



International workshop on

"Polymers with spatial and mechanical constraints"

Istituto Veneto di Scienze, Lettere ed Arti,
Venice - Italy
7 – 9 July, 2016

The configurations and function of large biological molecules such as DNA and RNA can be nowadays manipulated either through confinement in nano-fluidic volumes or by applying pico-forces by using optical/magnetic tweezers and atomic-force microscopes. These very recent techniques obviate the need for cloning and molecular amplification steps and enable researchers to detect physical phenomena that in the past would have been obscured by ensemble averaging.

These devices can be used not only to study the dynamical and mechanical properties of biomolecules but also to obtain genomic information and to characterize biological interactions at molecular level.

•These phenomena will be addressed by this workshop, spanning from application of these devices in the generic science to the exploration of the underlying physics. The workshop, by gathering eminent researchers in nano-fluidics, biophysics, material physics and computational physics (see list below) will integrate state of the art micro-manipulation single molecule experiments, theory and computational approaches.

Organizers

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[http://www.pd.infn.it/~orlandini/
Venice_2016/venice_2016.html](http://www.pd.infn.it/~orlandini/Venice_2016/venice_2016.html)

List of Speakers

Tapio Ala-Nissila
University School of Science, Finland

Elena Angeli
Dip. Fisica UniGe, Italy

Tobias Ambjornsson
Lund University, Sweden

Michele Caraglio
Dip. Fisica e Astronomia UniPd, Italy

Enrico Carlon
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Peter Cifra
Slovak Academy of Sciences, Slovakia

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Delft University of Technology, The
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Giovanni Dietler
EPFL, Switzerland

Max di Ventra
University of California San Diego, USA

Erwin Frey
Universitat Munchen, Germany

Patrick Doyle
MIT, USA

Alexander Grosberg
University of Minnesota, USA

Suckjoon Jun
University of California San Diego, USA

Yacov Kantor
Tel Aviv University, Israel

Mehran Kardar
MIT, USA

Christos Likos
University of Wien, Austria

Ralf Metzler
Universitaet Potsdam, Germany

Dmitrii Makarov
University of Texas, USA

Yitzhak Rabin
Bar-Ilan University, Israel

Aleksandra Radenovic
EPFL, Switzerland

Walter Reisner
Mc Gill University, Canada

Felix Ritort
Universitat de Barcelona, Espagna

Takahiro Sakaue
Kyushu University, Japan

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University of Ottawa, Canada

Stu Whittington
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