

# School on Biophysical Approaches to Macromolecules and Cells: Integrated Tools for Life Sciences and Medicine



**9 - 20 September 2019**  
**NM-AIST, Arusha, Tanzania**

Further information:  
<http://indico.ictp.it/event/8718/>  
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The application of physics to the life sciences has a long history, but over the last decades there has been a marked acceleration in a variety of related fields. Current approaches require a much closer link between physicists, chemists, computational scientists, on the one hand, and biologists/medical scientists, on the other, as well as the acquisition of a shared “language” and background.

The aim of the school is to introduce young African researchers to the latest developments in the field of molecular biophysics, and to help forge links between theoretical and experimental communities, acting as a focus for the emerging biophysical sciences in Africa.

## Description:

The rapid development in the fields of biophysics, structural biology and nanotechnology has made available a new range of tools and approaches that have revolutionized biological and medical research, by allowing scientists to understand biology at the molecular level, manipulate nano-particles and macromolecular objects, and to monitor the behavior of single molecules.

These developments are strongly connected to advances in computational biology and structural bioinformatics - ranging from structural biology to nanobiophysics, nanomedicine, single-molecule approaches - and with a revolutionary impact on biotechnology, pharmacology, drug delivery and early diagnostics of wide spread diseases.

## Topics:

- Structural Biology
- Molecular Biophysics
- Single-molecule Experiments
- Data Science
- Drug Design
- Molecular Dynamics
- Aqueous Chemistry

## How to apply:

Online application:  
<http://indico.ictp.it/event/8718/>

Female scientists are encouraged to apply.

## Grants:

A limited number of grants are available to support the attendance of African selected participants. There is no registration fee.

## Directors:

L. CASALIS, Elettra-Sincrotrone Trieste  
L. W. KIRURI, Kenyatta University  
A. A. MOHAMMED KHALID, Göttingen University  
M. N. NGAVOUKA, Univ. Marien Ngouabi, Brazzaville  
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## Local Organizers:

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H.S. SWAI, CREATES, NM-AIST, Arusha, Tanzania

## ICTP Scientific Contact:

A. HASSANALI, ICTP

## School Lecturers:

L. CASALIS, Elettra, Italy  
P. COSSIO, University of Antioquia, Colombia  
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## Deadline:

**31 May 2019**



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