Inauguration

WORLD METEOROLOGICAL ORGANIZATION

11th WMO Scientific Conference on Weather Modification
(Pune | India, 3-7 November 2025)

Website: https://wmo-11scwxmod.tropmet.res.in/
Email: wmo-11scwxmod@tropmet.res.in

Venue: Meghdoot Auditorium | IITM Pune | India
1600 – 1730 Hrs | 2nd November 2025

Lighting of the lamp: a symbol of a new beginning, knowledge, and traditional wisdom

Welcome address by Dr. Suryachandra Rao, Director, IITM

Honouring guests in recognition of scholarship

Address by the Guest of Honor:
Dr. M. Ravichandran, Hon Secretary, MoES

Address by the Guest of Honor:
Dr. M. Mohapatra, DGM IMD

Introduction of the Chief Guest

Inaugural Address by Chief Guest
WMO President H.E President Dr. Abdulla al Mandous

Address by the co-Chairs of WMO ET
Dr. Sarah Tessendorf and Dr. Steven Siems
Remarks by Dr. Estelle De Coning, WMO/WWRP

Vote of thanks by Dr. Thara Prabhakaran, LOC Chair

Ice-breaker event

Venue: Goldenrod, Marygold Convention Centre
Starting at 1800 Hrs | 2nd November 2025

11th WMO Scientific Conference on Weather Modification
(Pune, India, 3-7 November 2025)
Organized by WMO and IITM Pune

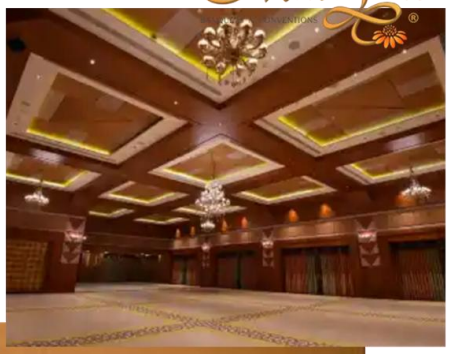
Ice-breaker event

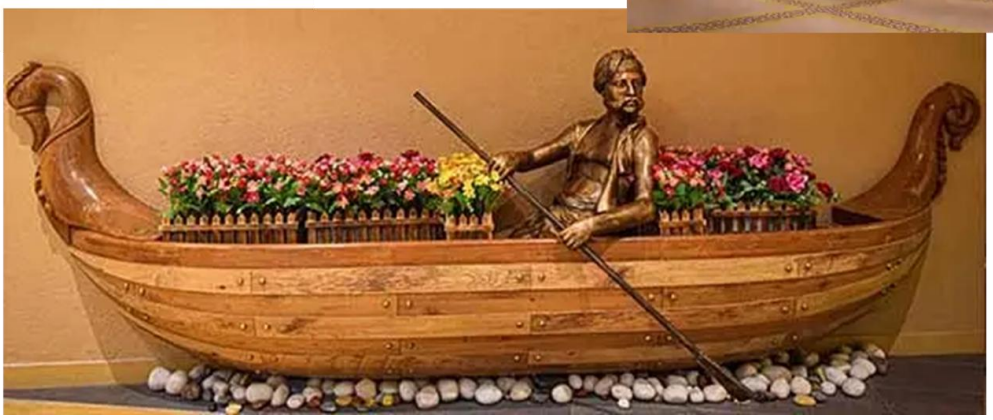
1800 hrs on 2nd November 2025

Sponsored by

TESSCORN Aerodyne Research

Venue Shiv Shailam's Marigold





Opp, Windmill Village Rd, Windmill Village, Bavdhan, Pune, Maharashtra 411021

(Sponsored by TESSCORN and Aerodyne Research)

Gala Dinner

Venue: Mimosa| Marygold Convention Centre

Starting at 1800 Hrs | 5th November 2025

11th WMO Scientific Conference on Weather Modification
(Pune, India, 3-7 November 2025)

RAINMAKER

Opp, Windmill Village Rd, Windmill Village, Bavdhan, Pune, Maharashtra 411021

(sponsored by Rainmaker and KCMC LLC)

ORALS

DAY1		
Session 1: Fundamental aspects of cloud physics as the basis for cloud seeding Part 1		
0930-1000 hrs	**Keynote: Jan Henneberger**	**Seeding Low Stratus Clouds to Understand the Microphysics of Glaciogenic Cloud Seeding**
1000-1015 hrs	**Paul Lawson**	Hygroscopic Seeding to Trigger a Natural Secondary Ice Process and Rain Enhancement
1015-1030 hrs	**Narihiro Orikasa**	Cloud droplet formation experiments by hygroscopic particle seeding under pristine maritime conditions
1030-1045 hrs	**Milin Kaniyodical Sebastian**	ROLE OF ISOPRENE-DERIVED SECONDARY ORGANIC AEROSOLS IN THE GLACIATION OF DEEP CONVECTIVE CLOUDS
1045-1100 hrs	**Group Photo + Break**	
1100-1130 hrs	**Tea break**	
1130-1145 hrs	**Xiaofeng Lou**	The Construction and Field Experiment of Aerosol-cloud-precipitation Interaction and Seeding Physical Response at Lushan Experimental Base for Fog and Cloud Physics
1145-1200 hrs	**Sachin Patade**	Investigating Warm and Cold Rain Processes in Mixed-phase monsoon clouds.
1200-1215 hrs	**Puja Roy**	Investigation of Supercooled Cloud Drop Evaporation Through Numerical Modeling at Native Scales

1215-1230 hrs	**ARINDAM DAS**	Influence of transported aerosols on the cloud microphysical properties during withdrawal phase of southwest monsoon over Western Ghats, India
1230-1330	**Lunch break**	
Session 2: Precipitation enhancement studies in deep convective clouds		
1330-1400 hrs	**Keynote Roelof Burger**	**Enhancing Rainfall from Deep Convective Clouds: Current Science, Operational Challenges, and Emerging UAS Technologies**
1400-1415 hrs	**Greg McFarquhar**	Use of Field Campaign Observations Acquired in Vicinity of Houston, Texas to Evaluate How Aerosols Affect Cloud Evolution and Development of Precipitation
1415-1430 hrs	**Alya Al Mazroui**	UAE Research Program for Rain Enhancement Science (UAEREP)
1430-1445 hrs	**Ayman Mohammed Albar**	Overview of Regional Cloud Seeding Program of Saudi Arabia
1445-1500 hrs	**Zhanyu YAO**	Evaluation of Chinese Randomized Experiments of Rain Enhancement (CRERE) (2014-2020)
1500-1530 hrs	**Tea Break**	

