Sessions / Programme Schedule: iRAD2018, 8-11 January 2018

Time	Program
08th January 2018 (08:00 – 17:30 IST) **Short-term course: Space-borne radars and applications**	
08:00 – 09:30	Registration
09:30 – 11:00	Precipitation radars: Technique and algorithms ***by Prof. T. Iguchi***
11:00 – 11:300	Tea Break
11:30 – 13:00	Space-borne SAR ***by Dr. Luca Baldini***
13:00 – 14:00	Lunch Break
14:00 – 15:30	Cloud radars: Technique and algorithms ***by Prof. V. Chandrasekhar***
15:30 – 16:00	Tea Break
16:00 – 17:30	Multisatellite precipitation estimates ***by Prof. T. Ushio***

09th January 2018 (09:00 – 17:30), Conference Day 01	
09:00 – 09:30	Registration
09:30 – 11:00	Inauguration
Session – 01: Advances in emerging weather radar technology and signal processing	
11:00 – 11:30	Lead Talk 1
11:30 – 11:40	Indigenous design and development of X-Band polarimetric Doppler weather radar ***by V. K. Anandan***
11:40 – 11:50	Next generation signal processors for polarimetric Doppler weather radar ***by Shashi Ranjan Kumar***
11:50 – 12:00	Concept of developing a adaptive signal processing technique to abrogate noise from weather radar echoes ***by N. Erfan***
12:00 – 12:10	Prognostic and diagnostic weather products in the validation of TERLS C- band polarimetric Doppler weather radar ***by K. V. S. Namboodri***
12:10 – 12:20	Identification characteristic dispersion of volcanic ash using PUFF model with weather radar on eruption of Mt. Rinjani August 2016 ***by Sulton Kharisma***
12:20 – 12:30	Bright band estimation in the Tropical monsoon rainfall using micro rain radar at a coastal site in Thiruvananthapuram ***by E. A. Resmi***
12:30 – 12:40	Retrieval and evaluation of very high resolution ocean surface winds from RISAT-1 Synthetic aperture radar ***by Abhisek Chakraborty***
12:40 – 12:50	Development of geophysical model function for global ocean surface wind vector retrieval from SCATSAT-1 scatterometer ***by Rajesh Sikhakolli***
12:50 – 13:00	Development of e-scan radar system for probing rapidly varying weather systems ***by M. Durga Rao***
13:00 – 14:00	Lunch Break
Session – 02: Young Scientist Award (YSA) presentations	
14:00 – 14:20	3D Geo-referenced visualization software for weather radars ***by D. K. Ashwin Raju***
14:20 – 14:40	Development and validation of timing and control signal generator (TCSG) for active phased array MST radar ***by Kalluri M. V. Prasad***
14:40 – 15:00	Comprehensive approach in developing radar controller software for active phased array radars ***by J. Kamal Kumar***
15:00 – 15:20	Deep and shallow rain occurrence and vertical structure of precipitation with SST over Bay of Bengal and Arabian Sea during the southwest monsoon season as inferred by TRMM-

	PR ***by K. Saikranthi***
15:20 – 15:40	An algorithm to detect and correct the aliasing errors in micro rain radar associated with strong vertical winds ***by A. S. Lavanya***
15:40 – 16:00	Statistical evaluation of convective storms in high resolution models using DWR ***by K. Amar Jyothi***
16:00 – 16:30	Tea Break (Poster Viewing)
Session – 03: Radar calibration, Quality control techniques and Operational radar networks	
16:30 – 16:40	Validation of S-band polarimetric Doppler weather radar at Cherrapunjee, Meghalaya ***by C. Pradeep Kumar***
16:40 – 16:50	Utilization of ground clutter for calibration of radar reflectivity for operational Indian Doppler weather radars ***by K. Amar Jyothi***
16:50 – 17:00	Indigenously developed C-Band dual polarization Doppler weather radar at Thumba (8.50 N, 770 E): Initial results and validation ***by K. Kishore Kumar***
17:00 – 17:10	Rain attenuation correction and its performance analysis for X-band radar reflectivity ***by Subrata Kumar Das***
17:10 – 17:20	Aliasing effects due to convective rain on micro rain radar reflectivity profile at a Tropical location ***by Animesh Maitra***
17:20 – 17:30	Convective cloud base detection using indigenously developed lidar ***by Y. Bhavani Kumar***
20:30 – 22:00	Director's dinner

