Tropical dynamics & Global monsoon

When: June 17 – June 24, 2024

Where: Indian Institute of Technology Bombay (IIT Bombay), India

This is designed to give an overview of the dynamics in the tropics and of the different monsoon systems. We will start by introducing the theories of monsoon and its large-scale structure during summer and winter and its variability. We then discuss monsoon as a coupled system. We explore how the characteristics of monsoon systems and circulation features such as the Hadley cell, the Walker circulation have changed as the planet warmed. We end by teaching the processes associated with cloud microphysics and precipitation. In addition, we have set up hands-on sessions where the students will learn to use python to handle climate data and get exposed to simple climate models, Large Eddy Simulations (LES) & Direct Numerical Simulations (DNS) as well as Global Climate Models (GCMs). The students will be given individual assignments and have to collaborate to solve group assignments. The hands-on session will train the students to perform analysis of their own research using python.

Departments from Which Students Can Attend the Course:
UG & PG Students (Climate science, Mechanical, Chemical, Civil, Computer science, Electrical, Engineering Physics, Mathematics)

Students are requested to carry their laptops as it will be required during the hands-on training sessions.

What we provide:

- Invitation Letters
- Airport Pickup & Drop off
- On campus accomodation (16th June 2024 to 23rd June 2024)
- Meals (Breakfast, Lunch, Dinner)
- Registration fee USD 65

Deadline for Registration: Kindly send the details in the google format by 15th April, 2024