

Programme Agenda

Day 1 - 28/01/2019

Room: Magellan, Bld.1

Opening

Chairs: Yves-Louis Desnos, ESA-Esrin, Italy

09:35 - 09:45

POLINSAR Objectives

Chairs: Francesco Sarti, ESA-Esrin, Italy

09:45 - 10:00

Coffee Break

10:00 - 10:30

SAR Missions

Chairs: Miranda, Nuno (ESA- ESRIN), Scipal, Klaus (European Space Agency)

10:30 - 12:10

10:30 Sentinel-1 Mission Status

Miranda, Nuno, ESA- ESRIN, Italy

10:50 COSMO-SkyMed Second Generation - Mission update

Presenting author: Dini, Luigi

Dini, Luigi, Italian Space Agency - ASI, Italy

11:10 TanDEM-X and Tandem-L: Mission Status

Hajnsek, Irena, DLR/ETH, Germany

11:30 The BIOMASS Mission

Scipal, Klaus, European Space Agency, Netherlands, The

11:50 On the Polarimetric potential of the STEREOID mission

Lopez-Dekker, Paco; Iannini, Lorenzo; Li, Yuanhao, Delft University of Technology, Netherlands, The

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Round Table SAR Missions

12:10 - 12:30

Lunch Break

12:30 - 13:30

Methods and Theoretical Modelling

Chairs: Marino, Armando (The University of Stirling), Subrahmanyeswara Rao, Yalamanchili (Indian Institute of Technology Bombay)

13:30 - 15:30

13:30 Comparison of Hybrid Polarimetric Parameters from RISAT-1 and ALOS-2 Compact Mode SAR Data

Subrahmanyeswara Rao, Yalamanchili; Kumar, Vineet, Indian Institute of Technology Bombay, India

13:50 Comparison of signal models for change detection with polarimetric SAR

Marino, Armando, The University of Stirling, United Kingdom

14:10 Biomass Estimation by means of Interferometric Ground Suppression in SAR Data

Mariotti d'Alessandro, Mauro (1); Tebaldini, Stefano (1); Quegan, Shaun (2); Soja, Maciej (3); Ulander, Lars M. H. (4), 1: Politecnico di Milano; 2: University of Sheffield; 3: University of Tasmania; 4: Chalmers University of Technology

14:30 Polarimetric Two-Scale Model (PTSM): extension to anisotropic slope distribution and comparison with the second-order Small-Slope Approximation (SSA2)

Iodice, Antonio; Di Martino, Gerardo; Riccio, Daniele, Universit di Napoli Federico II, Italy

14:50 Incidence angle dependencies in narrow-swath Quad-polarimetric SAR images

Cristea, Anca; Doulgeris, Anthony Paul, University of Troms, Norway

Coffee Break

15:30 - 16:00

Methods and Theoretical Modelling (cont'd)

Chairs: Marino, Armando (The University of Stirling), Subrahmanyeswara Rao, Yalamanchili (Indian

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Institute of Technology Bombay)

15:40 - 17:00

- 15:40 **Relating temporal decorrelation at P and L bands: results from tower-based and airborne campaigns supporting future synergies between repeat-passes spaceborne missions**
VILLARD, Ludovic (1); HAMADI, Alia (1); BORDERIES, Pierre (2); KOLECK, Thierry (1); LE TOAN, Thuy (1), 1: CESBIO, France; 2: ONERA, France
- 16:00 **Comparison of Nonlinear PCA and Model-Based Decompositions for Crop Classification using Multitemporal Fully Polarized SAR Data and Recurrent Neural Networks**
Wagener, Nicolas Jakob (1); Vrinceanu, Cristina Andra (1); Del Frate, Fabio (2), 1: European Space Agency; 2: University of Rome Tor Vergata
- 16:20 **Confusion between polarimetric signatures of forests and slanted buildings at C- and L-bands. An explanation.**
Thirion-Lefevre, Laetitia (1); Guinvarc'h, Régis (1); Colin-Koeniguer, Elise (2), 1: SONDRACentraleSupélec, France; 2: DEMR/ONERA, France
- 16:40 **Physical modelling of a multistatic coherence tensor in polarimetric SAR**
ALVAREZ-PEREZ, JOSE LUIS, University of Alcalá (UAH), Spain

Round Table Methods and Theoretical Modelling

17:00 - 17:20

Welcome Cocktail

17:20 - 19:00

Day 2 - 29/01/2019

Room: Magellan, Bld.1

SAR Polarimetry and PolInSAR

Chairs: Papathanassiou, Kostas (DLR), POTTIER, Eric (University of Rennes 1 / IETR)