10th January 2018 (09:00 – 17:30), Conference Day 02	
Session – 04: Quantitative Precipitation Estimation (QPE), Applications of radar data in meteorology, Hydrology and Urban planning	
09:30 – 10:00	Lead Talk 2
10:00 – 10:10	Neural network based methodology to estimate surface rainfall rate using ground and space borne radar observations ***by Srinivasa Ramanujam***
10:10 – 10:20	Radar rainfall retrieval algorithm at X-band frequency: Investigation over the Western Ghats ***by Yogesh Kisan Kolte***
10:20 – 10:30	Verification rainfall estimation from radar Doppler products in Pangkalan Bun ***by Muhammad Aldino Putra***
10:30 – 10:40	Developing an operational thunderstorm nowcasting system for NE region of India using polarimetric Doppler weather radar data ***by Shyam S. Kundu***
10:40 – 10:50	Monsoon clouds over Thumba: A C-band polarimetric Doppler weather radar perspective ***by K. V. Subrahmanyam***
10:50 – 11:00	Characterisation of first radar echoes in convective clouds over the Western Ghats ***by Ambuj Kumar Jha***
11:00 – 12:00	Tea Break (Poster Viewing)
12:00 – 12:10	Vertical structure of convection during dry and wet phases of monsoon over the Western Ghats using X-band radar observations ***by Utsav Bhowmik***
12:10 – 12:20	Radar observations of cloud and precipitation over the Western Ghats in diurnal scale ***by S. K. Das***
12:20 – 12:30	Identification of sea breeze front from Doppler products along the coastline of Visakhapatnam ***by P. Amarendra***
12:30 – 12:40	Overview of convection studies over the Western Ghats: IITM X-band radar observations ***by Sachin Deshpande***
12:40 – 15:00	Determination of convective initiation and evolution using C-band Doppler radar, Himawari-8, and sounding data in Jakarta region and its surrounding, Indonesia ***by Azhari Putri Cempaka***
12:50 - 13:00	Comparison of the NCUM liquid-water content during monsoon depression with aircraft and DWR: A case study ***by A. Sandeep***
13:00 – 14:00	**Lunch Break**
Session – 05: Severe weather observations, Storm electrification, Microphysical studies and Dual-polarization observations	
14:00 – 14:30	Lead Talk 3
14:30 – 14:40	Radar observation of tropical cyclones ***by Subhadeep***

	Maishal
14:40 – 14:50	Hail storm study by dual frequency radar ***by Durba Das***
14:50 - 15:00	Thunderstorm over Chandipur, analysis using Doppler weather radar ***by Bibekanda Panda***
15:00 – 15:10	Objective storm tracking and prediction using Doppler weather radar data over a Tropical Indian station ***by Bipasha Paul Shukla***
15:10 – 15:20	Quantification of raindrop size distribution over tropical coastal station Thumba (8.51°N, 76.87°E) ***by S. Lavanya***
15:20 – 15:30	A study of spatial and seasonal variation of rainfall contribution by a height spectrum of convective systems with special reference to deep and intense systems: A multi-sensor climatological perspective over the south Asian region ***by Partha Roy***
15:30 – 15:40	On design problems in developing atmospheric electric field meter ***by C. Jayant***
15:40 – 16:00	**Tea Break**
Session – 06: Use of Radar Data for NWP Models	
16:00 - 16:10	Doppler weather radar observations of a mesoscale convective system over Thumba and its assimilation into the ARPS atmospheric model: A case study ***by K. N. Uma***
16:10 – 16:20	Multiple DWR data assimilation in real time in NEXRAD format ***by Kuldeep Srivastava***
16:20 – 16:30	Assessing the impact of weather radar observations in predicting local air quality in Delhi city ***by Chandrasekhar***
Session – 07: Industrial Session	
16:30 – 17:00	Industry presentations
17:00 – 18:00	Visit to NARL facilities

