Indian Institute of Technology Bhubaneswar

Extreme Weather and Climate Variability: Observation, Understanding and Prediction

Training Workshop, December 22-31, 2016

In a changing climate scienario there is a trend in increase of extreme weather events such as severity of tropical cyclone, intense rainfall situations, cloud burst events, severity in lightning events, prolonged heat wave/cold wave conditions over Indian region. In addition, there are notably irregularities in the monsoon rainfall over Indian region impacting spectrum of areas such as agriculture, water resources, disaster management, energy..etc. which has direct consequence to Indian economy. Therefore, efforts must be made to accurately understand the factors responsible for systematic modulations of weather and climate. This course, is a step towards understanding fundamental and important concepts, processes through observations, state of the art numerical models, statistical techniques used in numerical weather prediction system. Further, advanced numerical methods/techniques used in high resolution weather and climate models for improving weather and climate prediction skills at different scales of forecast will be discuss and deliberated by experts.

International Faculty

Prof. Tiruvalum N Krishnamurti is the Lawton Distinguished Professor of Meteorology in the Department of Earth, Ocean and Atmospheric Sciences at Forida State University (FSU), USA. He is the recipient of several awards of excellence in his field including the most prestigious award in meteorology the International Meteorological Organization Prize from the World Meteorological Organization (WMO), the Carl Gustav-Rossby Research Medal of the American Meteorological Society (AMS) and Sir Gilbert Walker Gold Medal by Indian Meteorological Society (IMS). His research interests includes Monsoon variability, Tropical cyclone, Application of Dynamical and Statistical modeling for Weather and Climate forecast. He is the pioneer in Numerical Weather Prediction, Superensemble techniques for accurate tropical cyclone (track, landfall, intensity), and monsoon forecasts (droughts, floods, heavy rainfall). Further, developed the algorithm of Physical Initialization for Dynamical models with thrust on improving rainfall forecast over tropical region. An accomplished academician, researcher and mentor. He has an exemplary record on publications and citation.

Prof. Ruby Krishnamurti is the J Stewar Turner Professor of Oceanography at FSU, USA. Her interest includes turbulent convection, double-diffusive instability and application toward a better understanding of Ocean circulation. She has significantly contributed towards understanding bio-convection and on the heat budget of oil-contaminated Arctic Sea ice, as well as on stability and transition to turbulence. She has experience in developing laboratory and mathematical models for turbulent convection, wind driven large scale ocean circulation and double diffusion. She is an accomplished Fluid Dynamicist and Oceanographer and has an excellent record of publications and citations.

Course Coordinator

Dr. Sandeep Pattnaik is the Assistant Professor in the School of Earth Ocean and Climate Sciences (SEOCs), IIT Bhubaneswar. He has worked as Scientist at Indian Institute of Tropical Meteorology (IITM), Pune. His research interest includes tropical cyclone, monsoon and extreme weather events. His research work has been published in many national and international peer reviewed journals.

Co-coordinator: Dr Sourav Sil has Ph.D. from IIT Kharagpur, working as an Assistant Professor at SEOCs. His research interest includes Ocean circulation, Wave modeling, Ocean State Forecasting. He has published research papers in peer reviewed journals.

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Participants

Working in the areas of Atmosphere, Ocean, Weather and Climate Sciences

- B.E./ M.Sc / M.Tech./Ph.D./Post-doc students/scholars, Research associates
- Faculty/Scientists of Universities /IITs/ NITs/Operational and Research institutions.
- Professional, Risk analysts, NGOs working in Weather, Climate and Water related areas at different public as well as private institutions.

Registration Fee

The Participation fees for taking the course is as follows the workshop:

1) Participants from Abroad : $500
2) Participants from India
   a) Professional (from Industry): Rs: 7000
   b) Faculty Members/Scientists: Rs. 5000
   c) Students/Research Scholar: Rs. 1000

The above fee includes all instructional materials, tutorials, and Internet facility during class hours. The participants will be provided with single/double bedded accommodation on payment basis on availability of hostel rooms. Limited number of travel grants (III AC train fare) are available. For any queries regarding registration or other practical information, please contact the course coordinator.

Register online at http://www.gian.iitkgp.ac.in/GREGN

Bank details for online payment of course fee:
A/C Name: CEP, IIT Bhubaneswar
A/C No: 24282010001960
IFSC Code: SYNB0002428
Bank Name: Syndicate Bank
Branch Address: Indian Institute of Technology (IIT) Bhubaneswar