The Abdus Salam International Centre for Theoretical Physics

ICTP-INFM Conference on "New Frontiers in Nano-Biotechnology: Monitoring Protein Function with Single-Protein Resolution"

Organizer(s): M. Giacca, V. Pellegrini, V. Tozzini - Local Organizer: Paolo Carloni
Trieste - Italy, 14 - 19 July 2003

Venue: Adriatico Guest House Kastler Lecture Hall

Final programme

Monday, 14 July 2003 (Room:Adriatico Guest House Kastler Lecture Hall)

09:30 - 09:45	**Opening** ICTP (Prof. K.R. Sreenivasan - Director, Abdus Salam International Centre for Theoretical Physics) 10'
09:45 - 10:00	**Valentina Tozzini** / *Conference Director* **Notices and Remarks**
10:00 - 10:45	**Michele Parrinello**
10:45 - 11:00	--- coffee break ---
11:00 - 11:45	**Anna Tramontano** **Computational biology challenges in the post-genomic era**
12:30 - 14:30	--- lunch break ---
14:30 - 15:15	**Paolo Carloni** / *Conference, Local Organizer* **Ab initio molecular dynamics of systems of pharmaceutical relevance**
15:15 - 15:45	**Ana Damjanovic** **Theoretical Studies of Light Harvesting Proteins**
15:45 - 16:15	--- coffee break ---

16:15 - 16:45	**Houyu Zhang** **A partially incoherent rate theory of long-range charge transfer in DNA**

Tuesday, 15 July 2003 (Room:Adriatico Guest House Kastler Lecture Hall)

09:00 - 09:45	**Christoph Bräuchle** **Optical Experiments with Single Molecules in Material- and Bioscience**
09:45 - 10:30	**Rosa Di Felice** **Theoretical Investigation of Metal Ions in DNA-based nanowires**
10:30 - 11:15	**Giacinto Scoles** **Nanografting oriented de-novo proteins on surfaces**
11:15 - 11:45	--- coffee break ---
11:45 - 12:30	**Gianluca Lattanzi** **Motor proteins: Kinetics and Structure in coarse grained models**
12:30 - 14:30	--- lunch break ---
14:30 - 15:15	**Mauro Giacca** / *Conference Director* **Intercellular trafficking of the HIV-1 Tat protein probed by optical nanotechnologies**
15:15 - 16:00	**Maria F. García-Parajó** **Nano-scale organisation of receptor molecules on the membrane of Dendritic cells**
16:00 - 16:30	--- coffee break ---
16:30 - 17:00	**Marjolein Koopman** **Single molecule detection on cell membranes using ultra-high resolution optical microscopy**
18:00 - 18:00	(Room: Adriatico Guest House (Terrace)) --- Get-together/Welcome drink ---

Wednesday, 16 July 2003 (Room:Adriatico Guest House Kastler Lecture Hall)

09:00 - 09:45	**Eaton Lattman** **Buried titratable groups in proteins: Mechanisms of dielectric compensation**
09:45 - 10:30	**Saverio Alberti** **Folding, stability and fluorescence efficiency of the Green and Red Fluorescent Proteins**
10:30 - 11:15	**Riccardo Nifosi** **Relationship between structure and photophysics in Green Flourescent Proteins: a theoretical study**
11:15 - 11:45	--- coffee break ---
11:45 - 12:30	**George N. Pavlakis** **Study of protein interaction and nucleo-cytoplasmic trafficking using FRET and FRAP in live cells**
12:30 - 14:30	--- lunch break ---

14:30 - 19:30	**Afternoon free for excursions**

Thursday, 17 July 2003 (Room:Adriatico Guest House Kastler Lecture Hall)

09:00 - 09:45	**Udo Spöri** **Light Optical Nanoscopy**
09:45 - 10:30	**Petra Schwille** **Confocal detection and beyond: On the look-out for single molecules**
10:30 - 11:15	**Peter Langhoff** **Theoretical Studies of Fluorescent Proteins**
11:15 - 11:45	--- coffee break ---
11:45 - 12:15	**Alessandra Magistrato** **Characterization of the Dizinc Analogue of the Synthetic Diiron Protein DF1 via ab initio and Hybrid Quantum/Classical Molecular Dynamics Simulations**
12:30 - 14:30	--- lunch break ---
14:30 - 17:00	**poster session**
19:30 - 19:30	(Room: Adriatico Guest House (Terrace)) --- DINNER ---

Friday, 18 July 2003 (Room:Adriatico Guest House Kastler Lecture Hall)

09:45 - 10:30	**Jonathon Pines** **The spatial and temporal control of proteolysis in dividing cells**
10:30 - 11:15	**Alessandro Marcello** **Tat-mediated protein complex assembly at the integrated HIV-1 promoter**
11:15 - 11:45	--- coffee break ---
11:45 - 12:15	**Dirk Daelemans** **Measurement of interactions of the nuclear export factor CRM1 with its cargo in live cells**
12:30 - 14:30	--- lunch break ---
14:45 - 15:15	**Anushree Roy** **Real-time Visualization of Nuclear Import of ERK in Living Cells**
15:15 - 16:00	**Hiroaki Yokota** **Single molecule imaging of protein dynamics**
16:00 - 16:30	--- coffee break ---
16:30 - 17:00	**Gueguim E.B Kana** **Computer aided approach to locate the conserved regions of Aminoacid sequences**

Saturday, 19 July 2003 (Room:Adriatico Guest House Kastler Lecture Hall) (**Saturday**)

09:00 - 09:45	**Tullio Pozzan** **Second messenger dynamics in living cells**
09:45 - 10:30	**Aldo Ferrari** **Engineering single-molecule fluorescence dynamics for bio-molecular applications**
10:30 - 11:00	**Simone Raugei** **A Proficient Enzyme: Insight on the Mechanism of Orotidine Monophosphate Decarboxylase from Computer Simulations**
11:00 - 11:30	--- coffee break ---
11:30 - 12:30	**Carlos Simmerling** **Simulations of Protein Structure and Folding: What Can We Learn?**
12:30 - 12:45	**Concluding Remaks**
12:45 - 14:30	--- lunch ---