11th January 2018 (09:00 – 17:30), Conference Day 03	
Session – 08: Moving platforms: Space-borne, Air-borne and Ship-borne Radars	
09:30 – 10:00	Lead Talk 4
10:00 – 10:10	Remote sensing of rainfall over coastal oceans: spatio temporal match between GPM, DWR and INSAT – 3D ***by Sanjeev Dwivedi***
10:10 – 10:20	A multi-satellite analysis of precipitation features observed during the Indian Summer Monsoon ***by Ipshita Dey***
10:20 – 10:30	Regional variation of DSD over India and adjoining oceans during the southwest monsoon as inferred from GPM DPR ***by K. Saikranthi***
10:30 – 10:40	Variabilities and tendencies of South Asian precipitation as observed by TRMM precipitation radar ***by S. Sridharan***
10:40 – 10:50	Characteristics of precipitating convective clouds over the two different convective regimes of India using the observation from GPM and CloudSat satellites ***by Imolemba***
10:50 – 11:00	Structure of convective echoes over south peninsular India during pre-monsoon season using precipitation radar on-board Tropical rainfall measuring mission satellite ***by Geeta Agnihotri***
11-00 – 11:30	Tea Break (Poster Viewing)
Session – 09: Millimeter Wavelength Radars for cloud observations	
11:30 – 11:40	SST – Cloud thickness relation: observations using CloudSat and CALIPSO ***by A. K. M. Nair***
11:40 – 11:50	3D cloud structure analysis using advanced image processing techniques ***by Ameya Manas***
11:50 – 12:00	The characteristics of clouds and precipitation as observed by Ka-band cloud radar and disdrometer during the contrasting year of Indian monsoon ***by Kaustav Chakravarthy***
12:00 – 12:10	Is diurnal cycle associated with radar measured spectral width inferring the Indian summer monsoon vigour? ***by A. Srinivas***
12:10 – 12:20	Regional differences in relations between cloud vertical structure and sea surface temperature over the Tropical Indian and West Pacific Oceans using CloudSat and CALIPSO data ***by V. Ravikiran***
12:20 – 12:30	Enlightening different phases of monsoon by the cloud micro physical parameters extracted from a cloud profiling radar ***by Sukanya Patra***

12:30 – 12:40	A daytime and nighttime difference in characteristics of convective clouds over the North-Eastern part of India and its adjoining region - Multisensor observation ***by B. Rupraj***
12:40 – 12:50	Role of cloud vertical structure in investigating the vigour of Indian summer Monsoon ***by M. C. R. Kalapureddy***
12:50 – 13:00	CloudSat observations of three-dimensional distribution of cloud types in Tropical cyclones ***by K. V. Subramanyam***
13:00 – 14:00	Lunch Break
Session – 10: Wind profiling radars	
14:00 – 14:30	Lead Talk 5
14:30 – 14:40	Dynamical and thermo-dynamical coupling between lower and middle atmosphere observed during Indian summer monsoon onset ***by M. V. Ratnam***
14:40 – 14:50	Estimation of turbulence parameters using spectrum width observed by the 205 MHz Radar at Cochin ***by S. Athulya***
14:50 – 15:00	Characterisation of gust for wind biasing the rocket launches, using VHF wind profiler measurements ***by S. Satheesh Kumar***
15:00 – 15:10	Improved boundary layer height estimation using a fuzzy logic method - diurnal and seasonal variability of the convective boundary layer over a tropical station ***by P. Yashoda***
15:10 – 15:20	Algorithm for the separation of turbulence echo from the multi-peaked VHF radar spectra observed during Precipitation ***by Shridhar Kumar***
15:20 – 15:30	Gadanki active phased array MST radar: New capabilities and initial results ***by M. Durga Rao***
15:30 – 15:40	Design and implementation of micro controller zigbee based calify network for optical based auto phase calibration in active array MST radar ***by P. Kamraj***
15:40 – 15:50	Calibration of receiver and antenna of active phased array radar ***by T. Rajendra Prasad***
15:50 – 16:00	Vertical coupling from the lower atmosphere to the ionosphere: Observations inferred from Indian MST radar, GPS radiosonde, Ionosonde and SABER/TIMED instrument over Gadanki ***by Priyanka Ghosh***
16:00 – 16:10	Statistical analysis of convective indices derived from radiosonde and a wind profiling Radar ***by K. Arun***
16:10 – 16:30	Tea Break
16:30 – 17:30	Valedictory function and feedback