09:30 - 10:30

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09:30 Application of polarimetric information to the atmospheric phase screen compensation for GB-SAR in a mountainous area

Izumi, Yuta (1); Zou, Lilong (2); Kikuta, Kazutaka (1); Sato, Motoyuki (1), 1: Tohoku university, Japan; 2: The National Institute of Advanced Industrial Science and Technology (AIST), Japan

09:50 PolInSAR Ground and Volume Response Separation

Alonso-Gonzalez, Alberto; Papathanassiou, Konstantinos P., DLR, Germany

10:10 Towards The Estimation Of Soil Parameters Under Agricultural Vegetation By Means Of PolInSAR Measurements

Hecht, Emanuel, German Aerospace Center (DLR), Germany

Coffee Break

10:30 - 11:00

SAR Polarimetry and PolInSAR (cont'd)

Chairs: Papathanassiou, Kostas (DLR), POTTIER, Eric (University of Rennes 1 / IETR)

11:00 - 12:20

11:00 PolSARpro-Bio Edition : The new ESA toolbox for ESA & third party fully PolSAR missions

POTTIER, Eric (1); SARTI, Francesco (2); FITRZYK, Magdalena (3); PATRUNO, Jolanda (4), 1: University of Rennes 1 / IETR, France; 2: ESA-ESRIN; 3: RSAC c/o ESA-ESRIN; 4: RHEA System S.A. c/o ESA-ESRIN

11:20 Ambiguities in Poincare sphere orbit signatures of elementary scatterers under orthogonal transformations of the HV basis for dual-pol mode acquisition

Ratha, Debanshu (1); Rao, Y. S. (1); Pottier, Eric (2), 1: Indian Institute of Technology, Bombay, India; 2: University of Rennes 1, France

11:40 Quantitative Evaluation of Ionospheric Distortions on Spaceborne L-band SAR under Faraday rotation

Kim, Jun Su; Papathanassiou, Kostas, DLR, Germany

12:00 Multidimensional distance geometry analysis for classification of PolSAR images in Arctic scenarios

Marinoni, Andrea; Johansson, Malin; Espeseth, Martine; Brekke, Camilla, UiT - the Arctic University of Norway, Norway

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Lunch Break

12:20 - 13:20

SAR Polarimetry and PolInSAR (cont'd)

Chairs: Papathanassiou, Kostas (DLR), POTTIER, Eric (University of Rennes 1 / IETR)

13:20 - 14:40

- 13:20 **Detection of wind turbines using multi-polarization C- and X-band spaceborne SAR data**
 Ferrentino, Emanuele (1); Marino, Armando (2); Nunziata, Ferdinando (1); Migliaccio, Maurizio (1); Li, Xiaoming (3), 1: Universit di Napoli Parthenope, Italy; 2: The University of Stirling, Scotland (UK); 3: Chinese Academy of Sciences, China
- 13:40 **Towards a Physical Quantitative Assessment of Model-Based PolSAR Decompositions**
 Ballester-Berman, J. David (1); Ainsworth, Thomas L. (2); Lopez-Sanchez, Juan M. (1), 1: University of Alicante, Spain; 2: Remote Sensing Division (NRL), USA
- 14:00 **A Novel Scattering Vector Parameterization Method**
 Yin, Junjun (1); Yang, Jian (2); Joerg, Hannah (3), 1: University of Science and Technology Beijing, Beijing, China; 2: Tsinghua University, Beijing, China; 3: German Aerospace Center – Microwaves and Radar Institute, Wessing, Germany
- 14:20 **Monte Carlo Simulation study of stochastic distances applied on k-means algorithm for Fully Polarimetric SAR images**
 Carvalho, Naiallen; Sant'Anna, Sidnei; Bins, Leonardo, National Institute for Space Research - INPE, Brazil

Round Table SAR Polarimetry and PolInSAR

14:40 - 15:00

Applications of SAR Polarimetry on Agriculture

Chairs: Hajnsek, Irena (DLR/ETH), Patruno, Jolanda (RHEA)

15:00 - 15:20

- 15:00 **MULTI-TEMPORAL QUAD-POLARIMETRIC CHANGE MATRIX FOR AGRICULTURAL FIELDS MONITORING**
 Silva, Cristian (1); Marino, Armando (1); Lopez-Sanchez, Juan Manuel (2); Cameron, Iain (3), 1: University of Stirling, United Kingdom; 2: University of Alicante, IUll, Alicante, Spain; 3: Environment systems Ltd, Aberystwyth, United Kingdom

