

Program: NISAR Science Workshop

Space Applications Centre (ISRO), Ahmedabad

17-18 November 2014

Venue: SAC New Auditorium

17 November MONDAY			PDF
0900 – 1000	<i>Registration of Participants (Basement of New Auditorium)</i>		
1000 – 1005	Welcome Address	Tapan Misra, SAC	
1005 – 1020	Opening Remarks	Director, SAC	
1020 – 1035	NISAR Mission Overview	Tapan Misra, SAC	OV-01
1035 – 1100	ISRO Science Plan for NISAR Mission	Manab Chakraborty, SAC	OV-02
1100 – 1130	<i>Tea Break</i>		
1130 – 1150	NASA Perspectives on the NISAR Mission	Sanghamitra Dutta, NASA	OV-03
1150 – 1200	L & S band Airborne SAR mission	M. Ramanujam, SAC	OV-04
1200 – 1215	UAVSAR as a bridge to Maturing Possible NISAR Science and Applications	Scott Hensley, JPL	OV-05
1215 – 1245	Planned Data Products and Science Processing Paradigm for the NISAR Mission	Paul Rosen, JPL	OV-06
1245 – 1300	Key Findings from US NISAR Applications Workshop	Gerald W. Bawden, NASA	OV-07
1300 – 1400	<i>Lunch Break</i>		
Invited Talks: Ecosystem (Co-Chairs: Dr. Josef M. Kelindorfer, WHRC and Dr. P.K. Pal, SAC)			
1400 – 1420	Ecosystem science goals and application opportunities with the NISAR mission	Dr. Josef M. Kelindorfer, Woods Hole Research Center	IT-E01
1420 – 1435	SAR applications in forestry: Present status and future needs	C.S. Jha, NRSC	
1435 – 1450	Operational crop monitoring and production forecasting using SAR data	S.S. Ray, MNCFC, Delhi	IT-E03
Invited Talks: GeoSciences and Hazards (Co-Chairs: Dr. B.K. Rastogi, ISR & Dr. Bradford H. Hager, MIT)			
1450 – 1510	Anticipated advances in solid earth sciences from NISAR	Bradford H. Hager, MIT	IT-G01
1515 – 1530	SAR measurements for earthquake studies in India	B.K. Rastogi, ISR	IT-G02
1530 – 1545	<i>Tea Break</i>		
1545 – 1600	SAR applications in land deformation and geological hazards	P.K. Champati Ray, IIRS	IT-G03
Invited Talks: Cryosphere (Co-Chairs: Dr. Snehmani, SASE & Dr. Ian R. Joughin, Univ. of Washington)			
1600 – 1615	Remote sensing of Snow and Avalanche in Himalayan region	Snehmani, SASE	
1615 – 1635	Measuring Ice-sheet dynamics from space: past, present and future	Ian R. Joughin, Univ. Of Washington	IT-C02
1635 – 1650	SAR applications in Himalayan Snow & glacier monitoring	Manab Chakraborty, SAC	IT-C03

