

# Inauguration

## WORLD METEOROLOGICAL ORGANIZATION

[11<sup>th</sup> 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](mailto:wmo-11scwxmod@tropmet.res.in)

**Venue: Meghdoot Auditorium | IITM Pune | India**

**3:00 PM – 4:30 PM (IST) | 2<sup>nd</sup> 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

Remarks by Dr. Estelle De Coning, WMO/WWRP

Address by the co-Chairs of WMO ET  
Dr. Sarah Tessendorf and Dr. Steven Siems

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

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

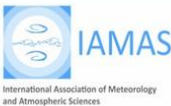
Introduction of the Chief Guest

Inaugural Address by Chief Guest  
Dr. Abdulla Al Mandous (WMO President)

Vote of thanks by Dr. Thara Prabhakaran, LOC Chair

# Ice-breaker event

**Venue: Goldenrod, Marygold Convention Centre**  
**6:30-8:30 PM (IST) | 2<sup>nd</sup> November 2025**  
**(For Registered Participants and Invitees only)**



**11<sup>th</sup> WMO Scientific Conference on Weather Modification**  
**(Pune, India, 3-7 November 2025)**

*Invitation*

Sponsored by





**Ice-breaker event**

**When:** 6:30-8:30 PM on 2<sup>nd</sup> November 2025

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



International Association of Meteorology  
and Atmospheric Sciences



# Gala Dinner

**Venue: Mimosa | Marygold Convention Centre**

**Starting at 05:00 PM (IST) | 5<sup>th</sup> November 2025**

**(For Registered Participants and Invitees only)**

**11<sup>th</sup> WMO Scientific Conference on Weather Modification**  
(Pune, India, 3-7 November 2025)

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*Invitation*

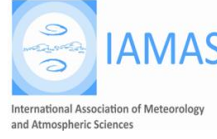
*Gala event*

*Marygold Convention Centre*

**Venue**

**When: 05:00 PM (IST) on 5<sup>th</sup> November 2025**

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



# ORALS

## DAY1

**Registration: 8:30 hrs (IST) onwards**

### Session 1: Fundamental aspects of cloud physics as the basis for cloud seeding Part 1

**Session Chairs: Dr. Estelle De Coning and Dr. Kamaljit Ray**

|                                                                                                                                                                                     |                                    |                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0930-1000 hrs                                                                                                                                                                       | <b>Keynote: Jan Henneberger</b>    | <b>Seeding Low Stratus Clouds to Understand the Microphysics of Glaciogenic Cloud Seeding</b>                                                                        |
| 1000-1015 hrs                                                                                                                                                                       | <b>Narihiro Orikasa</b>            | Cloud droplet formation experiments by hygroscopic particle seeding under pristine maritime conditions                                                               |
| 1015-1030 hrs                                                                                                                                                                       | <b>Milin Kaniyodical Sebastian</b> | ROLE OF ISOPRENE-DERIVED SECONDARY ORGANIC AEROSOLS IN THE GLACIATION OF DEEP CONVECTIVE CLOUDS                                                                      |
| 1030-1045 hrs                                                                                                                                                                       | <b>Xiaofeng Lou</b>                | The Construction and Field Experiment of Aerosol-cloud-precipitation Interaction and Seeding Physical Response at Lushan Experimental Base for Fog and Cloud Physics |
| 1045-1100 hrs                                                                                                                                                                       | <b>Group Photo + Break</b>         |                                                                                                                                                                      |
| 1100-1130 hrs                                                                                                                                                                       | <b>Tea break</b>                   |                                                                                                                                                                      |
| <b>Session 1: Fundamental aspects of cloud physics as the basis for cloud seeding Part 1 (continued)</b><br><br><b>Session Chairs: Prof. Jaywant Arakeri, Dr. Thara Prabhakaran</b> |                                    |                                                                                                                                                                      |
| 1130-1200 hrs                                                                                                                                                                       | <b>Keynote: Alya Al Mazroui</b>    | <b>UAE Research Program for Rain Enhancement Science (UAEREP)</b>                                                                                                    |

