

JANUARY 18-19, 2024

SISSA, VIA BONOMEA 265, TRIESTE
BIG MEETING ROOM, 7TH FLOOR

Pro3

joint programme 2023-2024

2nd Workshop

**Scientific computing
for natural sciences,
social sciences,
and applications:
methodological
and technological
development**

THURSDAY, JANUARY 18

Pro3 joint programme 2023-2024

2nd Workshop

- 14.00** Opening address
Gianluigi Rozza
- 14.10** “Identifying informative distance measures
in high-dimensional feature spaces”
Alessandro Laio (SISSA)
- 14.40** “Quantum ESPRESSO at the exascale”
Ivan Carnimeo (SISSA)
- 15.10** “Reduced Order Modelling: state of the art and challenges”
Gianluigi Rozza (SISSA)
- 15.40** “Full and reduced order models for the simulation
of geophysical flows”
Michele Girfoglio (SISSA)
- 16.10** Coffee Break
- 16.30** “Turbulent thermal convection with ice melting”
Roberto Verzicco (GSSI)
- 17.00** “Phase field modelling and simulation of damage
in human vertebra after screws fixation”
Pietro Lenarda (IMT School)
- 17.30** “High-fidelity digital twin models for computational archaeology”
Maria Rosaria Marulli (IMT School)

FRIDAY, JANUARY 19

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- 9.00** “New generation potential flow solvers for aeronautic and naval engineering applications”
Andrea Mola (IMT School)
- 9.30** “An agent-based approach integrating traffic and environmental emission simulations for public authorities”
Marco Paggi (IMT School)
- 10.00** “Solving integro-differential equations modeling pharmacodynamics”
Nicola Guglielmi (GSSI)
- 10.30** “Dynamic Land Cover Mapping exploiting satellite images: Insights on Large Raster Datasets processing”
Andrea Taramelli/Margherita Righini (IUSS)
- 11.00** **Coffee Break**
- 11.20** “Multiscale approaches for computational spectroscopy in solution”
Chiara Cappelli (SNS)
- 11.50** “Multiscale Models for Molecular Plasmonics”
Tommaso Giovannini (SNS)
- 12.20** Closing Remarks and Discussion
Gianluigi Rozza and Marco Paggi