (Badajoz and BIFI) *Phase Transition in Tensionless Surfaces.*

13:00 – 13:25 **V. Shelest** (Novosibirsk) *Optimal Numericalization of Symbol Sequences for Spectral Analysis: a Novel Approach to Study Gene Promoters.*

13:30 Break (Lunch Hotel Goya)

Afternoon Session

Chairman: Ramón Alvarez-Estrada (Complutense Madrid and BIFI)

16:00 Poster Session

18:30 – 18:55 **P.P. Bruscolini** (BIFI) *The Finkelstein Model for Protein Folding: Mean Field Approaches and Numerical Simulations.*

19:00 – 19:25 **V. Martín Mayor** (Complutense and BIFI) *Supercooled Liquid and Glasses: on the Relationship Between High-Frequency Dynamics and Aging Phenomena"*

20:30 Reception at the City Hall by the Mayor of Zaragoza.

Friday, February 13, 2004

MOLECULAR DESIGN (FROM THE GENOME TO PROTEINS AND DRUGS) AND DEDICATED COMPUTING

Morning Session:

Chairman: José María Sancho (Barcelona)

9:30 – 9:55 **C. Verma** (Singapore) *Protein Stability and Ligand Binding: New Paradigms from In-Silico Experiments.*

10:00 – 10:25 **A. Trovato** (Padova) *Geometrical Model for the Native-State Folds of Proteins.*

10:30 – 11:25 **H. J. Boehm** (Roche) *New Approaches to Structure-Based de Novo Design.*

11:30 Break (Coffee)

Chairman: José Manuel Sánchez Ruiz (Granada and BIFI)

12:00 – 12:55 **M. Amzel** (Johns Hopkins) *Molecular Mechanics/Dynamics Calculations of Biochemical Processes.*

13:00 – 13:55 **E. Freire** (Johns Hopkins and BIFI) *Development of Potent Inhibitors of the SARS Associated Coronavirus Protease 3C^{pro}.*

14:15 Break (Lunch Hotel Goya))

CALORIMETRY WORKSHOP - FRIDAY, FEBRUARY 13, 2004

16:30 – 17:10 **A. Velázquez-Campoy** (Zaragoza and BIFI) *Isothermal Titration Calorimetry of High-Affinity Interaction.*

17:10 – 17:50 **J.E. Ladbury** (London) *Thermodynamic-Structural Correlation in Biomolecular Interactions.*

17:50 – 18:10 Break (Coffee)

18:10 – 18:50 **A. Cooper** (Glasgow) *An Alternative View of Heat Capacity Effects on Protein Folding and Interactions.*

18:50 – 19:30 **J.M. Sanchez-Ruiz** (Granada and BIFI) *Differential scanning calorimetry of proteins: studies on barrierless folding, residual structure in denatured states and protein evolution.*