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| 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           |                                                                                                                                                            |
| <b>Session 2: Precipitation enhancement studies in deep convective clouds</b><br><b>Session Chairs: Dr. Sarah Tessendorf and Dr S. D. Pawar</b> |                       |                                                                                                                                                            |
| 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                                                                                                                                   | Sachin Patade         | Investigating Warm and Cold Rain Processes in Mixed-phase monsoon clouds.                                                                                  |
| 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             |                                                                                                                                                            |
| <b>Session 3: Hail mitigation, fog or rain suppression</b><br><b>Session Chairs: Dr. Ottmar Moehler and Prof. P. Pradeep Kumar</b>              |                       |                                                                                                                                                            |

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| 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                                                                                                                                                  |                           |                                                                                                                                                                                  |
| <b>Session 4: Precipitation enhancement studies in shallow/orographic clouds Part 1</b><br>Session Chairs: Prof. Roelof Burger and Dr. Alya Al Mazroui |                           |                                                                                                                                                                                  |
| 0930-1000 hrs                                                                                                                                          | Keynote: Sarah Tessendorf | Investigating the potential for winter orographic cloud seeding in the western United States                                                                                     |
| 1000-1015 hrs<br>(Online)                                                                                                                              | Sisi Chen                 | Winter Orographic Cloud Seeding in SNOWIE: Insights from an Ensemble Simulation Approach                                                                                         |
| 1015-1030 hrs<br>(Online)                                                                                                                              | 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                                                                              |

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| 1045-1100 hrs<br>(Online)                                                                                                                                  | Darrel Baumgardner      | Provisional Observations of Pollution Scavenging by Ice Layers (POPSICL)                                                         |
| 1100-1130 hrs                                                                                                                                              | Tea Break               |                                                                                                                                  |
| <b>Session 5: Precipitation enhancement studies in shallow/orographic clouds Part II</b><br><b>Session Chairs: Dr.Ayman Mohmmmed Albar and Dr. Shiekha</b> |                         |                                                                                                                                  |
| 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 Sricharouchot | 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             |                                                                                                                                  |
| <b>Session 6: Climate intervention/Marine Cloud Brightening</b><br><b>Session Chairs: Dr. Jing Duan and Dr. Anoop Mahajan</b>                              |                         |                                                                                                                                  |
| 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                                                             |

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|                                                                                                                      |                                     | Cooling Through Marine Low Cloud Intervention                                                                                                  |
| 1415-1430 hrs                                                                                                        | Vulker Wulfmeyer<br>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                           |                                                                                                                                                |
| <b>Session 7: Hazard mitigation, fog suppression</b><br><b>Session Chairs: Dr. Ali Abshaev, and Dr. Sachin Ghude</b> |                                     |                                                                                                                                                |
| 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                             |                                                                                                                                                |
| 1730-onwards                                                                                                         | Dinner hosted by the Director, IITM | Sayaji Hotel                                                                                                                                   |

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

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| 1145-1200 hrs                                                                                                                                                         | Miao Cai         | Development of Cloud Parameters with Fengyun Satellites and Its Application in Weather Modification                                                                                                                                         |
| 1200-1215 hrs                                                                                                                                                         | Marya Alhomoud   | 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      |                                                                                                                                                                                                                                             |
| <b>Session 10: Stakeholder engagement, ELSI panel talks and discussion</b><br><b>Session Chairs: Dr. Sarah Tessendorf, Dr. Omar Al Yazeedi, Dr. Thara Prabhakaran</b> |                  |                                                                                                                                                                                                                                             |
| 1400-1415 hrs<br>(Online)                                                                                                                                             | 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                                                                                                                                                                          |

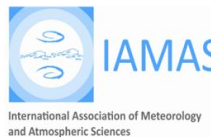
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| 1600-1630 hrs                                                                                                                                                                                                                      | Tea Break                    |                                                                                                                        |
| 1630-2000 hrs                                                                                                                                                                                                                      | Cultural event + Gala dinner |                                                                                                                        |
| Day 4                                                                                                                                                                                                                              |                              |                                                                                                                        |
| <p><b>Session 11: Broader applications/hazard mitigation (Eg. Bushfire/forest fire or avalanche mitigation, cyclone or typhoon mitigation, etc.)</b></p> <p><b>Session Chairs: Prof. Steven Siems and Dr. Suvarna Fadnavis</b></p> |                              |                                                                                                                        |
| 0930-1000 hrs<br>(Online)                                                                                                                                                                                                          | Keynote: Lulin Xue           | <b>Status, Progress, and Direction of Weather Modification and Regional Climate Intervention Research</b>              |
| 1000-1015 hrs                                                                                                                                                                                                                      | MASATAKA MURAKAMI            | Numerical experiments on typhoon modification by invigorating non-axisymmetric convection using a cloud seeding method |
| 1015-1030 hrs                                                                                                                                                                                                                      | Masashi Minamide             | A potential pathway to mitigate tropical cyclone intensification onset through multi-scale nonlinear interaction       |
| 1030-1045 hrs                                                                                                                                                                                                                      | TBD                          |                                                                                                                        |
| 1045-1100 hrs                                                                                                                                                                                                                      |                              |                                                                                                                        |
| 1100-1130 hrs                                                                                                                                                                                                                      | Tea Break                    |                                                                                                                        |
| <p><b>Session 12: Weather forecasting, and nowcasting Decision Support Systems</b></p> <p><b>Session Chairs: Dr. Medha Deshpande and Mr. P. Murugavel</b></p>                                                                      |                              |                                                                                                                        |
| 1130-1145 hrs                                                                                                                                                                                                                      | Caleb Steele                 | Leveraging GOES-R and HRRR for Cloud Seeding Operations: A Data-Driven Approach to Cloud Microphysical Analysis        |

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| 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          |                                                                                                                                  |
| <b>Session 13: Weather forecasting, and nowcasting Decision Support Systems</b><br><b>Session Chairs: Dr. Steven Siems and Dr. Anupam Hazra</b> |                      |                                                                                                                                  |
| 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?                                                                                         |

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| 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           |                                                                                                                                   |
| <p><b>Session 14: Inadvertent weather modification (Urban impacts, contrails, pollution dispersion, etc.)</b></p> <p><b>Session Chairs: Dr. Rajesh Kumar and Dr. Subrata kumar Das</b></p> |                 |                                                                                                                                   |
| 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 KHOBRADE | Influence of Land Surface Dynamics on Regional Precipitation Patterns                                                             |
| 1715-1730 hr                                                                                                                                                                               | Break           |                                                                                                                                   |
| 1730-1900 hrs                                                                                                                                                                              | Posters         |                                                                                                                                   |

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| <b>Day 5</b>                                                                                                                                                       |                                   |                                                                                                    |
| <b>Session 15: Fundamental aspects of cloud physics as the basis for cloud seeding Part II</b><br><b>Session Chairs: Dr. Norikasa and Prof. Greg McFarquhar</b>    |                                   |                                                                                                    |
| <b>0930-1000 hrs</b>                                                                                                                                               | <b>Keynote: Thara Prabhakaran</b> | <b>CAIPEEX - defining opportunity that shaped cloud physics studies in India</b>                   |
| <b>1000-1015 hrs</b>                                                                                                                                               | <b>Manhal Alhilali</b>            | Evaluating Cloud Seeding Effectiveness in Convective Clouds with the Advanced Super-Droplet Method |
| <b>1015-1030 hrs</b>                                                                                                                                               | <b>Weiguo Liu</b>                 | Introduction of CMA-CPEFS cloud seeding model and its application                                  |
| <b>1030-1045 hrs</b>                                                                                                                                               | <b>Mahen Konwar</b>               | Identifying the seeding signature in cloud particles from hydrometeor residuals                    |
| <b>1045-1100 hrs</b>                                                                                                                                               | <b>Sonali Patade</b>              | Measurements of ice nucleating particles over rain shadow region of India                          |
| <b>1100-1130 hrs</b>                                                                                                                                               | <b>Tea Break</b>                  |                                                                                                    |
| <b>Session 16: Fundamental aspects of cloud physics as the basis for cloud seeding Part III</b><br><b>Session Chairs: Ms. Mercy Varghese and Dr. Shivsai Dixit</b> |                                   |                                                                                                    |
| <b>1130-1145 hrs</b>                                                                                                                                               | <b>Ottmar Moehler</b>             | Development and operation of AIDA and PINE cloud simulation chambers                               |
| <b>1145-1200 hrs</b>                                                                                                                                               | <b>Kurt Hibert</b>                | Laboratory studies of hygroscopic seeding                                                          |

