Advanced School on High-Perfomance Computing and Applied AI for High-Resolution Regional Climate Modeling
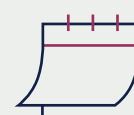
Description:

One of the new scientific frontiers in climate science is High-Resolution Kilometer-Scale Climate Projections. In the last years the role and potential of AI has been explored to complement the standard physically based dynamical models to overcome the main limitation due to the need of massive computational resources, to decrease the simulation time and to possibly improve the understanding of fine scale dynamic. The 2-week joint ICTP/UM6P event, with the participation of the Arab Fund for Economic and Social Development, aims to equip scientists with an understanding of contemporary computer tools to master the state of the art techniques for advanced climate modeling using the most powerful facility for high-performance computing hosted on the African continent. It offers an intensive curriculum emphasizing hands-on skills vital for modern scientists using HPC resources, alternating direct lectures and lab sessions.

MORE INFORMATION:

Special emphasis will be placed on young researchers and practitioners, as well as master's and PhD students interested in enhancing their climate modeling skills. Gender balance will also be prioritized, as much as possible, while considering qualifications and available candidates. The call for applications will specify the main criteria of selection, underlining that applications from Africa and the Arab world are strongly encouraged and financially supported.

TOPICS:

- Regional climate modeling : from theory to applications
- High-Perfomance Computing and Applied AI
- ML based Regional Climate Emulators

8 - 19 September 2025

Ben Guerir - Morocco

Deadline: 15 June 2025

DIRECTORS:
Robert Basmadjian, UM6P
Ismail Berrada, UM6P
Erika Coppola, ICTP
Serafina Di Gioia, ICTP
Fatima Driouech, UM6P
Ivan Girotto, ICTP
Imad Kissami, UM6P

ICTP SCIENTIFIC CONTACT:
Erika Coppola, ICTP
Ivan Girotto, ICTP

FURTHER INFORMATION:

E-mail: smr4054@ictp.it

Web: https://indico.ictp.it/event/10819/

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.