Session 3: Hail mitigation, fog or rain suppression		
1530-1600 hrs	**Keynote: Ali Abshaev**	**Short-term and long-term assessments of the effectiveness of hail suppression in different regions of the world**
1600-1615 hrs	**Malte Neuper**	4D-Radar-Evaluation of Thunderstorm development in the context of Hail Suppression missions
1615-1630 hrs	**Satyanarayana Tani**	Hail Mitigation Operations in Styria, Austria: History, Advances, AI-Integrated Dashboard, and Operational Insights
1630-1645 hrs	**Hui Wang**	Characteristics of Hail Clouds and Observational Evidence of the Effectiveness of Explosion-Induced Hail Suppression Based on Three X-band Dual-Polarization Phased Array Radars
1645-1700 hrs	**Shunji Kotsuki**	AMAGOI: Advancing Weather Modification to Mitigate Extreme Rainfall Disasters
1700-1830 hrs	**Posters**	
Day 2		
Session 4: Precipitation enhancement studies in shallow/orographic clouds Part 1		
0930-1000 hrs	**Keynote: Sarah Tessendorf**	**Investigating the potential for winter orographic cloud seeding in the western United States**
1000-1015 hrs	**Sisi Chen**	Winter Orographic Cloud Seeding in SNOWIE: Insights from an Ensemble Simulation Approach
1015-1030 hrs	**Christopher Hohman**	Observed and Simulated Physical Responses to Glaciogenic Seeding in an Orographic Cloud during SNOWIE

1030-1045 hrs	**Fateme Moradian**	Feasibility study and numerical evaluation of the cloud seeding operations for central part of Iran
1045-1100 hrs	**Darrel Baumgardner**	Provisional Observations of Pollution Scavenging by Ice Layers (POPSICL)
1100-1130 hrs	**Tea Break**	
Session 5: Precipitation enhancement studies in shallow/orographic clouds Part II		
1130-1145 hrs	**Binod Pokharel**	Potential of Cloud Seeding to Enhance Snowfall in the Himalayas: Insights from Utah and Wyoming Programs
1145-1200 hrs	**Aroonroth Sricharounchot**	Spatial Analysis for the Optimal Site Selection of Ground-Based Cloud Seeding Equipment: A Case Study in Upper Southern Thailand
1200-1215 hrs	**Nicholas Dawson**	The Liquid Propane Experiment (LPX): Overview, Phase 1 Results, and Phase 2 Plans
1215-1230 hrs	**Kandula Subrahmanyam**	Orographic precipitating clouds: Structure and Evolution
1230-1330 hrs	**Lunch Break**	
Session 6: Climate intervention/Marine Cloud Brightening		
1330-1400 hrs	**Keynote: Steven Siems**	**Marine Cloud Brightening over the Great Barrier Reef during periods of Coral Bleaching**
1400-1415 hrs	**Minghuai Wang**	Deep Learning Insights on Optimal Conditions for Enhancing Radiative

		Cooling Through Marine Low Cloud Intervention
1415-1430 hrs	**Vulker Wulfmeyer** **Oliver Branch**	The Cloud and Precipitation Reactor (CPR) - Intelligent land-use change to enhance precipitation in arid regions
1430-1445 hrs	**Asutosh Acharya**	South Asian Summer Monsoon under stratospheric aerosol intervention
1445-1500 hrs	**Alan Gadian**	Marine Cloud Brightening; usage of coded modulation to minimise the risks and unintended consequences of consequential rainfall perturbations.
1500-1530 hrs	**Tea break**	
Session 7: Hazard mitigation, fog suppression		
1530-1545 hrs	**Amadou COULIBALY**	Variability of extreme precipitation over Niger River Basin under Solar radiation modification
1545-1600 hrs	**Michelle Reboita**	Southern Hemisphere extratropical cyclones in climate scenarios with and without SAI
1600-1615 hrs	**Moumita Bhowmik**	The Challenge of Fog Suppression for Weather Management: Theoretical and Model Studies
1615-1630 hrs	**Ehud Gavze**	Warm Fog elimination: Methods and a Numerical model
1630-1700 hrs	**TBD**	
1700-1830 hrs	**Posters**	

Day 3		
Session 8: Emerging technologies or new methods for weather modification		
0930-1000 hrs	**Keynote: Jing Duan**	**Chinese Aircraft Observational Datasets and Research on the Application of Artificial Intelligence Analysis Methods in Airborne Detection Data**
1000-1015 hrs	**Kimberly Dill**	UAV Cloud Probes: Providing Information for Real-Time Decision-Making, Validation, and Research Objectives in Weather Modification
1015-1030 hrs	**Fred Brechtel**	Ground, Drone, and Aircraft-based Measurement Tools for Aerosol-Cloud Interaction and Cloud Seeding Studies
1030-1045 hrs	**Xu Zhou**	Case Studies and Technological Research on the Application of Large-scale UAV Systems in Weather Modification
1045-1100 hrs	**Marta Nelson**	Enhancing Cloud Seeding Efficiency: Insights from Particle Size Distribution and Flare Design Innovations
1100-1130 hrs	**Tea break**	
Session 9: Emerging technologies/new methods for weather modification, Stakeholder engagement		
1130-1145 hrs	**Jatan Buch**	Optimizing cloud seeding with a denoising diffusion model
1145-1200 hrs	**Miao Cai**	Development of Cloud Parameters with Fengyun Satellites and Its Application in Weather Modification

1200-1215 hrs	**Abdulhadi Alzahrani**	Hydrological Assessment of Cloud Seeding in the Southwestern Region of Saudi Arabia
1215-1230 hrs	**Prakash Tiwari**	Improving Community Access to Climate Information in Underdeveloped Mountains: An Illustration of Bridging the Gap between Climate-Science and Local Adaptation Needs Through Community Engagement and Communication in Hindu Kush Himalaya
1230-1245 hrs	**Supaluck Dasom**	ASEAN Weather Modification Centre (AWMC) under the ASEAN Sub-Committee on Meteorology and Geophysics (ASEAN SCMG)
1245-1300 hrs	**Mohan Kumar Das**	Hydrometeorological Dynamics and Integrated Flood Forecasting System for Eastern Bangladesh: Policy Implications for Resilience
	Lunch break	
Session 10: Stakeholder engagement, ELSI panel talks and discussion		
1400-1415 hrs	**Koji Tachibana**	Understanding Different Perceptions of Nature and The Culture-Sensitive ELSI of Geoengineering
1415-1430 hrs	**Kala Golden**	The Power of Three: Advancing Weather Modification through Government, Science, and Industry
1430-1600 hrs	**Panel discussion**	**Communication and stakeholder engagement challenges and strategies**
1600-1630 hrs	**Tea Break**	

1630-2000 hrs	**Cultural event + Gala dinner**	
Day 4		
Session 11: Broader applications/hazard mitigation (Eg. Bushfire/forest fire or avalanche mitigation, cyclone or typhoon mitigation, etc.)		
0930-1000 hrs	**Keynote: Lulin Xue**	**Status, Progress, and Direction of Weather Modification and Regional Climate Intervention Research**
1000-1015 hrs	**MASATAKA MURAKAMI**	Numerical experiments on typhoon modification by invigorating non-axisymmetric convection using a cloud seeding method
1015-1030 hrs	**Vijay Vishwakarma**	Impact of Surface Ocean Forcings on the Cloud and Precipitation Characteristics of Super Cyclonic Storm Amphan over the Bay of Bengal
1030-1045 hrs	**Masashi Minamide**	A potential pathway to mitigate tropical cyclone intensification onset through multi-scale nonlinear interaction
1045-1100 hrs	**Arkadii Koldaev**	Landscape and Forest fires reduction using weather modification for rain enhancement in the Republic of Sakha (Yakut)
1100-1130 hrs	**Tea Break**	
Session 12: Weather forecasting, and nowcasting Decision Support Systems		
1130-1145 hrs	**Caleb Steele**	Leveraging GOES-R and HRRR for Cloud Seeding Operations: A Data-

