

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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- Prof. Hirokazu Kobayashi (kobayashi@ie.niigata-u.ac.jp)

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 PolInSAR: 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.)		N _P n 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



REPORT ON THE THIRD INTERNATIONAL POLARIMETRIC SAR WORKSHOP IN NIIGATA 2012 (AUG. 23-AUG. 26)

The third international polarimetric synthetic aperture radar workshop in Niigata 2012 was successfully held in Niigata University Satellite Office on August 23–25, and Scientific excursion to Sado Island on August 26, 2012. This workshop is organized by Yoshio Yamaguchi and Sang Eun Park of Niigata University under “Space Sensing Project” funded by the Ministry of Education, Japan, Niigata University, and IEEE GRSS Japan Chapter. The technical co-sponsorship were given by the Commission F of the International Union of Radio Science in Japan (URSI-F), as well as the technical group on Space, Aeronautical and Navigational Electronics of the Institute of Electronics Information, Communication Engineers (IEICE-SANE).

The aim of the workshop is to introduce the cutting-edge technologies and to exchange new ideas and methodologies for promoting researches on polarimetric radar remote sensing and their applications. It covers from the basic theory of polarimetry to its practical applications. In this respect, internationally celebrated scholars with long experiences in this field are invited as guest speakers. The workshop was carried out in a relaxed atmosphere, which brought very fruitful discussions among participants (more than 50). This workshop started in 2010 for the first time and continued to be held in 2011, and in 2012 under the “Space Sensing Project”. The attendants in this third workshop 2012 are displayed in the photo.

Invited speakers:

- Prof. Wolfgang-Martin Boerner (University of Illinois at Chicago, USA, IEEE Life Fellow)
- Dr. Jong-Sen Lee (Naval Research Laboratory, USA, IEEE Life Fellow)
- Dr. Thomas Ainsworth (Naval Research Laboratory, USA)
- Dr. Shane Cloude (AEL Consultants, Scotland, UK, IEEE Fellow)
- Prof. Eric Pottier (University of Rennes 1, France, IEEE Fellow)
- Prof. Laurent Ferro-Famil (University of Rennes 1, France)
- Dr. Kostas Papathanassiou (German Aerospace Centre, Germany)

- Dr. Jakob J. Van Zyl (Jet Propulsion Laboratory, USA, IEEE Fellow)
- Dr. Yunjin Kim (Jet Propulsion Laboratory, USA)
- Dr. Scott Hensley (Jet Propulsion Laboratory, USA)
- Prof. Kun-Shan Chen (National Central University, Taiwan, IEEE Fellow)
- Dr. Bryan Chih-yuan Chu (National Central University, Taiwan)
- Prof. Wooil Moon (University of Manitoba, Canada, IEEE Life Fellow)
- Dr. Ridha Touzi (Canadian Center of Remote Sensing, Canada)
- Prof. Carlos López-Martínez (Universitat Politècnica de Catalunya, Spain)
- Prof. Bin Zou (Harbin Institute of Technology, China)
- Dr. Haipeng Wang (Fudan University, China)
- Dr. Shiv Mohan (Indian Space Research Organization, India)
- Prof. Dhamendra Singh (Indian Institute of Technology Roorkee, India)
- Prof. Y.S. Rao (Indian Institute of Technology Bombay, India)
- Dr. Masanobu Shimada (Japan Aerospace Exploration Agency, Japan, IEEE Fellow)
- Dr. Makoto Satake (NiCT, Japan)
- Prof. Motoyuki Sato (Tohoku University, Japan)
- Prof. Akira Hirose (The University of Tokyo, Japan)
- Dr. Motofumi Arii (Mitsubishi Space Software, Japan)
- Prof. Josaphat Tetuko Sri Sumantyo (Chiba University, Japan)
- Prof. Akira Kato (Chiba University, Japan)
- Dr. Ram (JAMSTEC, Japan)
- Prof. Ryoichi Sato (Niigata University, Japan)
- Dr. Gulab Singh (Niigata University, Japan)
- Dr. Yi Cui (Niigata University, Japan)
- Prof. Sang-Eun Park (Niigata University, Japan)

The number of attendants: 50+