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| <b>1200-1215 hrs</b> | <b>Naruki Hiranuma</b> | Laboratory study on the efficacy of new glaciogenic cloud seeding materials                                                                                |
| <b>1215-1230 hrs</b> | <b>Shaofeng Hua</b>    | Hygroscopic Seeding Simulation Using a Superdroplet-Bin Hybrid Microphysical Scheme                                                                        |
| <b>1230-1245 hrs</b> | <b>Lois Thomas</b>     | Large eddy simulations of a convection cloud chamber with variable sidewall forcing: achieving uniform supersaturation, microphysics, and turbulent mixing |
| <b>1245-1300 hrs</b> | <b>Xueliang Guo</b>    | Optimizing cloud seeding for rain enhancement based on aircraft measurements and modeling                                                                  |
| <b>1300-1330 hrs</b> | <b>Closing Remarks</b> |                                                                                                                                                            |
|                      | <b>Lunch</b>           |                                                                                                                                                            |



# POSTERS

| Session 1                  | Fundamental aspects of cloud physics as the basis for cloud seeding Part I                                                                                                  |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Participant                | Abstract Title                                                                                                                                                              |
| 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                                                                                                         |
| Udaya Gunturu              | What factors contribute to the scanty rainfall in arid and desert regions?                                                                                                  |
| 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                                                                              |
| 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                                           |
| K Shri Vignesh             | Significance of adding a small fraction of bigger droplets to enhance droplet size growth in turbulence                                                                     |
| 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           | Aerosol-Cloud Interactions and Precipitation Enhancement: Case Study from the CAIPEEX Hygroscopic Seeding Experiment                                                        |

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| 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.                                                                                  |
| <b>Session 2</b>     | <b>Precipitation enhancement studies in deep convective clouds</b>                                                                                                                                           |
| 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                                                                                                                |
| 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.                                                 |
| 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.                                                                                                |

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| 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                                                     |
| <b>Session 3</b>     | <b>Precipitation enhancement studies in shallow/orographic clouds</b>                                                                                            |
| Resmi EA             | Studying the developments of orographic clouds and rainfall: High Altitude Cloud Observations over Western Ghats, India                                          |
| 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.                                                                        |
| <b>Session</b>       | <b>Hail mitigation, fog or rain suppression</b>                                                                                                                  |
| <b>Darko Savic</b>   | Seeding effect assessment: description of two supercell storms with different seeding levels                                                                     |
| <b>Darko Savic</b>   | Automation of the hail suppression system in Serbia                                                                                                              |



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| Ivan Birovljevic   | Enhancing Cloud Seeding Criteria Using Machine Learning                                                                                                         |
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| Devender Bishnoi   | Drivers Behind Diminishing Trend of Monsoon Depressions over Bay of Bengal Influencing Monsoon rainfall over India                                              |
| 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                                                 |
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| <b>Session 4</b>   | <b>Hydrological processes, impacts, and assessments</b>                                                                                                         |
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| 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                                                                                    |
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| Rani Devi          | Role of ENSO and MJO in the Modulation of Heavy Rainfall Events™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                                           |

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| 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 LAND-ATMOSPHERE INTERACTIONS OVER CENTRAL INDIA DURING THE MONSOON SEASON         |
| 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 Aerosol-Cloud-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                          |
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| Session 5                    | Broader applications/hazard mitigation (Eg. Bushfire/forest fire or avalanche mitigation, cyclone or typhoon mitigation, etc.)                   |
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| 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.                                                              |
| Prajna Priyadarshini         | Disaster Mitigation in the Face of Lightning and Large-Scale Weather Patterns                                                                    |
| 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                                  |
| 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                                             |
| PragnyaPriyadarsi ni 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 (2004–2024) |
| 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.)                                                          |

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| 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 PM <sub>2.5</sub> and PM <sub>10</sub> in a Central Himalayan Location: A Case Study in Ranichauri |
| Rhijuja Bhorade       | Urbanization and Inadvertent Weather Modification Over Delhi                                                                                          |
| SUNILKUMAR KHADGARAI  | Identifying the Extreme Rainfall Hotspots over Mumbai: A special analysis using MESONET.                                                              |
| 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 India'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 2019-2020                                    |
| HZ Vanlalrochana      | Vertical Cloud Distribution over a Tropical Urban Region, Hyderabad                                                                                   |
| Kethavath Lakshma     | Decadal Variability of Boreal Spring Surface Air Temperature over India                                                                               |

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| 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                                                                                                       |
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| <b>Session 7</b>       | <b>Emerging technologies or new methods for weather modification</b>                                                                                                       |
| 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 |
| 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                                                                                                       |
| 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 – Eco Alternative to Chemicals and Gas?                                                                                                 |
| Nikitabehen 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                                                              |

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|                      | measurements, and lightning observations over three consecutive springs (2020–2022)                                                                            |
| Padmakumari Burrala  | Instrumented-UAV for Aerosol and Cloud properties: A New Facility for the support of Aerosol-Cloud-Precipitation studies in India                              |
| Santhoshkumar G      | 360° 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                                                                                                 |
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| <b>Session 8</b>     | <b>Weather forecasting, and nowcasting Decision Support Systems</b>                                                                                            |
| 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                            |

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| 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        |
| 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?                         |
| Kurt Hibert             | 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 – 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         | Synoptic-scale circulations and their impact on Extreme Rainfall Events over the North Indian Region.                                                            |

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| 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                                                                                                    |
| <b>Session 9</b>      | <b>Climate intervention/Marine Cloud Brightening</b>                                                                                                     |
| 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 India (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                                                                                |
| <b>Session 10</b>     | <b>Stakeholder/policymaker/public engagement and communication</b>                                                                                       |
| 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                                                   |
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| 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                                                                        |
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## Sessions and Keynote talks

Day 1  
3-11-2025

Session 1  
Fundamental aspects of cloud physics as the basis for cloud seeding,  
Part I  
  
Session Chairs: Dr. Estelle De Coning and Dr. Kamaljit Ray

Keynote: Jan Henneberger  
Seeding Low Stratus Clouds to Understand the Microphysics of Glaciogenic Cloud Seeding

Day 1  
3-11-2025

Session 1  
Fundamental aspects of cloud physics as the basis for cloud seeding, Part  
I (continued)  
Session Chairs: Prof. Jaywant Arakeri, Dr. Thara Prabhakaran

Keynote: Alya Al Mazroui  
UAE Research Program for Rain Enhancement Science (UAEREP)

Day 1  
3-11-2025

Session 2  
Precipitation enhancement studies in deep convective clouds  
  
Session Chairs: Dr. Sarah Tessendorf and Dr S. D. Pawar

Keynote: Roelof Burger  
Enhancing Rainfall from Deep Convective Clouds: Current Science, Operational Challenges, and  
Emerging UAS Technologies

Day 1  
3-11-2025

Session 3:  
Hail mitigation, fog or rain suppression  
  
Session Chairs: Dr. Ottmar Moehler and Prof. P. Pradeep Kumar

Keynote: Ali Abshaev  
Glaciogenic seeding impact on radar and lightning characteristics of hail clouds

Day 2  
4-11-2025

Session 4: Precipitation enhancement studies in  
shallow/orographic clouds  
  
Session Chairs: Prof. Roelof Burger and Dr. Alya Al Mazroui

Keynote: Sarah Tessendorf  
Investigating the potential for winter orographic cloud seeding in the western United States

Day 2  
4-11-2025

Session 5: Precipitation enhancement studies in  
shallow/orographic clouds  
  
Session Chairs: Dr. Ayman Mohammed Albar and Dr. Shiekha

Day 2  
4-11-2025

Session 6: Climate intervention/Marine Cloud Brightening  
  
Session Chairs: Dr. Jing Duan and Dr. Anoop Mahajan

Keynote: Steven Siems [SOSC000221]  
Marine Cloud Brightening over the Great Barrier Reef during periods of Coral Bleaching