		Driven Approach to Cloud Microphysical Analysis
1145-1200 hrs	**Pascal Oettli**	Visualization of Extreme Weather Events Scenarios Using Regional Ensemble Prediction Data
1200-1215 hrs	**Wilawan Kumharn**	Developing Tropical Cloud Model of Tropical Storm Soulik and Its Impact on Weather in Thailand
1215-1230 hrs	**Daniel Rosenfeld**	Retrieving cloud microstructure and seedability over the UAE based on combined cloud simulations and satellite data
1230-1245 hrs	**Orestis Panagopoulos**	Evaluating NWCSAF Products for Cloud Seeding: Impact of NWP Configurations on Nowcasting Performance
1245-1300 hrs	**AVISHEK RAY**	Modulation of clouds and precipitation due to aerosol hygroscopicity over Western Ghats, India
1300-1400 hrs	**Lunch break**	
Session 13: Weather forecasting, and nowcasting Decision Support Systems		
1400-1415 hrs	**Ioannis Matsangouras**	Assessing Cloud Seeding Effectiveness Using LROSE TITAN: Identifying Seeding Opportunities and Analyzing Storm Evolution
1415-1430 hrs	**Sarawut Arthayakun**	Predicting Cloud Seeding Potential Based on Machine Learning and WRF Forecast Data for Rainmaking Operations in Eastern Thailand

1430-1445 hrs	**Haldaaditya belgaman**	Mitigate Forest and Land Fire using Weather Modification based on Artificial Intelligence Decision Support System
1445-1500 hrs	**Duncan Axisa**	How intelligent is weather modification?
1500-1515 hrs	**Gerhardt Botha**	Advancing autonomous cloud seeding: The RECCES algorithm for targeting convective cells
1515-1530 hrs	**Nitig Singh**	Investigation of Bright Band Characteristics using L-Band Wind Profiler and C-Band Dual-Pol Weather Radar over Rain Shadow region
1530-1600 hrs	**Break**	
Session 14: Inadvertent weather modification (Urban impacts, contrails, pollution dispersion, etc.)		
1600-1615 hrs	**Chaitali Thali**	Assessing the Impact of Maritime Emissions on Coastal Weather Patterns and Environmental Parameters in Indian Ports
1615-1630 hrs	**Micael Cecchini**	Aerosol impacts on the populational behavior of shallow cumulus clouds over the Amazon
1630-1645 hrs	**Rajesh Kumar**	Quantifying the contributions of aerosol-radiation interactions contribute to post monsoon air quality problem in New Delhi
1645-1700 hrs	**AMAL KK**	Investigating Urban Land Cover Effects on simulation of Sea Breeze

		and Severe convective storms: A Study Over Chennai
1700-1715 hrs	**PRACHI KHOBRAGADE**	Influence of Land Surface Dynamics on Regional Precipitation Patterns
1715-1730 hr	**Break**	
1730-1900 hrs	**Posters**	
Day 5		
Session 15: Fundamental aspects of cloud physics as the basis for cloud seeding Part II		
0930-1000 hrs	**Keynote: Thara Prabhakaran**	**CAIPEEX - defining opportunity that shaped cloud physics studies in India**
1000-1015 hrs	**Manhal Alhilali**	Evaluating Cloud Seeding Effectiveness in Convective Clouds with the Advanced Super-Droplet Method
1015-1030 hrs	**Weiguo Liu**	Introduction of CMA-CPEFS cloud seeding model and its application
1030-1045 hrs	**Mahen Konwar**	Identifying the seeding signature in cloud particles from hydrometeor residuals
1045-1100 hrs	**Sonali Patade**	Measurements of ice nucleating particles over rain shadow region of India
1100-1130 hrs	**Tea Break**	

Session 16: Fundamental aspects of cloud physics as the basis for cloud seeding Part III		
1130-1145 hrs	**Ottmar Moehler**	Development and operation of AIDA and PINE cloud simulation chambers
1145-1200 hrs	**Kurt Hibert**	Laboratory studies of hygroscopic seeding
1200-1215 hrs	**Naruki Hiranuma**	Laboratory study on the efficacy of new glaciogenic cloud seeding materials
1215-1230 hrs	**Shaofeng Hua**	Hygroscopic Seeding Simulation Using a Superdroplet-Bin Hybrid Microphysical Scheme
1230-1245 hrs	**Lois Thomas**	Large eddy simulations of a convection cloud chamber with variable sidewall forcing: achieving uniform supersaturation, microphysics, and turbulent mixing
1245-1300 hrs	**Xueliang Guo**	Optimizing cloud seeding for rain enhancement based on aircraft measurements and modeling
1300-1330 hrs	**Closing Remarks**	
	Lunch	

POSTERS

Session 1	Fundamental aspects of cloud physics as the basis for cloud seeding Part I
Participant	***Abstract Title***
Sisi Chen	Ice-Droplets Interactions in Mixed-Phase Clouds: Lagrangian particle-based direct numerical simulation (DNS)
Xiangfeng Hu	Exploring the Microphysical Variability within Stratiform Clouds: In-Situ Aircraft Observations from North China
Stavros-Andreas Logothetis	Identification of Potential Targets for Glaciogenic Seeding Operations Using Satellite and Aircraft Cloud Observations During Saudi Arabia's Regional Cloud Seeding Program
Sandhya Jose	Understanding Extreme Precipitation Variability of Indian Summer Monsoon through Cloud Microphysical Processes
Marya AlHomoud	Assessment of Cloud Seeding Efficiency in Changing Cloud Properties
Xincheng Ma	Topographic Precipitation and Integrated Cloud-seeding Experiments (TOP-ICE).Part I:Natural Conditions
Udaya Gunturu	What factors contribute to the scanty rainfall in arid and desert regions?
Sreelekha R	Seasonal micro and macro physical characteristics of convective clouds in the Kingdom of Saudi Arabia
Rupraj Biswasharma	Modifications in thunderstorm properties during the COVID-19 lockdown: the role of pollutants and microphysics
Imolemba Longkumer	Seasonal and Diurnal Variability of Raindrop Size Distributions over the Leeward Western Ghats
Zhaoxia HU	Aircraft Measurements of the Microphysical Properties of Stratiform Clouds with Embedded Convection
MERCY VARGHESE	Impact of cloud base aerosol activation on the aerosol cloud interaction over a rain shadow region
Anil KumarV	Ice-nucleating particle measurements from two diverse geographical locations in India
Leena PP	Microphysics of pre-monsoon clouds as perceived from in-situ observation of a high-altitude site in Western Ghats, India
Jing Duan	Integration and Comparative Analysis of Remote Sensing and In Situ Observations of Aerosol Optical Characteristics Beneath Clouds
Xiaowei Zhong	UDINET: A LIGHTWEIGHT NETWORK FOR IMAGE RECOGNITION OF NATURAL SNOW AND ICE CRYSTALS IN WEATHER MODIFICATION
Puja Roy	Impacts of Collision-induced Drop Breakup on Droplet Size Distributions using Lagrangian Superdroplet Method
Akshada Kadam	Effects of Entrainment and Mixing on Cloud Microphysics under Dry Environmental conditions
Shibani Bhatt	Experimental Investigation of Turbulence in Rayleigh-Bernard Convection

Ahmed MOUCHA	Evaluation of Arome Model Forecasts for Cloud Seeding Operations: Comparison with In-Flight Measurements.
Sudarsan Bera	In-situ observations of monsoon cloud microphysics over Arabian Sea region
Kashmiri Devi	Microphysical parameterization for stratus clouds over western ghats, India
Gayatri Kulkarni	Aerosolâ€“Cloud Interactions and Precipitation Enhancement: Case Study from the CAIPEEX Hygroscopic Seeding Experiment
Sachin Patade	Influence of Aerosol Loading on the Microphysical Properties of Mixed-Phase Clouds over the Bay of Bengal: Insights from CAIPEEX Observations and High-Resolution Numerical Simulations.
Neelam Malap	Dissipation of clouds with hygroscopic cloud seeding during CAIPEEX experiment
Arya Pisharody	Characterizing Refractory Black Carbon in Deep and Shallow Convective clouds: Results from CAIPEEX campaign over rain shadow region
Vidya Pawar	Binary Collisions of Water Drops in Presence of Horizontal Electric Fields: Parameterization of Fragment Size Distribution.
Session 2	**Precipitation enhancement studies in deep convective clouds**
Raja Boragapu	Study of cloud seeding efficiency through quantifying spatial and temporal variability of seeding effects on supercooled liquid water content using combined NWP and airborne observations over Saudi Arabia
Hwang Yanbin	Randomized effect of artificial catalytic convective cumulus in Hainan island province,China
Ivanov Vladimir	Investigation of the possibility of precipitation from convective clouds using hygroscopic material with optimal microstructure
Ioannis Matsangouras	Evaluating Rainfall Enhancement in the Regional Cloud Seeding Program of Saudi Arabia: Summer and Autumn 2022
Ali Abshaev	Results of 5-years rain enhancement experiments using rocket technology
haldaaditya belgaman	A Preliminary Study of Evaluation of Cloud Cell Response to Cloud Seeding: Insights from C-Band Weather Radar Data in East Kalimantan Area, August 17, 2024.
MUATH ALKHALAF	Investigating the evolution of cloud seeding operations during different synoptic systems over the Kingdom of Saudi Arabia
Gayatri Kulkarni	Glaciogenic vs. Hygroscopic Cloud Seeding: A Numerical study of their relative impacts
Payoshni Samantray	Thermo-dynamical processes during Periodic Thunderstorms over different physiographic regions of India.
Kuldeep Madhekar	Understanding the Role of Ionized Hygroscopic Aerosols and Ion-Dipole Interaction in Enhancing Precipitation Using UAV-Based Cloud Seeding Systems
Devika MV	Long-Term Changes in the Diurnal Cycle of Deep Convective Clouds Over the Indian Monsoon Region

Hector Arias Rojo	DROUGHT MITIGATION WITH CLOUD SEEDING: EXPERIENCES IN MEXICO
TESNA MARIA	INFLUENCE OF SEA SURFACE TEMPERATURE ON MONSOON EXTREMES OVER THE WEST COAST OF INDIA
Arunkumar R	Understanding of Lightning and Convective Parameters: A Climatological Approach Using ERA5 and TRMM LIS Data.
Uma KN	Storm Dynamics across Monsoon Gateway and Rain Shadow Regions: Insights from long-term Radar Observations and Reanalysis
Darshana Gautam	Role of Aerosol-Cloud Interactions in Enhancing Precipitation: Insights from High-Resolution Simulations of Extreme Events Over the Western and Eastern Ghats.
Sachin Patade	High-Resolution Simulation of Glaciogenic Seeding Effects on Mixed-Phase Monsoon Clouds over the Rain Shadow Region of India
Ajil Kottayil	Emerging Trends in Deep Convective Cloud Dynamics During the Indian Summer Monsoon
Ajay Bankar	Enhancing Precipitation Forecasts in Deep Convective Clouds using Data Assimilation Techniques
ASHRUBA GHORAPADE	Tracking Convective Cell Lifecycle and Cell-to-Cell Interactions in the Monsoon Core Zone using Polarimetric Radar Observations
UdayaKumar Sahoo	Adaptive Fuzzy Logic Hydrometeor Classification for C-Band Radar Using Machine Learning-Based Membership Function Estimation
CHIRANJEEVI GUTTULA	The first Indian X band dual polarization Doppler Weather Radar network: A study of vertical profiles of radar parameters in a convective rain event over Mumbai
Jayesh Dhangar	Lightning Flash count variability over Indian region during different phases of Indian Summer Monsoon Season
Session 3	**Precipitation enhancement studies in shallow/orographic clouds**
Resmi EA	Studying the developments of orographic clouds and rainfall: High Altitude Cloud Observations over Western Ghats, India
Yunbo Chen	Obervation Study on Macro-and Micro-Structures of Orographic Clouds during the Winter in Haituo Mountain,Beijing
Raju Attada	Orographic Precipitation Extremes: Modelling and Observations
SUMESH RK	Microphysical and Dynamical Perspectives of Precipitation Enhancement in Shallow Clouds over the Western Ghats Orography
Rehan Hossain	Setting up of Sub-km Scale Model over the Southeast Coastal Indian Region
Arunkumar KL	Orographic Sensitivity in Simulating the December 2023 Tamil Nadu Extreme Rainfall
OM KUMAR	Decoding the role of Indian summer monsoon and westerlies in cloud cover variability over the Himalayas and Tibet
Ezequiel Hernandez T	THE SINALOA, MEXICO CLOUD SEEDING PROGRAM 2024, USE OF HYGROSCOPIC AND GACIOGENIC FLARES.

