



# Seventh WMO International Workshop on Monsoons (IWM-7) 22-26 March 2022, New Delhi, India

## TECHNICAL SESSION: INVITED PRESENTATIONS

**Day 4: 25 March, 2022 (Friday)**  
**Time: 0830-0950 IST (0300-0420 UTC) (80 Minutes)**

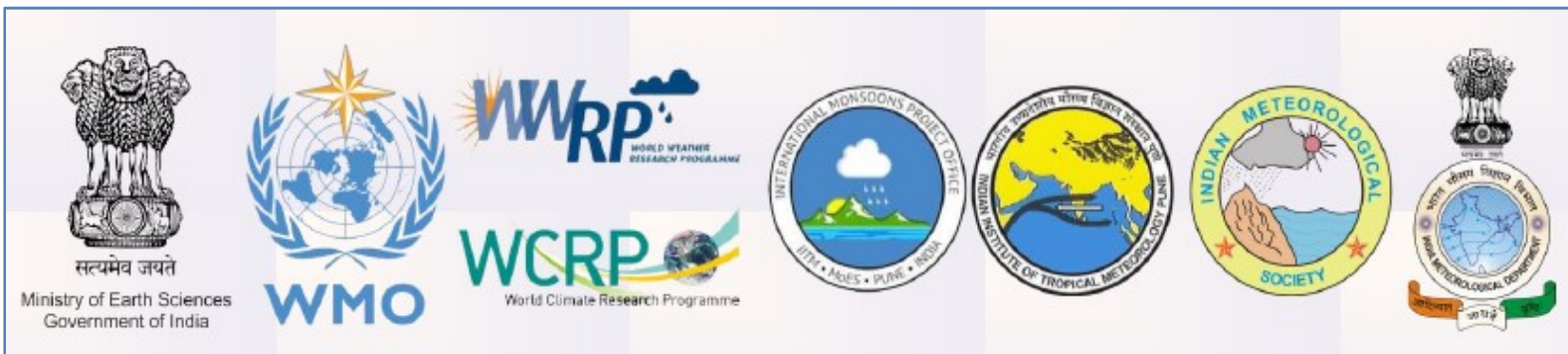
### SESSION - 25S1

**CHAIR: Dr. KYUNG-JA HA**

**(Each Talk : 15 minutes for presentation and 4 minutes for discussion+ 1 minute extra)**

Sr. No	ID No	Name	Affiliation	Theme	Title
1	8	BIN WANG	UH, USA	CLIMATE CHANGE AND MONSOONS	GLOBAL AND REGIONAL MONSOONS: CONCEPT AND DYNAMIC RESPONSE TO ANTHROPOGENIC WARMING
2	14	KYUNG-JA HA	PNU, S.KOREA	CLIMATE CHANGE AND MONSOONS	CLIMATE EXTREMES IN THE HYDROCLIMATE CHANGE
3	6	ANDREW TURNER	U. READING, U.K.	CLIMATE CHANGE AND MONSOONS	THE EFFECTS OF CLIMATE CHANGE ON THE GLOBAL AND REGIONAL MONSOONS
4	27	TIM LI	UH, USA	CLIMATE CHANGE AND MONSOONS	DISTINCTIVE SOUTH AND EAST ASIAN MONSOON CIRCULATION RESPONSES TO GLOBAL WARMING

**BREAK 15 Minutes**



## TECHNICAL SESSION: ORAL PRESENTATIONS

**Day 4: 25 March, 2022 (Friday)**  
**Time: 1005-1130 IST (0430-0550 UTC) (85 Minutes)**  
**SESSION : 25S2A : Hall A (Parallel Session)**