Invited Talks: Atmosphere, Ocean & Coasts (Co-Chairs: Dr. Raj Kumar, SAC & Dr. Benjamin M Holt, JPL)			
1650 – 1710	Ocean Studies with SAR		Benjamin M. Holt, JPL IT-A01
1710 – 1725	Ship Detection using SAR		R. Ramachandran, ADRIN IT-A02
1725 – 1740	Ocean parameter retrieval using SAR data		Raj Kumar, SAC IT-A03
1740 – 1800	<i>High Tea</i>		
1800 - 1840	Panel Discussion Moderator: Paul Rosen (JPL) Panelists: Tapan Misra (SAC), P.K. Pal (SAC), Mylswamy Annadurai (ISRO), Sanghamitra Dutta (NASA), M. Craig Dobson (NASA)		
1840	<i>Adjourn</i>		
18 November TUESDAY			
0930 – 1000	Characterizing regional and global hydrology with NISAR		Gerald W. Bawden, NASA IT-M01
1000 – 1020	Full and compact polarimetric SAR data analysis for various land features		Y.S. Rao, IIT-Bombay IT-M02
1020 – 1050	Sea Ice studies with SAR		Benjamin M. Holt, JPL IT-M03
1050 – 1100	Brief on Breakout Sessions (Identify Potential NISAR Applications and Measurement Requirements)		Anup Das, SAC
1100 – 1130	<i>Tea Break</i>		
1130 – 1300	Breakout-1: Four Application areas in Four parallel sessions; Venue and Co-Chairs for applications are listed below:		
	Ecosystem	Vikram Hall – Main lecture Hall	Dr. Josef M. Kelindorfer, Woods Hole Research Center & Dr. P.K. Pal, SAC
	Geosciences and Hazards	Vikram Hall – Horse Shoe Room	Dr. B.K. Rastogi, ISR & Dr. Bradford H. Hager, MIT
	Cryosphere	Vikram Hall – Seminar Room	Dr. Manab Chakraborty, SAC & Dr. Ian R. Joughin, Univ. of Washington
	Atmosphere, Ocean and Coasts	New Auditorium Conference Room	Dr. Raj Kumar, SAC & Dr. Benjamin M Holt, JPL
1300 – 1400	<i>Lunch Break</i>		
1400 – 1530	Breakout-2: by application area (Same as Breakout-1)		
1530 – 1545	<i>Tea Break</i>		
1545 - 1700	Breakout-3: by application area (Contd../) (Same as Breakout-1)		
1700 - 1800	Reports from Breakout sessions		Breakout Co-Chairs
1800 – 1815	Vote of Thanks and <i>Adjourn</i>		Anup Das, SAC

ECOSYSTEM

(Co Chairs: Dr. Josef M. Kelindorfer, WHRC and Dr. P.K. Pal, SAC)
(Vikram Hall – Main Lecture Hall)

Breakout Session – 1 (18 Nov., 1130 – 1300 Hrs)			PDF
1130 - 1220	Short Presentations – 05mins each (10 Nos)		
	Biomass estimation using SAR data	Rajib Panigrahi, IIT-Roorkee	BR-E01
	PollnSAR based Modeling for Forest Aboveground Biomass and Height retrieval	Shashi Kumar, IIRS	BR-E02
	Forest Fuel Load Quantification using Microwave Sensing	C.P. Singh, SAC	BR-E03
	Estimation of above ground biomass of a tropical forest site	Hitendra Padalia, IIRS	
	Characterizing Ecosystem stress using SAR remote sensing	B.K. Bhattacharya, SAC	BR-E05
	Full vs. compact polarimetry for agriculture	Y.S. Rao, IIT-Bombay	
	Investigation of NISAR for biodiversity assessment	G. Sandhya Kiran, MSU	BR-E07
	Forest Above Ground Biomass Estimation and Forest & Non Forest Classification	T.R. Kiran Chand	
	SAR Applications in Vegetation	Rajsi Udayan Kot	BR-E09
	Applications of NISAR in studying bird migration	Sneha M. Chopda, NIO	BR-E10
1220 – 1300	Discussion		
Breakout Session – 2 (18 Nov., 1400 – 1530 Hrs)			PDF
1400 – 1420	Remote sensing applications in agriculture: present prospects and future needs	K.R. Manjunath, SAC	BR-ET1
1420 – 1455	Short Presentations – 05mins each (07 Nos)		
	Microwave emissivity and land surface variables estimation	Sanjeev Kimothi, Swami Rama Himalayan Univ.	BR-E11
	Exploring SAR data for biophysical parameter retrieval to enhance agriculture monitoring	Rahul Nigam, SAC	BR-E12
	Parameter retrieval and enhanced growth monitoring of rice crop using SAR data	Indrani Chaudhary, DAIICT	BR-E13
	Identification of areas vulnerable to water-logging in irrigation command areas using L&S band airborne SAR data	R.L. Mehta, SAC	BR-E14
	Crop biomass retrieval for Gujarat region using L&S band SAR	Rucha Dave, AAU	BR-E15
	Ground truth collection using ground based polarimetric scatterometer with multiple polarization	OPN Calla, ICRS	BR-E16
	PolSAR Image classification for various Land cover features	Varsha Turkar, VIT	BR-E17
1455 – 1530	Discussion		
Breakout Session – 3 (18 Nov., 1545 – 1700 Hrs)			PDF
1545 - 1600	SAR Applications in Soil Moisture Retrieval	Harisankar Srivastava, IIRS	BR-ET2
1600 - 1630	Short Presentations – 05mins each (06 Nos)		
	Retrieval of high resolution surface soil moisture over India using NISAR	Kishan Lal Gadri, ICRS	BR-E18
	Retrieval of crop biophysical parameters from NISAR	Ramandeep Kaur Malhi, MSU	BR-E19
	Soil moisture retrieval using microwave remote sensing	Sasmita Chaurasia, SAC	BR-E20
	Use of satellite observations in the soil moisture assimilation system at NCMRWF	John P. George, NCMRWF	BR-E21
	Impact of sea level rise on Lakshadweep islands ecosystem	Ashutosh Saidawat, CSIR	BR-E22
	Spatial ecology for coastal zone management and coastal EIA, for sustainable development	Pranay Kumar Singh, CSIR-ASIR	BR-E23
	Agriculture Remote Sensing (Tentative)	Anil Sood, PRSC	BR-E24
1630 – 1700	Discussion		

GEOSCIENCES AND HAZARDS

(Co-Chairs: Dr. B.K. Rastogi, ISR & Dr. Bradford H. Hager, MIT)

(Vikram Hall – Horse Shoe Room)

Breakout Session – 1 (18 Nov., 1130 – 1300 Hrs)			PDF
1130 - 1220	Short Presentations – 05mins each (10 Nos)		
	Potential of multi-frequency & wide swath DInSAR in land subsidence studies	RS Chatterjee, IIRS	
	Flood assessment, monitoring and management using SAR Data	MVSS Giridhar, JNTU	BR-G02
	Crustal deformation studies using advanced InSAR time series data	KM Sreejith, SAC	
	DInSAR for seismic hazard studies	John Mathew, NRSC	BR-G04
	Multi-angle urban classification using polarimetric SAR	Shaunak De, IIT-Bombay	BR-G05
	Suitability of SAR data for topographical modelling	Ritesh Agrawal, SAC	BR-G06
	Major Climatic changes in north western parts of Rann of Kachh	Rohan Thakkar, Guj. Univ.	
	SAR measurement for earthquake studies in India	Rakesh Dumka, ISR	
	SAR Data utilization for deformation and plate tectonic movement studies	Abdul Qadir, NESAC	
	Impact of thermal expansion on Persistent Scatterer Interferometry Products	Shweta Sharma, SAC	BR-G10
1220 – 1300	Discussion		
Breakout Session – 2 (18 Nov., 1400 – 1530 Hrs)			PDF
1400 – 1420	SAR Applications in Geoscience / Geo-archaeology	A.S. Rajawat, SAC	BR-GT1
1420 – 1450	Short Presentations – 05mins each (06 Nos)		
	Active tectonic deformation: Possible applications of NISAR data on Plate boundary processes	Anil Earnest, CSIR-Fourth Paradigm Instt.	BR-G11
	Study of terrestrial planetary analogues using NI-SAR	Shiv Mohan, PRL	BR-G12
	Microwave probing of planetary surface including Earth	C. Suresh Raju, SPL, VSSC	BR-G13
	Geomorphology around mount Sinabung volcano (Indonesia) using RISAT SAR data	Sandhya Rani Pattanaik, SAC	BR-G14
	Impact of Urban Canopies on Heat islands: A case study	Anurag Kandya, Indus Univ.	BR-G15
	Study of ground deformation of Bhuj area using PSInSAR	Kausik Biswas, IIT-Kh	BR-G16
1450 – 1530	Discussion		
Breakout Session – 3 (18 Nov., 1545 – 1700 Hrs)			PDF
1545 - 1600	Disaster management support program of ISRO: Operational flood mapping and management	P. Manjushree, NRSC	BR-GT2
1600 - 1625	Short Presentations – 05mins each (05 Nos)		
	Tripura needs a different remedial plan for disaster handling	Suman Dev, NIT-Agartala	
	Application of L-band SAR data for deriving vital hydrogeological inputs for groundwater management	G. Sreenivasan, RRSC-C	BR-G18
	Implementation of RS & GIS in Civil Engineering	Tarun Sahoo, SAO Univ.	
	Data Quality Evaluation and Monitoring Approach for SAR Sensors	Maneesha Gupta, SAC	BR-G20
	ITG-Tool: A GUI based software for InSAR processing for monitoring surface deformation	Biswajit Manna, IIT-Kh	BR-G21
1625 – 1700	Discussion		

CRYOSPHERE

(Co-Chairs: Dr. Manab Chakraborty, SAC & Dr. Ian R. Joughin, Univ. of Washington)
(Vikram Hall – Seminar Room)

Breakout Session – 1 (18 Nov., 1130 – 1300 Hrs)			PDF
1130 - 1200	Short Presentations – 05mins each (06 Nos)		
	Snow and glacier studies highlights using L and C-band SAR data and future hydrological applications using SAR data in part of North Western Himalayas	Praveen Thakur, IIRS	BR-C01
	Monitoring of glacial zones and transient snow line of chhota sigri	Sanchayita Kundu, SAC	BR-C02
	Application High Resolution SAR Imagery for Snow Physics	Sanjeev Kumar, SASE	BR-C03
	Generation and Validation of the Interferometric SAR DEMs from TanDEM-X data for Indian Himalayan glacier	Ankur Pandit, IIT-Bombay	BR-C04
	Dynamics of the Gangotri Glacier Inferred from Long-Term and Seasonal Fluctuations in Velocity	S.P. Satyabala, IISc	
	Applications of L- & S-band Radar Measurement to monitor cryosphere	Subhra Mathur, ICRS	BR-C06
1200 – 1300	Discussion		
Breakout Session – 2 (18 Nov., 1400 – 1530 Hrs)			PDF
1400 - 1420	Polar-Ice studies using microwave data	Sandip R. Oza, SAC	
1420 – 1440	Short Presentations – 05mins each (04 Nos)		
	Identification of Major Hot Spot areas in selected parts of Antarctica	Sarvesh Palria, MDS Univ.	
	Monitoring and quantifying changes in ice velocities in Antarctic margins	P. Jayaprasad, SAC	
	Energy balance partitioning and glacial processes: Role of SAR remote sensing	Nilendu Singh, WIHG	BR-C09
	Snow Parameters estimation from backscattering measurement	Asha Thapliyal, USAC	
1440 – 1530	Discussion		
Breakout Session – 3 (18 Nov., 1545 – 1700 Hrs)			PDF
1545 - 1600	Short Presentations – 05mins each (03 Nos)		
	Potential of Multi-frequency SAR applications in Himalayan cryosphere	Sushil Kumar Singh, SAC	BR-C11
	Near Real Time Sea Ice Advisory for Safe Ship Routing During Antarctic Expeditions	D. Ram Rajak, SAC	BR-C12
	Prospective cryosphere applications of NASA-ISRO SAR	Shridhar D. Jawak, NCAOR	BR-C13
1600 – 1700	Discussion		

ATMOSPHERE, OCEAN & COASTS
(Co-Chairs: Dr. Raj Kumar, SAC & Dr. Benjamin M Holt, JPL)
(New Auditorium – Conference Room)

Breakout Session – 1 (18 Nov., 1130 – 1300 Hrs)			PDF
1130 - 1145	Short Presentations – 05mins each (03 Nos)		
	Internal waves in Bay of Bengal by SAR observations	Meka Rajasekhar, SDSC, ISRO	BR-A01
	Ocean response of L-band airborne SAR	SK Sasmal, NRSC	
	Monitoring of marine oil spill from SAR images: Automatic detection and classification of oil spills	Ratheesh Ramakrishnan, SAC	
1145 – 1300	Discussion		
Breakout Session – 2 (18 Nov., 1400 – 1530 Hrs)			PDF
1400 - 1430	SAR applications of Ocean internal waves	KVSR Prasad, Andhra Univ.	
1430 – 1440	Short Presentations – 05mins each (02 Nos)		
	Possible use of NISAR observations for tropical cyclone studies	CM Kistawal, SAC	BR-A04
	Retrieval of ocean parameters from NISAR	RM Gairola, SAC	BR-A05
1440 – 1530	Discussion		
Breakout Session – 3 (18 Nov., 1545 – 1700 Hrs)			PDF
1545 - 1600	Short Presentations – 05mins each (03 Nos)		
	NISAR coastal watch applications and demonstration	OPN Calla, ICRS	BR-A06
	Mud flat/mud bank monitoring using advanced Radar imaging	R. Sarangi, SAC	BR-A07
	Applications of SAR in Ocean Observations	J. S. Upadhyay, NIOT	BR-A08
1600 – 1700	Discussion		