



Azadi Ka Amrit Mahotsav

Annual Monsoon E-Workshop and National E-Symposium on “Changing climate and extreme events: impacts, mitigation & Role of oceans”

Date : 21st – 23rd February, 2022

Organised by:

Indian Meteorological Society, Pune Chapter (IMSP)

In association with

IITM Pune, IMD Pune and Ocean Society of India, Pune Chapter

Day 1 : 21st February, 2022

Annual Monsoon Workshop on Monsoon 2021

(Day1: 21 Feb: Youtube link: <https://youtu.be/utbzJvW-sdI>)

Day 2-Day 3 : 22nd – 23rd February, 2022

National E-Symposium on “Changing climate and extreme events: impacts, mitigation & Role of oceans”

(Day2: 22 Feb: Youtube link: <https://youtu.be/YWTTZF5ZfQw>)

(Day3: 23 Feb: Youtube link: <https://youtu.be/DgQO5SIL3Eg>)

Poster viewing available (18-23 February, 2022) at

<https://www.tropmet.res.in/imsp/>

Hosted By

Indian Meteorological Society, Pune Chapter (IMSP)

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Annual Monsoon Workshop on Monsoon 2021

Jointly Organised by

India Meteorological Department, Pune (IMD Pune),
Indian Institute of Tropical Meteorology (IITM),
Indian Meteorological Society, Pune Chapter (IMSP)

Day 1 : 21st February, 2022

(21 Feb: Youtube link: <https://youtu.be/utbzJvW-sdl>)

Time	Agenda	Speaker
0930-1020	Inauguration session	
9.30	Inviting and welcoming dignitaries to virtual Dias Chief guest: Dr. M. Mohapatra, DGM IMD & President IMS, Guests of honour: Dr. R. Krishnan, Director IITM, & Shri. K.S. Hosalikar, Head, CR&S,SI, IMD Pune	
9.35-09.40	Saraswati Vandana	
9.40-09:45	Welcome address by Chairman, IMSP	
9.45-09.50	Felicitation/Introduction of the Chief Guest and Guests of Honour	
9.50-9.55	E-release of proceedings/IMSP Bulletin	
9.55-10.05	Inaugural address by the Chief Guest, DG, IMD	
10.05-10.10	Address by the Guest of Honour, Director, IITM	
10.10-10.15	Address by the Guest of Honour, Head, CR&S, IMD Pune	
10.15-10.20	Vote of Thanks (by IMSP Secretary)	
10.20-13.00	Technical Session on Features of 2021 Monsoon (SW & NE)/ Monsoon Discussion Chairperson(s): Dr. K.S. Hosalikar & Dr. S.A. Rao	
10.20-10.45	Keynote Talk: Monsoon Mission	Dr. Suryachandra Rao
10.45-11.05	Seasonal outlook of monsoon 2021	Dr. O.P. Sreejith
11.05-11.25	NE Monsoon 2021	Dr. Geetha Balasubramanian, IMD Chennai
11:25-11:45	Oceanic conditions during 2021	Dr. Anant Parekh
11:45-12:05	Synoptic aspects of monsoon 2021	Dr. Sakha Sanap
12:05-12:25	Forecast of systems during 2021 monsoons	Shri Tanmoy Goswami
12:25-12.45	Agricultural aspects of monsoon 2021	Dr. Ashutosh Mishra
12:45	General discussions on monsoon 2021	
	LUNCH BREAK (1300 to 1400)	

1400-1800	<u>Technical Session on Theme1- Indian Monsoon</u> Chairperson(s): Dr. R. R. Kelkar and Dr. A.K. Sahai Rappouter: Sunil Kumar & Sukanya Patra	
14:00-14:25	Keynote talk: Indian summer monsoons of 2020 and 2021	Prof. S. Gadgil
14:25-14:50	Key note talk: Global Climate Change and Impacts on Monsoon Hydrological Cycle	Dr. R. Krishnan
14:50-15:10	Invited talk: Indian Summer Monsoon Variability: El Niño-teleconnections and beyond	Dr.J.S. Chowdary
	Oral presentations	
15.10-15.20	Relationship between Azores High and Indian summer monsoon	Dr Ramesh Kumar Yadav
15.20-15.30	Multi-Model Ensemble prediction of rainfall over Indian region at district scale	Dr. M. T. Bushair
15.30-15.40	Contrasting cloud vertical structure during Monsoon intra-seasonal variations over geographically different Indian regions using CloudSat	M.C.R Kalapureddy
15.40-15.50	Strengthening of ENSO-monsoon relationship over Southern Peninsular India during recent times	Monalisa Sahoo
15.50-16.00	Storm scale convection associated with the modes of intra-seasonal oscillation in the monsoon trough region	Abhishek Kumar Jha
16.00-16.10	Atmospheric vertical structure of turbulence over core monsoon zone in Central India	Meenu R Nair
16.10-16.20	Analysing seasonal variations of tropical tropopause and the impact of deep convection on tropopause structure over a high altitude station in the Western Ghats	Ambuj K Jha
16.20-16.30	Latitudinal shift of Asian jet and its influence on Indian summer monsoon rainfall in observations and CFSv2 hindcast	Amol Vibhute
16.30-16.40	Simulation of interannual relationship between the Atlantic zonal mode and Indian summer monsoon in CFSv2	Vijay Pottapinjara
16.40-16.50	Decadal variability of summer monsoon rainfall over the Western Ghats and Monsoon Core Zone	Subrota Halder
16.50-17.00	Influence of Indo-western Pacific ocean capacitor mode on Indian summer monsoon rainfall in CMIP6 models	Darshana D. Patekar
17.00-17.10	Influence of El Niño Southern Oscillation on the Indian summer monsoon rainfall in future decades using coupled models	Dr. Hrudya P. H.
17.10-17.20	An Investigation into Non-precipitating and precipitating clouds during North-East Monsoon rain by SSPA based X-Band Doppler Weather Radar	Shivangi Mishra
17.20-17.30	Atmospheric circulation during Indian summer monsoon 2021: A study using 53 MHz VHF radar at Haringhata (22.93N, 88.50E)	Debyendu Jana
17.30	Concluding Remarks by Session Chairs	

===== END of DAY 1 =====

Day 2 : 22 February, 2022

National E-Symposium on “Changing climate and extreme events: impacts, mitigation & Role of oceans”

(Day2: 22 Feb: Youtube link: <https://youtu.be/YWTTZF5ZfQw>)

0930-1300	<u>Technical Session on Theme2: Extreme weather events and predictions</u> Chairperson(s): Dr. C. Gnanaseelan & Dr. P. Mukhopadhyay Rapporteur: Ambuj K Jha & Meenu R Nair	
09.30-09.55	Keynote Talk: Predicting Extreme weather in extended range	Dr. A.K. Sahai
09.55-10.15	Invited Talk: How to improve prediction of extreme precipitation events	Dr. P. Mukhopadhyay
10.15-10.35	Invited Talk: Is Southeast Arabian Sea becoming new Hot Spots for Deep Clouds and Severe Cyclonic Storms?	Dr. S. Abhilash, CUSAT
	Oral presentations	
10.40-10.50	Precipitation Nowcasting using ensemble learning approaches	Anupam Priamvada
10.50-11.00	Prediction of Rainfall over Kerela using deep neural network	Avinash Paul
11.00-11.10	Relation between rainfall and soil moisture variability during dry and wet extremes over core monsoon zone of India	Madhusudan Ingale
11.10-11.20	Optical Flow methods for Nowcasting of heavy precipitation events observed by X-Band DWR	Shahla K.P.
11.20-11.30	Turbulence studies during a convective system using nonlinear Properties	Ramyakrishna Enugonda
11.30-11.40	Space-time variation of large hail-producing mesoscale convective systems over a complex terrain of the Indian subcontinent as revealed by the integrated TRMM and GPM	Partha Roy
11.40-11.50	Investigating the impact of soil moisture variability on temperature extremes over the Indian region	Naresh Govind Ganeshi
11.50-12.00	Decadal prediction of surface air temperature over India: a reality	Fousiya T.S.
12.00-12.10	Tropical cyclones over the Arabian Sea during the monsoon onset phase	Shreyas Dhavale
12.10-12.20	GPM-DPR observed precipitation microphysics of Tropical Cyclone NISARGA (2020)	Amit Kumar
12.20-12.30	Evaluation of Remote sensing based convection –cloud-precipitation seasonal characteristic change over pertinent to the east coast of Andhra Pradesh/india.	Bura Giridhar
12.30-12.40	Study of lightning activity over Odisha in different Seasons and responsible Meteorological Conditions	Prajna Priyadarshini
12.40-12.50	Understanding Cloudbursts using Dual-Frequency Precipitation Radar	Diya Das
12.50-13.00	Influence of climate modes on Red sea heat content	Chandra Sekhar V.
13.00	Concluding remarks by session chairs	
13.00-14.00	Lunch Break	

1400-1600	Technical Session on Theme3: Climate Change, its impacts & mitigations Chairperson(s): Prof. Subimal Ghosh & Prof. Venugopal Rapporteur: Emanuel & S Hamid Ali	
14.00-14.20	Invited Talk: Understanding Causality in Hydrometeorology with Process Network	Prof. Subimal Ghosh, IIT Mumbai
14.20-14.40	Invited Talk: Indian monsoon floods: When it rains, how does it pour?	Prof. Venugopal, IISc, Bangalore
	Oral presentations	
14.40-14.50	Impact of different bio-meteorological parameters on net ecosystem exchange of a semi-deciduous forest in northeast India	DIPANKAR SARMA
14.50-15.00	Global climate change projections of aerosol optical depth in CMIP6 global climate models' simulations	Bharath J
15.00-15.10	Climate Change Impact at Farm Level and adaptation strategies under sustainable agricultural pathways	Dr. N. Subash
15.10-15.20	Impact of Asian summer monsoon variability on UTLS water vapor	Bhupendra Bahadur Singh
15.20-15.30	Soil Moisture Measurement Sensor Network using Raspberry Pi and IoT	Dr.Rajani P.K.
15.30-15.40	Linkage between west pacific subtropical high, tropical cyclones over northwestern Pacific and Indian summer monsoon rainfall	Roja CHALUVADI
15.40-15.50	How much factors of climate change responsible for seismicity along MBFT zone in recent decades?	Umesh Verma
15.50-16.00	Assessment of climate change impact on the intensity of the Tropical Cyclones formed over the North Indian Ocean during landfall	Shahenaz Mulla
16.00	Concluding remarks by session chairs	
1610-1800	Technical Session on Theme4: Air-sea interaction Chairperson(s): Dr. R. Krishnan & Dr. P.A. Francis Rapporteur: Emanuel & S Hamid Ali	
16.10-16.35	Keynote talk: Decadal Variability, Predictability and Prediction	Dr. C. Gnanaseelan
16.35-16.55	Invited talk: The upper ocean response of Bay of Bengal to very severe cyclones Phailin and Hudhud	Dr. P.A. Francis, INCOIS
16.55-17.15	Invited talk: Cascading extreme weather events and interactions over the ocean, land and Atmosphere	Dr. Roxy Mathew Koll
	Oral presentations	
17.20-17.30	Contrasting air-sea response to the north Indian Ocean cyclones during the pre-monsoon and the post-monsoon seasons	Vineet Singh
17.30-17.40	Studies on Black Carbon aerosols in relation to Boundary Layer Height and Rainfall over sub urban Chennai	Meruga Ashok Williams
17.40-17.50	Response of subtropical south Indian Ocean to tropical heat anomalies	Anila Sebastian
17.50-18.00	Decadal variability in the tropical Indian Ocean salinity and stratification and the associated coupled air-sea feedback	Sandeep Mohapatra
18.00	Concluding remarks by session chairs	

-----END of DAY 2-----

Day 3 : 23 February, 2022

(Day3: 23 Feb: Youtube link: <https://youtu.be/DgQO5SIL3Eg>)

0930-1300	Technical Session on Theme5: Role of Oceans on Changing Climate Chairperson(s): Prof. Prasad Bhaskaran and Dr. Supriyo Chakraborty Rapporteur: Haldar and Fousiya	
09.30-09.55	Keynote talk: Wind-waves in a changing climate for the Indian Ocean	Prof . Prasad Bhaskaran, IIT Kharagpur
09.55-10.15	Invited Talk: Bio-geochemical interaction between Ocean and the Atmosphere in a Changing Climate	Dr. Vinu Valsala
10.15-10.35	Invited Talk: Precipitation isotope: an interface between the past and present climate	Dr. Supriyo Chakraborty
	Oral presentations	
10.40-10.50	South Asian monsoon response to weakening of Atlantic meridional overturning circulation in a warming climate	Sandeep Narayananasetti
10.50-11.00	Unravelling the causes of intense warming in the north Indian Ocean during 2006–2015: a feature in contrast to the hemispheric asymmetry in warming of the other major ocean basins	Soumya Mukhopadhyay
11.00-11.10	Assessing the role of horizontal resolution in simulating the marine heatwave over the Tropical Indian Ocean: Evidence from High-Resolution Model Intercomparison Project	Anand Singh Dinesh
11.10-11.20	An overview of the role of oceanic iodine emissions in a changing climate	Swaleha Inamdar
11.20-11.30	Amplification of Short-term Arabian Sea Aerosol Monsoon Relationship by ENSO	Nandini G
11.30-11.40	Impact of PDO and ENSO on Indian summer monsoon rainfall and its changing relationship before and after climate shift	Anupama K Xavier
11.40-11.50	On the relation between the boreal spring position of the Atlantic Inter-tropical Convergence Zone and Atlantic Zonal Mode	Pottapinjara Vijay
11.50-12.00	Demonstrating the tropical Indian Ocean characteristics during contrasting monsoon years: Assessment of high- resolution regional model performance	Lokesh Kumar Pandey
12.00-12.10	Influence of warming on ISMR trends	Prijitha R. G.
12.10-12.20	Quantification of annual and semi-annual harmonics of sea surface temperature in the tropical Indian Ocean	Abhishek V.A.
12.20-12.30	Decadal Predictability of Indian Ocean Dipole using IITM decadal prediction system and CMIP6 decadal hindcasts	Rashmi Kakatkar
12.30-12.40	Intra-decadal variability of the Indian Ocean Shallow Meridional Overturning Circulation during Boreal Winter and its Impact on Ocean Heat Content	Rahul U Pai
12:40	Concluding remarks by session chairs	
1300- 1400	Lunch Break	
14.00-14.40	Felicitation Talk: Dr. Prabhat Kumar for AMS award	
15.00-17.00	Panel Discussion on “Learning & Communicating Climate Science: a dialogue to bridge gaps in climate education” (Panelists: Dr. M. Ravichandran, Dr. M. Mohapatra, Dr. R. R. Kelkar, Dr. R. Krishnan, Shri. K.S. Hosalikar, Dr. A. K. Sahai, Dr. C. Gnanaseelan, Dr. Supriyo Chakraborty, Shri. Mayuresh Prabhune)	
17:00	Concluding session & Announcement of Awards	

=====END of the Workshop=====

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