**SESSION COORDINATOR: DR. SUSMITHA JOSEPH**

**(Each Talk : 10 minutes for presentation and 2 minutes for discussion + 1 minutes extra)**

Sr. No.	ID No.	Theme	Name	Title
1	99	REGIONAL MONSOONS	AMITA PRABHU	INFLUENCE OF EURASIAN SNOW, ATLANTIC SST AND ARCTIC OSCILLATION ON SUMMER MONSOON RAINFALL VARIABILITY OVER THE NORTH EAST REGIONS OF INDIA
2	101	REGIONAL MONSOONS	MONG-MING LU	DECADAL CHANGES OF THE EARLY SUMMER ASIAN MONSOON AND THE SOUTH CHINA SEA TROPICAL CYCLONES DURING THE YEARS 2001 THROUGH 2020
3	102	REGIONAL MONSOONS	RAHUL SINGH	INVESTIGATION OF DRY AIR INTRUSION OVER INDIA DURING BREAK PHASES OF SUMMER MONSOON
4	109	REGIONAL MONSOONS	DAMODAR BAGALE	SPATIAL AND TEMPORAL VARIABILITY OF MONSOON RAINFALL AND ITS TRENDS ON THE SOUTHERN SLOPES OF CENTRAL HIMALAYAS
5	116	REGIONAL MONSOONS	DR. ANANDA KUMAR DAS	THE INFLUENCE OF MONSOON LOW-LEVEL JET ON THE HEAVY RAINFALL OVER THE WESTERN GHATS
6	117	REGIONAL MONSOONS	DONALDI SUKMA PERMANA	EVALUATION OF MULTIPLE GRIDDED PRECIPITATION DATASETS USING GAUGE OBSERVATIONS OVER INDONESIA DURING ASIAN-AUSTRALIAN MONSOONS PERIOD

**BREAK 15 Minutes**



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**Day 4: 25 March, 2022 (Friday)**  
**Time: 1005-1130 IST (0430-0550 UTC) (85 Minutes)**  
**SESSION : 25S2B : Hall B (Parallel Session)**

**SESSION COORDINATOR: Dr. JOHN P GEORGE**

**(Each Talk : 10 minutes for presentation and 2 minutes for discussion + 1 minutes Extra)**

Sr. No.	ID No.	Theme	Name	Title
1	126	REGIONAL MONSOONS	D RAJAN	CHARACTERISTICS FEATURES OF HOURLY RAINFALL OVER PLAINS AND COMPLEX TERRAIN REGIONS
2	94	NEW TECHNOLOGIES AND TOOLS	HARVIR SINGH	MULTI-MODEL SPATIAL VERIFICATION OF RAINFALL FORECAST DURING RECENT MONSOONS USING A STATE-OF-ART TECHNIQUE
3	120	REGIONAL MONSOONS	ABHILASH	REGIONAL RAINFALL ANALYSIS OF HARYANA IN RELATION TO MONSOON TELECONNECTIONS AND AGRICULTURE
4	122	REGIONAL MONSOONS	S. INDIRA RANI	INFLUENCE OF AIRCRAFT OBSERVATIONS IN SIMULATING THE INDIAN MONSOON FEATURES IN THE IMDAA REANALYSIS
5	93	NEW TECHNOLOGIES AND TOOLS	SUSHANT KUMAR	A MACHINE LEARNING APPROACH TO IMPROVE TROPICAL CYCLONE INTENSITY PREDICTION OF NCMRWF ENSEMBLE PREDICTION SYSTEM
6	98	NEW TECHNOLOGIES AND TOOLS	HASIBUR RAHAMAN	IMPROVED OCEAN ANALYSIS WITH UPGRADED MODEL IN THE GLOBAL OCEAN DATA ASSIMILATION SYSTEM

**BREAK 15 Minutes**



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## TECHNICAL SESSION: SHORT ORAL CUM E-POSTER PRESENTATIONS

**Day 4: 25 March, 2022 (Friday)**  
**Time: 1145-1300 IST (0615-0730 UTC) (75 Minutes)**  
**SESSION : 25SP (Short Oral Cum Poster Session)**