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Kingdom

Coffee Break

15:20 - 15:50

Applications of SAR Polarimetry on Agriculture (cont'd)

Chairs: Hajnsek, Irena (DLR/ETH), Patruno, Jolanda (RHEA)

15:50 - 16:50

15:50 EVALUATING THE CLOUDE-POTTIER DECOMPOSITION FOR CROP CLASSIFICATION USING MULTI-TEMPORAL RADARSAT-2 DATA

Presenting author: Ustuner, Mustafa

Ustuner, Mustafa (1); Balik Sanli, Fusun (1); Abdikan, Saygin (2); Erten, Esra (3,4); López-Martínez, Carlos (5), 1:

Department of Geomatic Engineering, Yildiz Technical University, Istanbul, Turkey; 2: Department of Geomatics Engineering, Bulent Ecevit University, Zonguldak, Turkey; 3: Faculty of Science, Technology, Engineering & Mathematics, The Open University, Milton Keynes, United Kingdom; 4: Department of Geomatics Engineering, Istanbul Technical University, Istanbul, Turkey; 5: Remote Sensing and Natural Resources Modelling Group, Luxembourg Institute of Science and Technology, Luxembourg

16:10 Crop Growth Monitoring Using Compact-Polarimetry SAR Data

Hosseini, Mehdi (1); McNairn, Heather (2); Mitchell, Scott (1); Davidson, Andrew (2); Dingle Robertson, Laura (2), 1:

Carleton University, Ottawa, Canada; 2: Agriculture and Agri-Food Canada

16:30 Modelbased Assessment of the Ground Polarimetry in Crops estimated using Polarimetric Interferometric SAR

Joerg, Hannah (1); Alonso-Gonzalez, Alberto (1); Papathanassiou, Konstantinos (1); Hajnsek, Irena (1,2), 1: German

Aerospace Center (DLR); 2: ETH Zurich

Round Table Applications of SAR Polarimetry on Agriculture

16:50 - 17:10

Room: James Cook

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Poster Session

17:10 - 19:10

Extending parameter space analysis of model based decomposition for coastal wetland classification

kwok, expo,

The distinction between thawed/frozen soils in Alaska by multi-temporal Sentinel 1 radar data

Rodionova, Natalia,

Anisotropic Scattering Detection for Characterizing Polarimetric Circular SAR Multi-Aspect Signatures

Li, Yang; Lin, Yun; Wang, Yanping; Hong, Wen,

A MACHINE LEARNING APPROACH FOR ACCURATE CROP TYPE MAPPING USING COMBINED POLARIMETRIC SAR AND OPTICAL TIME SERIES DATA

Tufail, Rahat; Javed, Muhammad Asif; Ahmad, Sajid Rashid, College of Earth and Environmental Sciences, University of the Punjab, Pakistan

Forest biophysical parameters retrieval using L-band airborne multi-baseline UAVSAR datasets

Awasthi, Shubham; Jain, Kamal, Indian Institute of Technology Roorkee, Uttarakhand, India

A New X-Bragg Scattering-Based Approach for Bare Surface Discrimination

Tahraoui, Sofiane; Ouarzeddine, Mounira,

A PolSAR Scattering Power Factorization Framework using a Geodesic Distance

Ratha, Debanshu (1); Bhattacharya, Avik (1); Frery, Alejandro C. (2); Pottier, Eric (3), 1: Indian Institute of Technology, Bombay, India; 2: Universidade Federal de Alagoas, Brazil; 3: University of Rennes 1, France

Atmospheric Effects on Satellite Synthetic Aperture Radar at X-Band and above

Mori, Saverio; Biscarini, Marianna; Marzano, Frank S.; Pierdicca, Nazzareno,

Effect of Temporal Decorrelation on Polarimetric SAR Interferometric Measurement of Tropical Forest Structure: Results from AfriSAR L- and P- band InSAR Campaign

Ramachandran, Naveen; Saatchi, Sassan; Dikshit, Onkar,

Sentinel-1 Based Water Level Monitoring for Protected Salt Lake in Turkey

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Bilgiliolu, Burhan Baha (1,2); Erten, Esra (1); Musaolu, Nebiye (1), 1: Faculty of Civil Engineering, Istanbul Technical University, Istanbul 34469, Turkey; 2: Faculty of Engineering and Natural Sciences, Gumushane University, Gumushane, 29000, Turkey

APPLICABILITY OF THE MULTITEMPORAL COHERENCE APPROACH TO SENTINEL-1 FOR THE DETECTION AND DELINEATION OF FOREST FIRES IN THE CONTEXT OF COPERNICUS EMS