Session	**Hail mitigation, fog or rain suppression**
Djordje Kardum	Seeding effect assessment: description of two supercell storms with different seeding levels
Djordje Kardum	Automation of the hail suppression system in Serbia
Xinshu Fu	Artificial Fog Dispersal Campaign in Coastal Megacity: Practice and Experience in Shanghai, China
Zoran Vucinic	Hail Suppression in Serbia from 1967 to 2025
Alexandru Marin	Innovative Aerosol Generating Systems for Hail Mitigation and Precipitation Enhancement
Ivan Birovljevic	Enhancing Cloud Seeding Criteria Using Machine Learning
yuquan zhou	Characteristics of the atmospheric water cycle and key technologies and applications for precise intervention in specific targets
Devender Bishnoi	Drivers Behind Diminishing Trend of Monsoon Depressions over Bay of Bengal Influencing Monsoon rainfall over India
YONG ZENG	Analysis of Array Phased Array Radar Observation of a Severe Hailstorm Process in the Yunnan-Guizhou Plateau
Prasanna Lonkar	Investigating the microphysical features of haze and dense fog in different regions over IGP
Anupam Hazra	The Challenge of Fog Suppression for Weather Management: Theoretical and Model Studies
Anupam Hazra	Understanding of Microphysical processes for Hail Particle Suppression over India using Triple-moment Microphysics scheme in Numerical Weather Prediction Model
Donali Gogoi	Understanding Cloud base lowering fog using observation, reanalysis and high resolution modeling using DM-Chem
Mamta yadav	Recent years Hailstorm analysis over central India during winter and premonsoon season
Kedar Tahashildar	Changes in Cloud Microphysical Properties induced by firing a Prototype Hail Cannon in Laboratory Simulated Clouds.
Darko Savic	Numerical simulations of aerosol scavenging in deep convective clouds using a three-moment microphysical scheme
Zoran Vucinic	COST-BENEFIT ANALYSIS OF THE HAIL SUPPRESSION IN SERBIA
Session 4	**Hydrological processes, impacts, and assessments**
Ting Li	Distribution characteristics of cloud water resources in Altay Region
Sara Vanessa C. R. da Silva	Statistical Assessment of Rainfall Enhancement in the Kingdom of Saudi Arabia during the Regional Cloud Seeding Program
VIKAS KUSHWAHA	Elevation dependent effects of precipitation on river discharge at different spatio-temporal scales
Miao Cai	Quantifying the Cloud Water Resource: Basic Concepts, Quantification Methods and Characteristics

Raja Boragapu	Investigating Causal Relationships between Rainfall and Vegetation Dynamics in the Asir Mountains, Southwest Saudi Arabia
Bhupendra Singh	Catastrophic landslides in the Western Ghats: Hydrological triggers, Risks and Mitigation challenges
Nicholas Dawson	Exploring A Replacement for Wintertime Cloud Seeding Target-Control Benefit Analysis
Saranya Sasidharan	A new approach to Radar Rainfall Estimation using Vertically Integrated Liquid based Reflectivity profile
Tanuja Kango	Elevation-Dependent Climate Trends in the Beas Basin, Northwestern Himalayas
Karabi Karmaker	Influence of Madden-Julian Oscillation on Primary Productivity in the Northern Bay of Bengal
Rani Devi	Role of ENSO and MJO in the Modulation of Heavy Rainfall Eventâ€™s characteristics over North Eastern India
Sumit Kumar	Convective Dynamics and Hydrological Modeling of the 2023 Delhi Flash Floods Using Coupled WRF-Hydro and X-Band Radar
Sahana CG	Analysing the Impact of Summer Monsoon Rainfall Variability on the Agricultural Productivity in Rainfed Regions of Maharashtra and Karnataka
ZhilLiang Shu	Development of a Localized Atmospheric Weighted Mean Temperature Model for the Liupan Mountain Area
Sudip Kundu	Geospatial assessment of space-based AWiFS derived NDVI pattern with respect to ground-based IMD rainfall data over Assam, India
Puspendu BiswasPaul	Geospatial Modeling of Flood Susceptibility in Eastern Bangladesh: Risk Assessment and Hazard Zonation for the August 2024 Flood
Suparya Raj	INVESTIGATING THE ROLE OF SOIL MOISTURE AND EVAPOTRANSPIRATION IN MODULATING LANDâ€“ATMOSPHERE INTERACTIONS OVER CENTRAL INDIA DURING THE MONSOON SEASON
SifatTanzil OVI	Atmospheric Circulation Patterns and Synoptic-Scale Forcing of the Eastern Bangladesh Flood, August 2024: A Meteorological Perspective
Silpamol DS	Understanding the Precipitation characteristics associated with the sub-seasonal variability during the Indian summer monsoon
Sumana Sarkar	Multi-Criteria Ensembles for hydro-meteorological analysis of a flash flood event over the megacity of Bangalore
Prajwal K	Impact of Convectively Coupled Equatorial Waves on Extreme Precipitation Events Over the West Coast of India
CharanTeja Tejavath	Maiden Observations of Precipitation Processes in the Schirmacher Oasis, Antarctica
Aashna Verma	Projected Variability in Water Availability and Potential-Evapotranspiration under Climate Change over Varanasi District using CMIP6

Praneta Khardekar	Probability Distribution Analysis of Indian Summer Monsoon Rainfall and High Cloud Fraction in CMIP6 Projections of a Warming Climate
Saloni Sharma	Evolving Cloud Characteristics and Their Climate Linkages and Precipitation Implications Over the Indian Summer Monsoon Region
Archana Rai	Evaluation of Evapotranspiration partitioning in Noah and CFSv2
Yogesh Kolte	Quantitative Precipitation Estimation over a complex terrain: Dual-polarization X-band radar measurements
Pooja Purushotham	Characteristics of Virga Event from Observations and Numerical Simulation
Abhirami M	Assessing Future Climate Projections: An In-depth Analysis of CMIP6 Models on Indian Ocean Warming, Sea Surface Temperature Biases, and Precipitation Patterns
Rohini Bhawar	Multisource Analysis of Aerosolâ€“Cloudâ€“Precipitation Interactions Using Satellite and Reanalysis Datasets
R Vinnarasi	Tracing Moisture Sources of the 2013 Kedarnath Floods Using a Lagrangian Approach: contributions from the Tropics and the Middle East
Gong Dianli	Numerical Investigation of Transport of Water Vapor and Cloud Hydrometeors During Typhoon â€œDAMREYâ€ Influence on Shandong Peninsula
Session 5	**Broader applications/hazard mitigation (Eg. Bushfire/forest fire or avalanche mitigation, cyclone or typhoon mitigation, etc.)**
Pushpa Rapeti	Influence of Cumulus Parameterization in WRF for Super Cyclone Simulation
Harsha P	Understanding Heat Stress and Prediction Tools for India
Rushikesh Adsul	HighResMIP CMIP6-Based Near-Future Projections of Tropical Cyclone Activity Over the Bay of Bengal
Ganadhi ManoKranthi	Enhancing trends in the Bay of Bengal pre-monsoon Tropical Cyclone size and the underlying physical processes
Amita Prabhu	Suppression of Summer Monsoon Rainfall over North India: The Impact of Indian Ocean Warming, Arctic Sea Ice Decline, and Arctic Amplification
Siddhant Arya	Western Disturbances and Their Role in Extreme Weather Phenomena: A Reanalysis, Satellite and Radar Based Assessment
JENI VICTOR	Aerosol and cloud microphysics alterations and their influence on IGP lightning activity during the COVID-19 Lockdown
Shreyasi Upadhyay	Tibetan Plateau Amplification and its Linkage with Indian Summer Monsoon
Halima Akter	Recent trends of cyclonic storm surges scenario in the Southern part of Bangladesh.
MaishaFarzana Methila	Sensitivity Parameterization Analysis for Tropical Cyclone Track Prediction Over the Bay of Bengal Using the WRF-ARW Model
Prajna Priyadarshini	Disaster Mitigation in the Face of Lightning and Large-Scale Weather Patterns

ArpitaRoy Shawon	Socioeconomic Resilience to Flooding through the Integration of Spatial Analysis and Community Indicators in the Eastern Bangladesh Severe Flood of August 2024
ShipaRani Singha	Assessment of Agricultural Losses Due to the Severe Monsoonal Flood in the Eastern Bangladesh, August 2024
Neetak Kumar	Climatology of lightning over Indo-Gangetic Plain and its correlation with meteorological indices.
Ying Zhang	Cloud Seeding Effects on Wet Scavenging of Atmospheric Reactive Nitrogen Pollutants: A Numerical Modeling Study
MaishaFarzana Methila	Changing Patterns of Extreme Rainfall in Eastern Bangladesh: A Climatological Analysis of the Eastern Bangladesh Flood, August 2024
AKSHARA NG	UNDERSTANDING THE RAINFALL STRUCTURE OF SEVERE CYCLONIC STORM MICHAUNG AND ITS PREDICTION
Madhu Kaundal	Seasonal differences in the trend of tropical cyclone characteristics over the Southern Indian Ocean
PragnyaPriyadarsini Pradhan	Assessing Storm Surge Hazards in India: A Risk-Based Clustering Approach
MuniraJaman Memy	Spatiotemporal Analysis of Heat Waves and Heat Index Escalation Ascribed to Extreme Temperature Increase in South-Central Bangladesh (2004â€“2024)
Pooja Debnath	A case study on copping and mitigation strategies of flood affected community in Feni, Bangladesh
NAGALAKSHMI KATRU	Role of Genesis Location in the Dynamics of Extremely Severe Cyclonic Storm (ESCS) FANI over NIO
Session 6	**Inadvertent weather modification (Urban impacts, contrails, pollution dispersion, etc.)**
Sachin Patil	Understanding the Effect of Aerosol Physicochemical Properties on CCN Activation: A Long-Term Observational Study at a High-Altitude Site in India
Betsy KB	Role of Aerosols on Prolonged Extreme Heatwave Events over India and its Implication to Atmospheric Boundary Layer
Partha Pratim Gogoi	Modulation of Urban Microclimate and its Ramifications: A Special Reference to outbreaks of Japanese encephalitis (JE) in Assam, India
Rajmal Jat	Urban Climate and Air Quality Impacts of open Wasteland in Delhi-NCR: A Modelling Study on Heat Mitigation and Pollution Reduction
ATUL KUMAR SRIVASTAVA	Influence of meteorological parameters on aerosol size distribution during the winter fog campaign over Delhi
PRIYAMBADA PALAI	The Impact of Urbanization on Heat Islands
Prabhat Kumar	Assessing the impact of climate change on future extreme temperature events over major cities of Gangetic Plains
RaviRanjan Kumar	Pune's Heat Stress Puzzle: Interplay of Urbanization, Pollution, and Atmospheric Conditions

HIBA P	Seasonal Variability of Atmospheric Boundary Layer Height over the Indian Subcontinent
Neha Kushwaha	Impact of Built-up Expansion on Local Temperature and Precipitation Over Northern India.
SWATHY GOPALAKRISHNA	Chemical Characterization and Radiative Forcing of PM2.5 and PM10 in a Central Himalayan Location: A Case Study in Ranichauri
Rhituja Bhorade	Urbanization and Inadvertent Weather Modification Over Delhi
SUNILKUMAR KHADGARAI	Identifying the Extreme Rainfall Hotspots over Mumbai: A special analysis using MESONET.
Sanjay Mehta	Climatology of the aerosols redistribution due to varied tropical cyclones over the Indian ocean
Deewan Bisht	Aerosol chemistry over a central Himalayan site in India: sources and temporal variability
Seetha CJ	Exchange Between Atmospheric Boundary Layer and Free Troposphere Over the Indian Monsoon Region
Preethi Bhaskar	Can a global pandemic modify regional weather and climate
PRAVEEN KUMAR	Air Quality-Climate Interactions in Indiaâ€™s West Central Region: Role of EDGAR and SAFAR Inventories in Capturing Seasonal Variability
Deenmani lal	Influence of Atmospheric Moisture and Instability Parameters on Lightning Activity Over Delhi NCR During 2019â€“2020
HZ Vanlalrochana	Vertical Cloud Distribution over a Tropical Urban Region, Hyderabad
Kethavath Lakshma	Decadal Variability of Boreal Spring Surface Air Temperature over India
Ashish Soni	Anthropogenic Influence on CCN Variability over the Bay of Bengal
Kavita Patnaik	Assessing Heat Wave-Driven Ozone Variability in Delhi
MdNaiem Sarder	Variation in Ambient and Feels-Like Temperature among Different Coastal and Inland Cities in Bangladesh
Swadesh Mohapatra	Assessment of Surface Urban Heat Island over Bengaluru City in India
Session 7	**Emerging technologies or new methods for weather modification**
Yuzhong Wu	Application of composite wing UAV in weather modification
Ashish Routray	Developed Nested High-Resolution Rapid Refresh Modeling System over the Indian Himalayan Region
Tom DeFelice	On the Autonomous Implementation of Operational Rain Enhancement Maneuvers by UAS
Ezhilarasi S	Next Generation Computing: Evolution of HPC, AI Integration, and Usage of Exascale Platforms in Weather Forecasting and Climate Prediction

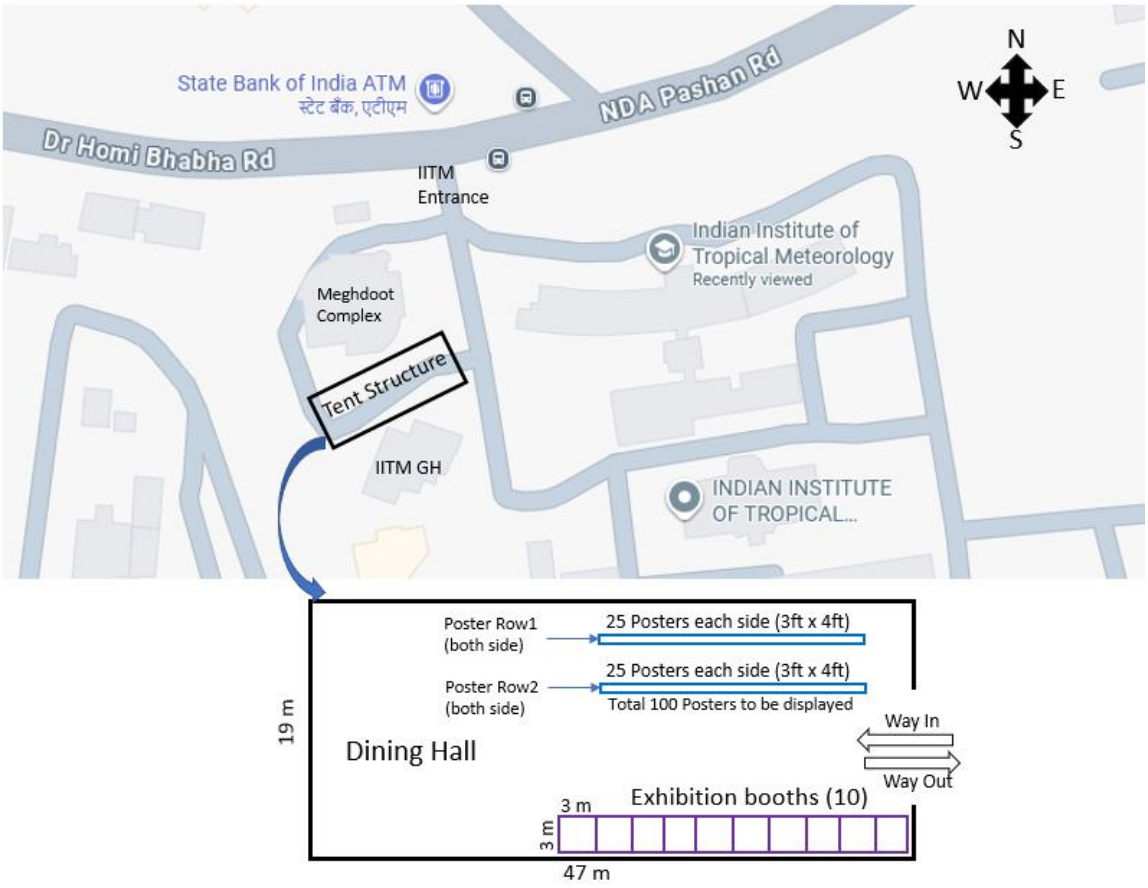
Ezhilarasi S	Advancing Evaluation with CSET: A Flexible and Reproducible Approach for UM LFRic Models by Building Trust in Convective and Turbulence-Scale Verification and Development
Yang Gao	Integrated Design of the Airborne Task System Equipped for the High-Performance MA60 Seeding Aircraft
Sanket Kalgutkar	Measurements of atmospheric turbulence in the lower atmosphere using a fixed wing UAV system of LARUS facility
Abhishek Gupta	Drag scaling in Truly Neutral Atmospheric Boundary Layer Using LES
Mahesh Nikam	UAV-Integrated Radiosonde Telemetry system for atmospheric profiling
CHAO TAN	Advances and Future Prospects of Artificial Intelligence in China Weather Modification
Masaya Ishikawa	Ice nucleation activity of plants: species and tissue distribution, characterization and functions.
Ali Abshaev	Studying the possibilities of creating artificial clouds and rain
Roopashree Shrivastava	APPLICATION OF ARIMA TECHNIQUE FOR MONTHLY AND SEASONAL RAINFALL FORECASTS: A CASE STUDY FOR TROMBAY SITE
Randy Seidl	Rainfall Enhancement by Ionization â€“ Eco Alternative to Chemicals and Gas?
Nikitabahen Makwana	Machine Learning-Driven Estimation of Superdroplet Growth from DNS Data
Rona MariaSunil	Clustering TEJ regimes and associated rainfall signatures in the Indian summer monsoon
SUNILKUMAR KHADGARAI	Synergetic approach to develop multi source precipitation product from high resolution Radar , rain gauge networks and satellite over Mumbai
Pranaba Nayak	Investigating the formation of thunderstorm-induced muon events using the Ooty muon telescope, electric field measurements, and lightning observations over three consecutive springs (2020â€“2022)
Padmakumari Burrala	Instrumented-UAV for Aerosol and Cloud properties: A New Facility for the support of Aerosol-Cloud-Precipitation studies in India
Luo Jiayi	Simulation and Experimental Investigation of Warm Cloud Catalysis Utilizing the Artificial Weather Modification Cloud Chamber
Santhoshkumar G	360Â° Rotating Ceilometer - The future of Cloud Observation
Sachin Deshpande	Properties of Mesoscale Convective Systems Throughout Their Lifetimes in the Monsoon Core Zone Using Satellite, Polarimetric Radar, and Lightning Observations
Subhrajit Rath	Hybrid Approach: Combining Physical and CNN-Based Cloud Fraction prediction for Enhanced NWP across scale
Biprav Chetry	Portable Cost-Effective Aerosol Particle Analyser Using a Smartphone

Manisha Tupsoundare	Objective Identification and Tracking of ZDR Columns in Polarimetric Radar Observations: A Proxy for Deep Convective Updrafts
Yuta Higuchi	Comparative Study of Black-Box Methods in Weather Intervention
Session 8	**Weather forecasting, and nowcasting Decision Support Systems**
Kandula Subrahmanyam	Estimating the diameter of deep convective rain cells using C-band SAR from the EOS-4 satellite and GPM measurements
Ioannis Matsangouras	Applications of NWCSAF in cloud seeding activities in the Kingdom of Saudi Arabia
Raja Boragapu	Investigating the performance of major thermodynamic parameters and their relevance to determine convection over Saudi Arabia
Sarawut Arthayakun	Standardized Spatial Reference for Rainmaking Weather Modification Data Integration Based on an Open-Source DGGS
Nandivada Umakanth	Impact of Cumulus and Microphysics Scheme Selection on WRF-Simulated Extreme Rainfall in Hilly Terrain
Sahadat Sarkar	Development and implementation of drop size distribution parameterization in GFS model based on observation data from Indian region
PatitaKalyana Sahoo	Characterizing Diurnal Rainfall Variability in Monsoon-Controlled Oceanic Domains: Bay of Bengal vs Arabian Sea
Sudhanshu Shekhar	Climate variability and extreme weather events over the Western and Central Himalayas
Pribin KP	Challenges and Advances in CMIP6 Simulations of Indian Summer Monsoon Rainfall: A Focus on Large-Scale and Convective Precipitation
Anupam Hazra	Hygroscopic Cloud Seeding in Warm-rain Processes over Indian subcontinent using Triple-moment Microphysics scheme in Numerical Weather Prediction Model
Rashmi Hallad	Integrating Remote Sensing and Machine Learning for Agricultural Drought Prediction and Crop Yield Loss Assessment in North Karnataka
Junaid Bin Yousuf P	Evaluation of Thermodynamic Indices for Lightning Prediction in India
BIJIT BANERJEE	Assessment of PBL Schemes in the WRF Model Using 212.5 MHz Wind Profiling Radar for Boundary Layer Estimation Over Complex Terrain in Northeast India
KrishnaK Osuri	Microphysical Processes and Thunderstorm rainfall and hail
AngelAnita Christy	Radar-derived and simulated analysis of boundary layer evolution and thermodynamical variations during a thunderstorm event over a tropical urban station
MdAwlad Hossain	Assessing WRF-ARW Simulations of the 2024 Feni Flash Flood: A Comparative Study with GPM and BMD Observations