**Session Coordinator : Dr. Rajib Chattopadhyay, IMD**

**(Each Talk : 2 and ½ minutes.)**

Sr. No.	ID No.	Theme	Name	Title
1	40	HIGH IMPACT MONSOON WEATHER	PAROMITA CHAKRABORTY	EXTREME RAINFALL EVENTS PREDICTION DURING INDIAN SUMMER MONSOON USING CONVECTIVE-SCALE ENSEMBLE PREDICTION SYSTEM
2	41	HIGH IMPACT MONSOON WEATHER	SAUMYENDU DE	DID THE FIRST PAPER IN METEOROLOGY PUBLISHED BY AN INDIAN DECODE TORNADO DYNAMICS 154 YEARS AGO?
3	44	HIGH IMPACT MONSOON WEATHER	PRABHATH H KURUP	SIMULATION OF CLOUDBURST EVENT OVER KERALA DURING THE 2019 MONSOON SEASON
4	46	HIGH IMPACT MONSOON WEATHER	ARULALAN T	EXTREME RAINFALL EVENTS OVER INDIA DURING MONSOONS AND ITS RELATION TO THE MADDEN JULIAN OSCILLATION: PROBABILISTIC PREDICTABILITY BY THE MEDIUM-RANGE MULTI-MODEL ENSEMBLES
5	47	HIGH IMPACT MONSOON WEATHER	TRISANU BANIK	INVESTIGATION OF RAINFALL AND LIGHTNING INTER-RELATIONSHIP DURING THE SOUTH WEST MONSOON SEASONS OVER LIGHTNING HOTSPOTS OF INDIA



6	49	HIGH IMPACT MONSOON WEATHER	AKHIL SRIVASTAVA	HRRR: NOWCAST GUIDANCE TO PREDICT EXTREME WEATHER EVENTS DURING MONSOON SEASON
7	50	HIGH IMPACT MONSOON WEATHER	AKKISETTI MADHU LATHA	CLIMATOLOGY OF THERMODYNAMIC INDICES AND BACKGROUND SYNOPTIC CONDITIONS RESPONSIBLE FOR SEVERE CONVECTION DURING PRE TO POST MONSOON SEASONS OVER INDIAN REGION
8	55	HIGH IMPACT MONSOON WEATHER	VIGIN LAL F	MONSOON INTRA SEASONAL RAINFALL OSCILLATION OVER GUJARAT STATE 2021.
9	56	HIGH IMPACT MONSOON WEATHER	HEMLATA BHARWANI	IMPACT BASED FORECAST OF FLASH FLOODS OVER SOUTH ASIA
10	59	MODELLING MONSOON PROCESSES	SIDDHARTH KUMAR	DOES INCREASING HORIZONTAL RESOLUTION IMPROVE SEASONAL PREDICTION OF INDIAN SUMMER MONSOON? : A CLIMATE FORECAST SYSTEM MODEL PERSPECTIVE
11	60	MODELLING MONSOON PROCESSES	K. S. S. SAI SRUJAN	DOWNSTREAM AND IN SITU GENESIS OF MONSOON LOW-PRESSURE SYSTEMS IN COUPLED MODELS
12	83	MONSOON INFORMATION AND PREDICTION FOR SOCIETAL BENEFIT	DEVENDRA KUMAR TIWARI	COMPARATIVE STUDY OF INTRASEASONAL VARIABILITY OF SUMMER MONSOON RAINFALL OVER NORTH AND SOUTH BIHAR, INDIA
13	66	MODELLING MONSOON PROCESSES	ABHIJITH V	IMPROVED PQPF IN THE NEPS-G USING ENSEMBLE BMA TECHNIQUE OVER INDIA
14	104	REGIONAL MONSOONS	ARCHISMAN BARAT	CHARACTERISTICS OF MONSOON RAINFALL IN LAST FOUR DECADES OVER AN URBAN AREA OF THE GANGETIC PLAINS
15	70	MODELLING MONSOON PROCESSES	HASHMI FATIMA	ASSESSING LAND SURFACE VARIABILITY DURING SUMMER-MONSOON PERIOD WITH IMDAA REANALYSIS DATA

16	73	MODELLING MONSOON PROCESSES	ARATHY MENON	STRUCTURE AND DYNAMICS OF A CASE-STUDY MONSOON DEPRESSION IN HIGH-RESOLUTION NUMERICAL SIMULATIONS USING THE MET OFFICE UNIFIED MODEL
17	77	MODELLING MONSOON PROCESSES	USHNANSHU DUTTA	ROLE OF CLOUD PROCESSES BEHIND THE INDIAN SUMMER MONSOON RAINFALL AND ITS PREDICTION
18	80	MODELLING MONSOON PROCESSES	ASHU MAMGAIN	EVALUATION OF SHORT RANGE FORECASTS FROM GLOBAL AND REGIONAL ENSEMBLE PREDICTION SYSTEMS OF NCMRWF
19	96	NEW TECHNOLOGIES AND TOOLS	AVNISH VARSHNEY	A MACHINE LEARNING FRAMEWORK FOR THE DETECTION OF BUILTUP CHANGES: USE OF MULTI-SPECTRAL SATELLITE IMAGES
20	97	NEW TECHNOLOGIES AND TOOLS	MADHU CHANDRA R KALAPUREDDY	PYSCANCF – THE PYTHON LIBRARY FOR SINGLE SWEEP WEATHER RADAR DATASETS OF IMD
21	45	HIGH IMPACT MONSOON WEATHER	GOKUL VISHWANATHAN	COMPARING THE INTERACTION OF DRY AIR INCURSION WITH MONSOON DEPRESSION USING ERA-5 AND IMDAA REANALYSIS DATASETS
22	57	HIGH IMPACT MONSOON WEATHER	PRAJNA PRIYADARSHINI	ANALYSIS OF HEAVY RAINFALL OVER INDIA IN AUGUST 2019 AND THE PERFORMANCE OF GLOBAL NUMERICAL MODEL FORECASTS
23	81	MODELLING MONSOON PROCESSES	SAURABH VERMA	ROLE OF PBL AND MICROPHYSICAL PARAMETERIZATIONS DURING WRF SIMULATED MONSOONAL HEAVY RAINFALL EPISODES OVER MUMBAI



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## TECHNICAL SESSION: INVITED PRESENTATIONS

**Day 4: 25 March, 2022 (Friday)**

**Time: 1800-1920 IST (1230-1340 UTC) (80 Minutes)**

**SESSION - 25S3**

**CHAIR: Dr. AJIT TYAGI**

**(Each Talk : 15 minutes for presentation and 4 minutes for discussion+ 1 minute extra)**

Sr. No	ID No	Name	Affiliation	Theme	Title
1	20	R. KRISHNAN	WCRP JSC, INDIA	CLIMATE CHANGE AND MONSOONS	IMPLICATIONS OF VOLCANIC AEROSOLS FOR SEASONAL FORECASTING OF THE INDIAN MONSOON IN A CHANGING CLIMATE
2	40	DR. HEIDI KREIBICH	POTSDAM, GFZ GERMAN RESEARCH CENTRE FOR GEOSCIENCES	SECTRAL APPLICATION	IMPACT-BASED FORECASTING OF URBAN FLOODING
3	11	D.S. PAI	IMD, INDIA	SUB-SEASONAL TO SEASONAL (S2S) PREDICTIONS	SEASONAL PREDICTION OF INDIAN MONSOONS
4	35	D. R. PATTANAIK	IMD, NEW DELHI	SECTRAL APPLICATION (AGRICULTURE)	MEDIUM AND EXTENDED RANGE FORECAST OF MONSOON OVER INDIA : APPLICATION IN AGRICULTURE

**BREAK 5 Minutes**



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## TECHNICAL SESSION: ORAL PRESENTATIONS

**Day 4: 25 March, 2022 (Friday)**  
**Time: 1925-2045 IST (1355-1515 UTC) (80 Minutes)**  
**SESSION : 25S4A : Hall A (Parallel Session)**