Presenting author: Larraaga, Arantzazu

Larraaga, Arantzazu (1); de Blas, Teresa (1); Donezar Hoyos, Uxue (1); Ros, Fermín (1); Albizua, Lourdes (1); Steel, Alan (2); Broglia, Marco (2), 1: Tracasa, Spain; 2: Joint Research Centre (JRC)

Multi-temporal and multi-frequency analysis to assess forest degradation

Pacheco-Pascagaza, Ana Maria (1); Garcia, Mariano (2); Rodriguez-Veiga, Pedro (1,3); Balzter, Heiko (1,3), 1: University of Leicester, United Kingdom; 2: University of Alcala, Spain; 3: National Centre for Earth Observation (NCEO), United Kingdom

Crop yield estimation by Sentinel-1 radar polarimetric data

Friedl, Zoltán (1,2); Nádor, Gizella (1); Molnár, András (3); Surek, György (4), 1: Government Office of the Capital City Budapest, Hungary; 2: Eötvös Loránd University, Department of Geophysics and Space Science; 3: Research Institute of Agricultural Economics; 4: MLog Instruments Ltd.

Enhanced TomoSAR Imaging through Statistical Regularization

Martín del Campo Becerra, Gustavo Daniel; Reigber, Andreas; Nannini, Matteo,

Backscatter analysis using multi-temporal Sentinel 1 SAR data for irrigated crops monitoring in Banat region, Romania

Poenaru, Violeta; Badea, Alexandru,

Detecting aquaculture structures using the iDPoIRAD and PINGPONG COSMO SkyMED

Marino, Armando; Ballester, David; Spyrakos, Evangelos,

Polarimetric analysis of ALOS-2 SAR quad-pol data to detect icebergs

Bailey, Johnson Albert; Marino, Armando; Lanz, Peter,

PyRAT: A Flexible SAR Postprocessing Toolbox

Reigber, Andreas; Martin del Campo Becerra, Gustavo; Jäger, Marc,

THE CO-POLARIZED PHASE DIFFERENCE OVER SEA SURFACE: THE INFLUENCE OF SAR ACQUISITION PARAMETERS AND ENVIRONMENTAL CONDITIONS

Buono, Andrea; de Macedo, Carina Regina; Nunziata, Ferdinando; Velotto, Domenico; Migliaccio, Maurizio,

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Variable Reduction in Random Forests for Multi-sensor, Multi-temporal SAR Data Streams: Wetland Classification Case study

Behnamian, Amir; Banks, Sarah; White, Lori; Pouliot, Darren; Millard, Koreen; Pasher, Jon; Duffe, Jason, Environment and Climate Change Canada, Canada

Analysis and Interpretation of Polarimetric L-band Ground-Based SAR Echoes from a Partly-Vegetated Land Surface

Özdemir, Caner; Demirci, Sevket; Isker, Hakan; Yilmaz, Betul; Gokkan, Serhat, Mersin University, Turkey

3-D study of a Random Volume over Ground: underlying ground characterization using controlled PolTomSAR experiments

Abdo, Ray; Ferro-Famil, Laurent,

An investigation of the effect of polarimetry on forest structure estimation using TanDEM-X high resolution digital elevation models

Choi, Changhyun; Pardini, Matteo; Papathanassiou, Konstantinos,

Decision Tree Classification Method based on Adaptive Dimensional Polarimetric Features of PolSAR Data

Cheng, Jianda (1); Yin, Qiang (1); Zhang, Fan (1); Hong, Wen (2), 1: Beijing University of Chemical Technology, China, People's Republic of; 2: Institute of Electronics, Chinese Academy of Sciences

Hybrid-pol data analysis for land cover classification

Presenting author: Kumar, Ajeet

Kumar, Ajeet (1); Sharma, Rakesh (1); Das, Anup (2); Panigrahi, Rajib Kumar (1), 1: IIT Roorkee, India; 2: Space Application Center (ISRO)

InSAR coherence-based land cover classification of Okara, Pakistan

Khalil, Rao Zahid; Haque, Saad Ul, Institute of Space Technology, Pakistan

SAR images compressed sensing based on Orthogonal Matching Pursuit algorithm

Roubah, Slim; Ouarzeddine, Mounira; Souissi, Boularbah,

Classification of Forest Areas with Multi-Frequency Fully Polarimetric and Multi-Baseline Interferometric SAR Data: the Haspelmoor Case Study

Persico, Federica; Soprano, Isabella; Joerg, Hannah; Pardini, Matteo; Hajnsek, