

# Workshop on Physical Virology



**17 - 21 July 2017**  
**Trieste, Italy**

Further information:

Activity URL: <http://indico.ictp.it/event/7978/>

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Physical Virology is a nascent discipline involving the development and application of physics-based quantitative methods for characterization of various aspects of the “life cycle” of viruses.

This area of research has been rapidly growing for at least two reasons. First, the “molecular minimality” of viruses implies that their life cycle must rely on passive physical mechanisms to an extent that has no parallel in bacterial or eukaryotic cells, which have a more complex organization. Secondly, experimental techniques are nowadays capable of probing the living and inanimate matter at the nanoscale, thus providing an unprecedented insight into the structural and dynamical behaviour of viruses.

This workshop aims at providing a state-of-the-art overview of the topic by bringing together theorists and experimentalists to present and discuss the latest advancements.

## Topics

The workshop will particularly focus on:

- the structure and self-assembly of viral capsids;
- the nature and energetics of packaging of the genome;
- the dynamics and nanoscale interactions responsible for viral genome delivery;
- the systemic spreading of viral infections; and
- the adaptive response to evolutionary pressure of the highly optimized viral genome.

## How to apply:

Online application:

<http://indico.ictp.it/event/7978/>

Female scientists are encouraged to apply.

## Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Partial travel support will be provided to selected graduate students and postdocs who will be invited to attend the workshop.

## Directors:

C. MICHELETTI, SISSA

R. PODGORNIK, UNIVERSITY OF LJUBLJANA

R. ZANDI, UNIVERSITY OF CALIFORNIA, RIVERSIDE

## Local Organizer:

A. CELANI, ICTP

## Speakers:

A. BEN-SHAUL, The Hebrew U. Jerusalem

B. BOTHNER, Montana State U.

R. BRUINSMA, UCLA

M. CASTELNOVO, ENS Lyon

M. CIEPLAK, IFPAN, Warsaw

P. J. DE PABLO GÓMEZ, U. Autónoma de Madrid

B. DRAGNEA, Indiana U.

A. EVILEVITCH, Carnegie Mellon U.

W. M. GELBART, UCLA

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C. UETRECHT, Leibniz Inst. for Experimental Virology, Hamburg

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