

# 3rd International Polarimetric SAR Workshop in Niigata 2012

**Date:** August 23-26, 2012

**Venue:** Tokimate (Niigata Univ. Satellite Campus), Niigata, Japan  
(<http://www1.niigata-u.ac.jp/tokimate/>)

**Sponsored by**

Niigata University; IEEE GRS Japan Chapter; IEICE SANE ; and URSI-F, Japan

**Schedule Overview**

Aug. 23	Aug. 24	Aug. 25	Aug. 26
09:00 ~ Morning Session 1 10:30	09:00 ~ Morning Session 1 10:30	09:00 ~ Morning Session 1 10:30	Scientific Excursion SADO island (07:55 ~ 18:30)
10:30 ~ Coffee Break 10:50	10:30 ~ Coffee Break 10:50	10:30 ~ Coffee Break 10:50	
10:50 ~ Morning Session 2 12:20	10:50 ~ Morning Session 2 12:20	10:50 ~ Morning Session 2 12:20	
12:20 ~ Lunch Break 13:40	12:20 ~ Lunch Break 13:40	12:20 ~ Lunch Break 13:40	
13:40 ~ Afternoon Session 1 15:10	IEICE SANE (Space, Aeronautical and Navigational Electronics)  Technical Committee Meeting	13:40 ~ Afternoon Session 1 15:10	
15:10 ~ Coffee Break 15:30		15:10 ~ Coffee Break 15:30	
15:30 ~ Afternoon Session 2 16:30		15:30 ~ Afternoon Session 2 16:30	
16:30 ~ Coffee Break 16:40		16:30 ~ Coffee Break 16:40	
16:40 ~ Afternoon Session 3 18:20		16:40 ~ Afternoon Session 3 18:20	

## Contact

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## August 23, 2012

		Name	Affiliation	Title
9:00	9:30	Prof. Wolfgang Martin Boerner	University of Illinois at Chicago, USA	Historical development of Radar Polarization technology towards Radar Polarimetry culminating in fully polarimetric POL-IN-SAR
9:30	10:00	Prof. Wolfgang Martin Boerner	University of Illinois at Chicago, USA	Assessment of fully polarimetric POLSAR Remote Sensing & Geophysical Stress-change monitoring with implementation to agriculture, forestry & aqua-culture plus natural disaster assessment & monitoring within the Pacific Ring of Fire
10:00	10:30	Dr. Masanobu Shimada	JAXA	Polarimetric Geometric Calibration and Validation of the newly developed JAXA Pi-SAR-L2 and the Interferometric and polarimetric performances
10:30	10:50	<i>Break</i>		
10:50	11:20	Dr. Ridha Touzi	Canada Centre for Remote Sensing, Canada	Calibration of polarimetric Radarsat2 using high precision transponder measurements
11:20	11:50	Dr. Kostas Papathanassiou	DLR, Germany	Polarimetric SAR Interferometry Activities at DLR
11:50	12:20	Dr. Scott Hensley	JPL, USA	Polarimetric and Polarimetric Interferometric Research at JPL
12:20	13:40	<i>Lunch</i>		
13:40	14:10	Dr. Jakob J. Van Zyl	JPL, USA	A Polarimetric Segmentation Approach for Soil Moisture Active/Passive (SMAP) Mission: Algorithm Description and Results
14:10	14:40	Dr. Yunjin Kim	JPL, USA	A Polarimetric Segmentation Approach for Soil Moisture Active/Passive (SMAP) Mission: Application to Time Series Algorithm
14:40	15:10	Prof. Kun-Shan Chen	National Central University, Taiwan	Polarimetric Surface Scattering from Layered Media
15:10	15:30	<i>Break</i>		
15:30	16:00	Dr. Bryan Chih-yuan Chu	National Central University, Taiwan	Polarimetric Analysis of Coastal Environments Based on Four-Component Scattering Decomposition
16:00	16:30	Prof. Shiv Mohan	ISRO, India	SAR polarimetry applications for terrestrial and lunar surfaces
16:30	16:40	<i>Break</i>		
16:40	17:10	Prof. Dhamendra Singh	IIT Roorkee, India	Problems and Challenges to Study Lunar Surface Using Mini-SAR Data of Chandrayaan-1
17:10	17:40	Prof. Y. S. Rao	IIT, Bombay, India	Classification of Multifrequency and Multipolarization SAR data for Various Land Features
17:40	18:20	Dr. Sang-Eun Park	Niigata University, Japan	Polarimetric SAR remote sensing of earthquake/tsunami disaster
18:30	-	<i>Banquet</i>		