SheikhFahimFaysal Sowrav	Predicting Flood Events Using ARIMA: Statistical Forecasting of Rainfall and Hydrological Trends in the Eastern Bangladesh Flood, August 2024
Apala Majumder	Performance Assessment Of NCEP and ECMWF 6-24-Hourly Rainfall Forecasts Against CMORPH Satellite Data For India
Malay Ganai	Sensitivity of enhanced vertical resolution in the operational Global Forecast System (GFS) T1534 on the short to medium range forecast of Indian summer monsoon
Tanmoy Goswami	Can a 12-km GFS Model Simulate the Observed Relationship between Cloud Optical Properties and Extreme Rainfall of Indian Summer Monsoon?
Marwa Majdi	Development of a Machine Learning System to Emulate WRF Forecasts for Thunderstorm Nowcasting in Support of the North Dakota Cloud Modification Project
Josin Sanal Thomas	Hail growth detection and early warning from dual polarimetric signatures.
Vishal Pathak	Teleconnection between ENSO and Indian Summer Monsoon rainfall in the MMCFSv1 and MMCFSv2
Aditi Singh	Prediction of Planetary Boundary Layer Height (PBLH) in Urban Areas â€“ A Machine Learning Approach
Mandar Nikale	Nowcasting of Convective Rainfall using High-Resolution ART CPol Radar in the Monsoon Core Zone and X-band Radar Network in Mumbai
Reba Halder	Understanding the 2023 Indian Summer Monsoon Through Model-Based Analysis of Rainfall and Circulation
Gaurav Govardhan	Decision Support System for Air Pollution Management in the National Capital of India
Aravindhavel Ananthavel	Early Detection of Severe Storm using Differential Reflectivity from Dual Polarimetric Radar for Nowcasting.
Harshad Hanmante	Convective Clustering and Rain-Type Classification in the Indian Monsoon Core Zone: Insights from Dual-Polarization Radar Observations and WRF Model Simulations
Bhumika Bhumika	Synopticâ€scale circulations and their impact on Extreme Rainfall Events over the North Indian Region.
Nitig Singh	Physics-Based Deep Learning Technique for Urban Rainfall Nowcasting: A Case Study of Multi-Source Data Fusion
Narayan Prasad Gautam	Impacts of tornado and cloud burst rainfalls in Nepal
Session 9	**Climate intervention/Marine Cloud Brightening**
Sanjib Ghosh	Precipitation in the GBM river basin under G6Sulfur and G6Solar geoengineering scenarios
Ramesh Kumar Yadav	Impact of the Indo-Pacific Warm Pool Warming on Indian Summer Monsoon Rainfall Pattern
SOMNATH MAHATO	Decadal Analysis of LULC Changes in Tamil Nadu and Maharashtra in IndiaÂ (2010-2020)

Steven Siems	Sensitivity of cloud-aerosol interactions to varying aerosol emissions and spatial distributions across the Great Barrier Reef (GBR)
Ankita	Trends in Surface Air Temperatures over the Hindu Kush Himalayas
Joao Ribeiro	Response of Winds and Precipitation in Extratropical Cyclones in Experiments with Stratospheric Aerosol Injection
Madhuri Sonawane	Understanding the Impact of Stratospheric Aerosol Injection under GeoMIP6 on the Northern Hemisphere Summer Monsoon (JJAS)
Gokul T	Low clouds over the subtropical Indian Ocean in the Mascarene High environment and sub-seasonal circulation associations with the Indian summer monsoon.
NANDHAKUMAR SK	Atmospheric Impacts of Marine Aerosols: Evidence from South Indian Waters
Session 10	**Stakeholder/policymaker/public engagement and communication**
Praveen Sreedharan	Harnessing Wind Energy During the Monsoon Season: Opportunities and Challenges for India
Mohit Kumar	Heat Stress Forecast Verification: A trend and variability analysis across time and space
STEPHEN OPIYO	Engineering the Skies: An Overview of African Weather Modification Projects and Their Future Potential
Fatima Akter	Pathways to Develop and Strengthen Community-Based Lightning Early Warning Systems in Bangladesh
Arnab Chakraborty	Cloud Seeding in India: Developments, Effectiveness, Research Growth, and Global Perspectives
Kailash Chand Pandey	Weather-Agro Advisories: Empowering Trans boundary Communities in India and Nepal

Plan



Oral presentations: Meghdoot Auditorium
Audio visuals/ projectors available.
We will require oral presentations to be uploaded before a deadline
On-site: presentation slides should be uploaded one day in advance

We will require ET members to chair oral sessions (will be paired with a local scientist from LOC)
There will be designated young scientists making a summary of the sessions
We will request a summary of the poster sessions as well.
Presentation guidelines are available

Poster

Poster boards will be available on site, pins, tapes etc will be available.

It should be 3x4 ft

100 posters can be displayed in the hall outside

100 posters can be in the hall below the Auditorium

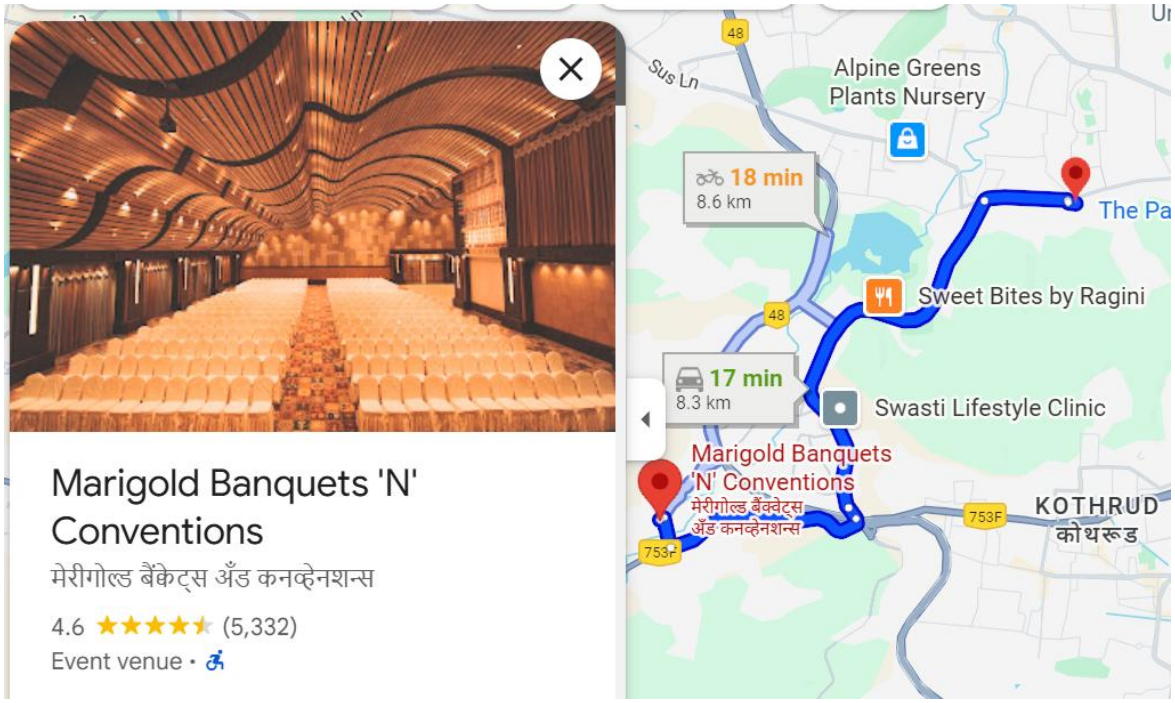
<u>Sponsor Booths</u>

3 m x 3 m sized exhibition booth

and will have light, internet, 2 chairs, 2 tables

ET Meeting:

The Separate Hall will be booked and catering will be arranged



The Venue of Ice breaking session and Gala Event