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Poster presentations (During the Tea Breaks)		
Author	**Title**	**Poster ID**
D. Harikrishna	Calibration and maintenance of IITM's weather radar	PS-01
J. Raghavendra	Implementation of digital down converter chain on FPGA for atmospheric radar receiver applications	PS-02
K. V. S. Namboodiri	Microwave and fluid dynamic properties of metallic sphere and corner reflector balloon payloads: Experience from the TERLS C BAND polarimetric Doppler weather radar calibrations.	PS-03
K. Jayaraj	Design, development and validation of RF system for active phased array MST radar	PS-04
M. Rahul	Estimation of three dimensional velocity of wind over a station using Doppler weather radar data	PS-05
M. Rahul	Radar clutter rejection based on radial velocity of scatterers	PS-06
Ramakrishna Datta	Limitation of the use of X-Band radar at on board aircraft to avoid mishap	PS-07
Sulton Kharisma	Identify of difference between heavy rain and hail based on single polarization of weather radar in Bima	PS-08
Savita B. Morwal	Convection over the north peninsular region using radar	PS-09
Shivangi Mishra	A Study and comparison of vertical profile of reflectivity (VPR) of precipitation over Kerala region during Southwest monsoon season using C-Band DWR and GPM satellite	PS-10
Shivangi Mishra	Empirical relation development for rainfall estimation by C-Band polarimetric Doppler weather radar in India	PS-11
Arpita Rastogi	Case study for lightning in Bihar in 2016	PS-12
Gyana Ranjan Mati	An empirical precipitation accumulation (PAC) estimation using polarimetric radar data	PS-13
Himanshu Sharma	Heavy to very heavy rainfall monitoring using polarimetric C-band weather radar	PS-14

Indranil Talukdar	An analysis of the differences between daily rainfall estimated by Kolkata DWR using different values of 'A' and 'b' in Z - R relation and conventional rainfall data during the pre-monsoon season	PS-15
M.C.R. Kalapureddy	Investigating the role of cirrus cloud in association with ISM phases using cloud radar	PS-16
S. Satheesh Kumar	High resolution wind profiler and lidar measurements for quantification of turbulence in the cirrus clouds	PS-17
Sushanta Kundu	Observation and analysis of pre-monsoon storm using polarimetric Doppler weather radar	PS-18
Ved Prakash Singh	Object-oriented Precipitation Forecast (OPF) model - A new tool using DWR based QPE derived from Mmachine learning process	PS-19
S. Sudheendran	Diurnal variation of rainfall over the peninsular India and adjoining Seas as observed by INSAT-3D satellite	PS-20
Animesh Maitra	Anomalous radar reflectivity during intense convection in the boundary layer	PS-21
S Sridharan	Tropical precipitating systems and their role in the generation of nonmigrating tides	PS-22
Y. Bhavani Kumar	Laser radar for remote sensing of rainfall	PS-23
M. Durga Rao	Indigenous development of meteor radar system at NARL, Gadanki	PS-24
Debasis Jana	Susceptibilities of the Indian low latitude ionosphere to intense geomagnetic storms	PS-25
P. Yasodha	Development of 445 MHz multi-receiver radar at NARL	PS-26
P. Parvathi	The Atmospheric Boundary Layer FMCW (Frequency Modulated Continuous Wave) bi static Radar	PS-27
K. N. Uma	Evolution, structure and dynamics of Tropical cyclone using doppler weather radar and MST Radar	PS-28
V. K. Anandan	First time observation of precipitation and drop-size distribution during Indian monsoon using 205 MHz VHF wind profiler radar	PS-29
Parthasarathy Mishra	Microphysical study of induced rainfall over industrial region using space borne radar and NWP model	PS-30