

## SECOND BIFI INTERNATIONAL CONGRESS

*“From Physics to Biology: The Interface between Experiment and Computation”*

The Institute for Biocomputation and Physics of Complex Systems, BIFI, is organizing the conference *“From Physics to Biology: The Interface between Experiment and Computation”* to be held from 8-11 February 2006 in Zaragoza, Spain.

During the last several years, molecular biology has attracted the attention of both biologists and physicists and it has moved from the study of individual components toward the modeling and understanding of many interacting components. On the other hand, the complexity of biomolecules and their collective behavior make it necessary the interaction between those researchers devoted to experimental and theoretical studies. The aim of the **BIFI-06** Conference is to bring together researchers working at the interface between Physics and Biology from both the theoretical and experimental point of views. The topics of the conference are Nucleic Acids, Proteins and Peptides and Collective Behavior of Biomolecules. Specifically, the subjects covered include,

- *Ab initio and DFT molecular computations.*
- *Solvation Energy.*
- *Energy Functions.*
- *Mechanical properties of DNA and RNA: unzipping and stretching of single molecules.*
- *Structure and folding of RNA.*
- *Non canonical forms of DNA .*
- *Docking of virtual ligand libraries containing millions of molecules.*
- *Conformational flexibility and docking.*
- *Energy landscapes and ligand binding.*
- *Protein-protein interactions: the interactome.*
- *Signal networks and disease.*
- *Macromolecule folding with emphasis in structure prediction.*
- *Biomolecular interactions and their analysis with theoretical and computational approaches of relevance for ligand and drug design*
- *Self - assembly of DNA structures and proteins.*
- *Cell Signaling.*
- *Chromosome structure.*
- *Molecular Networks.*
- *Disordered Systems and Neural Networks.*

### ***Participation***

The Organizing Committee promotes a call for contributions. There will be 11 invited lectures and around 16 short (25 minutes) oral contributions to be selected among those presented as a poster when they are best suited for a talk. Otherwise, they should be included in the poster session. Please see the web page of the conference (<http://bifi.unizar.es/bifi2006>) to know how to proceed or contact directly the local organizers by sending an email to Dr. Yamir Moreno: [yamir@unizar.es](mailto:yamir@unizar.es) no later than November 15, 2005.





Instituto de **Bi**ocomputación  
y **F**ísica de sistemas complejos

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Scientists and students from all countries are welcome to attend the conference. Please, note that the maximum number of attendees is limited to 200. The Conference fee is 370 € for early registration (before October 15) and 450 € for late registration. The Conference fee includes hotel accommodation (breakfast included) during the dates of the conference, a banquet dinner and coffee breaks. We expect to have limited funds in the form of fellowships for students and young post-docs to cover only the Conference fee.

### **Lectures and Keynote Speakers**

The list of invited speakers includes:

- M. Amzel (Johns Hopkins)
- C. Cavasotto (Molsoft)
- S. Cocco (ENS, Paris)
- E. Freire (Johns Hopkins and BIFI)
- M. Karplus (Strasbourg and Harvard)
- S. Leibler (Rockefeller University)
- A. Perczel (Eotvos)
- A. Tramontano (University of Rome “La Sapienza”)
- G. Waksman (Institute of Structural Molecular Biology)
- M. E. Wall (Los Alamos)
- E. Westhof (Strasbourg)

### **Important dates**

Deadlines:

- Early registration: October 15, 2005
- Last day to complete registration: November 15, 2005
- Poster abstract submission: January 5, 2006

### **Contact information:**

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