

4th Summer School on Theory, Mechanisms and Hierarchical Modeling of Climate Dynamics: Atlantic Variability and Tropical Basin Interactions at Interannual to Multi-Decadal Time Scales



31 July - 11 August 2023
An ICTP hybrid meeting
Trieste, Italy

Further information:
<https://indico.ictp.it/event/10198/smr3864@ictp.it>

The activity will combine a graduate-level summer school on state-of-the-science knowledge in Atlantic multi-decadal variability and tropical basin interactions, followed by a workshop on current research topics in the field.

Description:

Tropical ocean basins influence each other on seasonal and longer timescales. Variations in the Atlantic multi-decadal variability (AMV) can drive changes in the tropical Pacific and Indian Oceans via atmospheric teleconnections, even modulating global warming.

The first week of the summer school will be devoted to:

(i) current theories for the Atlantic Meridional Overturning Circulation (AMOC) variability and stability, governing mechanisms of AMV and role in TBIs

(ii) mechanisms underlying tropical mean climate, ocean-atmosphere interactions at interannual to decadal timescales.

The second week will be centered on current research topics, such as the potential factors driving and modulating TBIs, the relative role of AMV and AMOC, as well as historical and future changes.

Hands-on training will be aimed at introducing participants to a hierarchy of climate models for simulating AMV and TBIs.

Topics:

- The relative role of AMOC in setting AMV spatial patterns and timescale;
- Factors controlling tropical basins interactions (TBIs) at different timescales and their modulation;
- How climate models simulate the AMV/AMOC interaction and TBIs
- How do AMV/AMOC and TBIs evolve in a warming climate

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How to apply:

Online application:
<https://indico.ictp.it/event/10198/>

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.

Deadline:

1 May 2023



The Abdus Salam
**International Centre
for Theoretical Physics**
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