Day 3  
5-11-2025

Session 7: Hail mitigation, fog or rain suppression

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|                                                                                                                                                                                   | Session Chairs: Dr. Ali Abshaev, and Dr. Sachin Ghude                                                                                                                                                         |
| Keynote: Steven Siems [SOSC000221]<br>Marine Cloud Brightening over the Great Barrier Reef during periods of Coral Bleaching                                                      |                                                                                                                                                                                                               |
| Day 3<br>5-11-2025                                                                                                                                                                | Session 8: Emerging technologies or new methods for weather modification<br><br>Session Chairs: Dr. Findy Renggono and Dr. Padmakumari                                                                        |
| Keynote: Jing Duan [SOSC000056]<br>Chinese Aircraft Observational Datasets and Research on the Application of Artificial Intelligence Analysis Methods in Airborne Detection Data |                                                                                                                                                                                                               |
| Day 3<br>5-11-2025                                                                                                                                                                | Session 9: Emerging technologies or new methods for weather modification Stakeholder engagement<br><br>Session Chairs: Dr. Micael Amore Cecchini and Dr. Mahen Konwar                                         |
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| Day 3<br>5-11-2025                                                                                                                                                                | Session 10: Stakeholder engagement, ELSI panel talks and discussion<br><br>Session Chairs: Dr. Sarah Tessendorf, Dr. Omar Al Yazeedi, Dr. Thara Prabhakaran                                                   |
| Panel discussion: Panel : Sarah Tessendorf, Kala Golden ( please add)                                                                                                             |                                                                                                                                                                                                               |
| Day 4<br>6-11-2025                                                                                                                                                                | Session 11: Broader applications/hazard mitigation (Eg. Bushfire/forest fire or avalanche mitigation, cyclone or typhoon mitigation, etc.)<br><br>Session Chairs: Prof. Steven Siems and Dr. Suvarna Fadnavis |
| Keynote: Lulin Xue [SOSC000272]<br>Status, Progress, and Direction of Weather Modification and Regional Climate Intervention Research                                             |                                                                                                                                                                                                               |
| Day 4<br>6-11-2025                                                                                                                                                                | Session 12: Weather forecasting, and nowcasting Decision Support Systems<br><br>Session Chairs: Dr. Medha Deshpande and Mr. P. Murugavel                                                                      |
|                                                                                                                                                                                   |                                                                                                                                                                                                               |
| Day 4<br>6-11-2025                                                                                                                                                                | Session 13: Weather forecasting, and nowcasting Decision Support Systems<br><br>Session Chairs: Dr. Steven Siems and Dr. Anupam Hazra                                                                         |
|                                                                                                                                                                                   |                                                                                                                                                                                                               |
| Day 4<br>6-11-2025                                                                                                                                                                | Session 14: Inadvertent weather modification (Urban impacts, contrails, pollution dispersion, etc.)<br><br>Session Chairs: Dr. Rajesh Kumar and Dr. Subrata kumar Das                                         |
|                                                                                                                                                                                   |                                                                                                                                                                                                               |

Day 5  
7-11-2025

Session 15: Fundamental aspects of cloud physics as the basis for cloud seeding Part II

Session Chairs: Dr. Norikasa and Prof. Greg McFarquhar

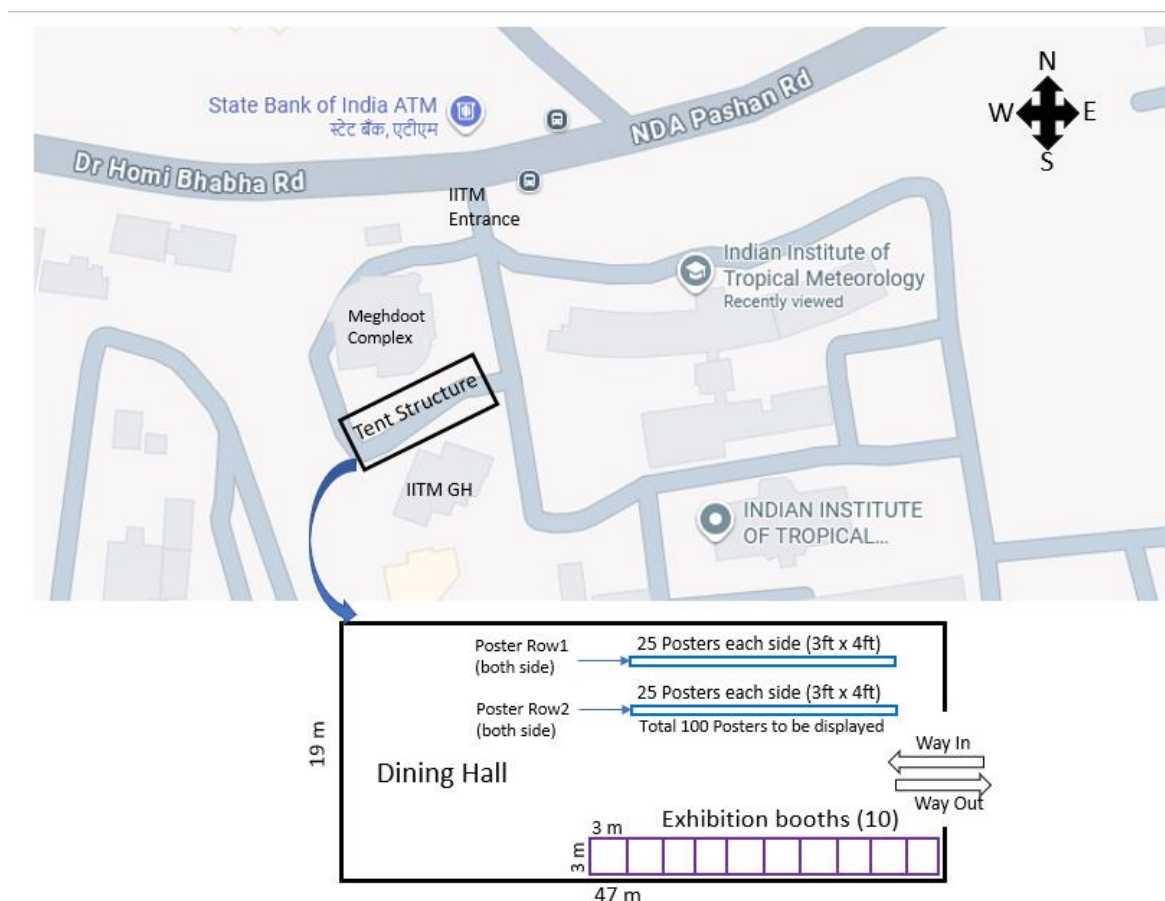
Keynote: Thara Prabhakaran [SOSC000002]  
CAIPEEX - defining opportunity that shaped cloud physics studies in India

Day 5  
7-11-2025

Session 16: Fundamental aspects of cloud physics as the basis for cloud seeding Part III

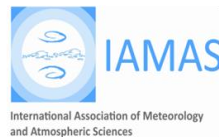
Session Chairs: Ms. Mercy Varghese and Dr. Shivsai Dixit

## 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.**

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**It should be 3x4 ft**

**100 posters can be displayed in the hall outside**

**100 posters can be in the hall below the Auditorium**



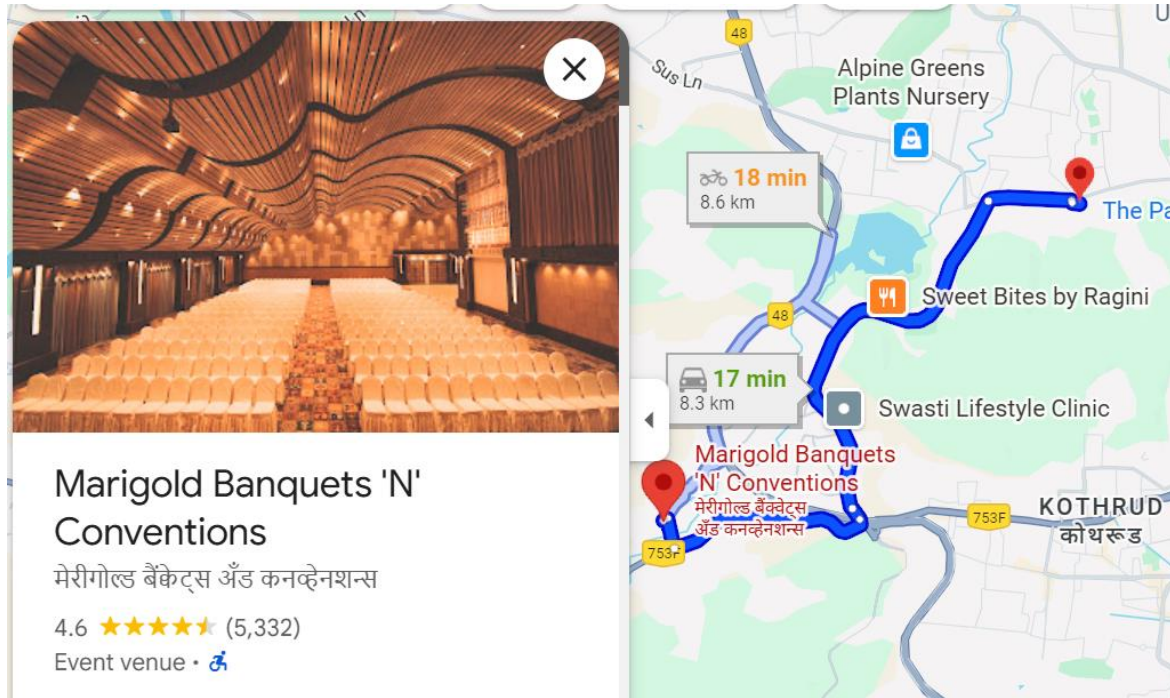
### **Sponsor Booths**

**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**