**SESSION COORDINATOR: Dr. NACHIKETA ACHARYA**

**(Each Talk : 10 minutes for presentation and 2 minutes for discussion + 1 minutes extra)**

Sr. No.	ID No.	Theme	Name	Title
1	82	MONSOON INFORMATION AND PREDICTION FOR SOCIETAL BENEFIT	KATE SALMON	HOW WELL DO SEASONAL FORECAST MODELS SIMULATE SOUTH ASIAN MONSOON PRECIPITATION?
2	92	MONSOON INFORMATION AND PREDICTION FOR SOCIETAL BENEFIT	FEBA FRANCIS	DECADAL PREDICTION OF THE INDIAN OCEAN DIPOLE - LINKS FROM THE SOUTHERN OCEAN
3	68	MODELLING MONSOON PROCESSES	ANKUR SRIVASTAVA	REVEALING SOURCES OF MODEL ERROR IN INDIAN SUMMER MONSOON FORECASTS
4	35	FIELD EXPERIMENTS AND OBSERVATIONAL CAMPAIGNS	DR ADARSH KUMAR	STUDY OF ATMOSPHERIC ELECTRICAL CONDUCTIVITY DURING MONSOON SEASON AT A TROPICAL STATION OF NORTHERN INDIA
5	71	MODELLING MONSOON PROCESSES	ELENA SUROVYATKINA	PREDICTING ONSET AND WITHDRAWAL OF INDIAN SUMMER MONSOON: RECENT ADVANCE AND REGIONAL EXTENSION
6	63	MODELLING MONSOON PROCESSES	MOHANA S THOTA	REPRESENTATION OF PROCESS-ORIENTED DIAGNOSTICS IN IMDAA REANALYSIS DURING MONSOON





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**Day 4: 25 March, 2022 (Friday)**  
**Time: 1925-2045 IST (1355-1515 UTC) (80 Minutes)**  
**SESSION : 25S4B : Hall B (Parallel Session)**

**SESSION COORDINATOR: DR. ANDREW TURNER**

**(Each Talk : 10 minutes for presentation and 2 minutes for discussion + 1 minutes Extra)**

S. No.	ID No.	Theme	Name	Title
1	39	HIGH IMPACT MONSOON WEATHER	JEEVANPRAKASH RAMCHANGRA KULKARNI	HYDRAULIC JUMP: THE CAUSE OF HEAVY RAINFALL ON THE IMMEDIATE LEE SIDE OF THE WESTERN GHATS IN THE MAHARASHTRA STATE OF INDIA
2	42	HIGH IMPACT MONSOON WEATHER	KIERAN M. R. HUNT	HOW INTERACTIONS BETWEEN TROPICAL DEPRESSIONS AND WESTERN DISTURBANCES CAUSE HEAVY PRECIPITATION
3	48	HIGH IMPACT MONSOON WEATHER	AMBROGIO VOLONTE	THE INTERACTION OF TROPICAL AND EXTRATROPICAL AIR MASSES CONTROLLING EAST ASIAN SUMMER MONSOON PROGRESSION
4	103	REGIONAL MONSOONS	KIERAN M R HUNT	MODES OF COASTAL PRECIPITATION OVER SOUTHWEST INDIA AND THEIR RELATIONSHIP TO INTRASEASONAL VARIABILITY
5	119	REGIONAL MONSOONS	VENUGOPAL THALLAM	QUANTIFYING THE ROLE OF ANTECEDENT SOUTHWESTERN INDIAN OCEAN CAPACITANCE ON THE VARIABILITY OF SUMMER MONSOON RAINFALL OVER HOMOGENEOUS REGIONS OF INDIA
6	118	REGIONAL MONSOONS	SUBRATA KUMAR DAS	RADAR-DERIVED PROPERTIES OF THE CONVECTION DURING THE PASSAGE OF LOW PRESSURE SYSTEMS