## August 24, 2012

		Name	Affiliation	Title
9:00	9:30	Dr. Jong Sen Lee	Naval Research Laboratory, USA	Generalized model-based scattering decomposition based on incoherent scattering models
9:30	10:00	Dr. Thomas L. Ainsworth	Naval Research Laboratory, USA	Polarimetric Classification Based on Underlying Scatterer Shape and Orientation Distributions
10:00	10:30	Dr. Shane Cloude	AELc, Scotland	Compact POLSAR and POInSAR: Good or Bad?
10:30	10:50	<i>Break</i>		
10:50	11:20	Prof. Eric Pottier	University of Rennes 1, France	On the use of fully polarimetric ALOS-PALSAR and Radarsat-2 datasets for monitoring the wetland dynamics and for detecting archaeological sites
11:20	11:50	Prof. Laurent Ferro-Famil	University of Rennes 1, France	TBD
11:50	12:20	Prof. Carlos López-Martínez	UPC, Spain	Speckle Noise Characterization and Filtering in PolSAR and PolInSAR Data
12:20	13:20	<i>Lunch</i>		

### Technical Committee on Space, Aeronautical and Navigational Electronics (SANE) (Fri, Aug 24, 2012 13:20 - 16:55)

13:20	13:45	Jun Awaka (Tokai Univ.)		On separation of rain echo and surface echo in the radar observation of rain from space
13:45	14:10	Kohei Osa (WNI), Josaphat Tetuko Sri Sumantyo, Fumihiko Nishio (Chiba Univ.)		Estimation Method of Dielectric Constants of Snow and Ice using Electric Field Vector Measurements of Reflected Waves
14:10	15:00	Yoshio Yamaguchi (Niigata Univ.)		[Special Talk] Scattering Power Decomposition of Polarimetric Radar Data
15:00	15:15	Break (15 min.)		
15:15	15:40	Si-Wei Chen, Motoyuki Sato (Tohoku Univ.)		Polarimetric Model-Based Decomposition with Generalized Scattering Models
15:40	16:05	Mao Inami, Hirokazu Kobayashi, Yoshio Yamaguchi (Niigata Univ.)		Short-Range Radar Imaging Considering the Antenna Characteristics by using AF
16:05	16:30	Yoshio Kosuge (Nagasaki Univ.)		NPN Method Using a Constant Velocity Target Model
16:30	16:55	Shiori Mihara, Takeshi Amishima, Kazufumi Hirata (Mitsubishi Electric)		Proposal of the Signal Separation method using Multiplicity of Frequency channels

## August 25, 2012

		Name	Affiliation	Title
9:00	9:30	Prof. Wooil Moon	University of Manitoba, Canada	TBD
9:30	10:00	Prof. Motoyuki Sato	Tohoku University, Japan	Near range polarimetric SAR
10:00	10:30	Prof. Akira Hirose	The University of Tokyo, Japan	Adaptive signal processing based on complex-valued neural networks in radar imaging
10:30	10:50	<i>Break</i>		
10:50	11:20	Dr. Motofumi Arii	Mitsubishi Space Software, Japan	Challenges to the Diversity of Vegetated Surfaces using POLSAR Data
11:20	11:50	Prof. Bin Zou	Harbin Institute of Technology, China	Asymmetric Decomposition Method for Polarimetric SAR Data Using a Modified Four-Component Scattering Model
11:50	12:20	Dr. Haipeng Wang	Fudan University, China	Reconstruction of a 3D Complex Target Using Step-Frequency Radar
12:20	13:40	<i>Lunch</i>		
13:40	14:10	Prof. Ryoichi Sato	Niigata University, Japan	Stricken man-made object detection using scattering power decomposition with NNED and rotation of the covariance matrix
14:10	14:40	Prof. Josaphat Tetuko Sri Sumantyo	Chiba University, Japan	Development of Synthetic Aperture Radar onboard Unmanned Aerial Vehicle
14:40	15:10	Dr. Makoto Satake	NICT, Japan	New NICT airborne X-band SAR system, Pi-SAR2: current status and future plan
15:10	15:30	<i>Break</i>		
15:30	16:00	Prof. Akira Kato	Chiba University, Japan	Ground truth of PALSAR data using airborne and terrestrial LIDAR data
16:00	16:30	Dr. Ram Avtar	JAMSTEC, Japan	Multi-temporal PALSAR data to detect conversion of peatland forests to oilpalm plantation in Sarawak, Malaysia
16:30	16:40	<i>Break</i>		
16:40	17:10	Dr. Yi Cui	Niigata University, Japan	On complete three-component decomposition of POLSAR coherency matrix data
17:10	17:40	Dr. Gulab Singh	Niigata University, Japan	Full-pol-SAR decomposition scheme over wet snow areas
17:40	18:00	Prof. Yoshio Yamaguchi	Niigata University, Japan	Discussions and Closing Remarks