

ERICE 2026

Chromatin landscapes: Linking physical reality with biological destiny

Directors of the Course: R. Bizzarri · A. Diaspro · E. Hinde

15 OCT THURSDAY	18:15 Opening Remarks 18:30 Bruce Alberts · Lectio Magistralis	Learning from failure: Life as an education.	19:30 Dinner · Marsala Room
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16

OCTOBER
FRIDAY

09:00-10:00

Andrew Belmont

The relationships between nuclear organization and genome function

10:00-11:00

Andrew Belmont

Re-imagining the relationship between nuclear organization and gene expression via nuclear speckle, perispeckle, and gene dynamics.

11:00-11:30

Coffee Break - Poster

11:30-13:00

Mario Nicodemi

Phase transitions in the nucleus of cells shape chromatin 3D architecture and functions.

13:00-15:00

Lunch

17

OCTOBER
SATURDAY

09:00-10:00

Ranieri Bizzarri

A short microscopy course for the adventurous naturalist.

10:00-11:00

Christoph Cremer

Imaging of the Chromatin Landscape: Why do we need Super-Resolution Microscopy?

11:00-11:30

Coffee Break - Poster

11:30-13:00

Paolo Bianchini

Resolving chromatin: nanoscopy tools to see its three-dimensional organisation

13:00-15:00

Lunch

18

OCTOBER
SUNDAY

09:00-10:00

Christoph Cremer

Quantitative Analysis of the Chromatin Landscape by Super-Resolution Microscopy

10:00-11:00

Elizabeth Hinde

Seeing the Chromatin Landscape: Quantifying Chromatin Architecture with FLIM and FRET

11:00-11:30

Coffee Break - Poster

11:30-13:00

Francesca Cella Zancacchi

Quantitative single-molecule localization microscopy and radiobiology applications.

13:00-15:00

Lunch

19

OCTOBER
MONDAY

09:00-10:00

Irene Farabella

Reconstructing the 3D Genome: From Ensemble Views to Single-Cell Chromatin Tracing and Modelling.

10:00-11:00

Stefano Manzo

Theoretical lecture: Chromatin Dynamics at the Nuclear Periphery.

11:00-11:30

Coffee Break - Poster

11:30-13:00

Spartaco Santi

The Journey of DNA Beyond the Genome: from Chromatin Architecture to Cellular Fate and from Extracellular DNA to Intercellular Communication.

13:00-15:00

Lunch

20

OCTOBER
TUESDAY

09:00-10:00

Davide Mazza

Dynamics of diffusible factors in the eukaryotic nucleus: transcription factor search mechanism.

10:00-11:00

Davide Mazza

Dynamics of diffusible factors in the eukaryotic nucleus: single molecule microscopy insights.

11:00-11:30

Coffee Break - Poster

11:30-13:00

Aldo Pagano

The extreme plasticity of neoplastic cells in solid tumors and changes in chromatin structure in response to plasticity/transdifferentiation events in neuroblastoma.

13:00-15:00

Lunch

15:00-16:00

Walter Rocchia

Theoretical lecture - Continuum Electrostatics for Chromatin: From Poisson-Boltzmann Theory to Multiscale Models

16:00-17:00

Walter Rocchia

Applicative lecture - Electrostatics of the Nucleosome: From Histone-DNA Forces to Chromatin Compaction

17:00-17:30

Coffee Break - Poster

17:30-19:00

Valeria Vetri

Biomolecular condensates: mechanisms of formation and maturation.

19:00-19:30

Discussion

19:30

Dinner · Marsala Room

15:00-16:00

Nicole Francis

Mechanisms to maintain chromatin information through the cell cycle.

16:00-17:00

Nicole Francis

Protein polymerization and phase separation in Polycomb function.

17:00-17:30

Coffee Break - Poster

17:30-19:00

Ranieri Bizzarri

Condensates for better or for worse: an evolutionary dynamic paradigm rooted in biophysics.

19:30

Dinner · Marsala Room

15:00-16:00

Elizabeth Hinde

Navigating the Chromatin Landscape: Fluorescence Fluctuation Spectroscopy of DNA Target Search

16:00-17:00

Ines Delfino

Vibrational Micro-Spectroscopy of Chromatin under Stress: From Molecular Changes to Nuclear Reorganization. Method.

17:00-17:30

Coffee Break - Poster

17:30-19:00

Ines Delfino

Vibrational Micro-Spectroscopy of Chromatin under Stress: From Molecular Changes to Nuclear Reorganization. Application.

19:00-19:30

Flash Talks & Discussion

19:30

Dinner · Marsala Room

15:00-16:00

Stefano Manzo

Practical course: Genomic Approaches to Study Genome Structure.

16:00-17:00

Jurek Dobrucki

Interaction of photons of various energies with DNA, and consequences for live cells

17:00-17:30

Coffee Break - Poster

17:30-19:00

Jurek Dobrucki

What fluorescence imaging and next generation sequencing reveal about DNA damage and repair.

19:00-19:30

Flash Talks & Closing Remarks

19:30

Dinner · Marsala Room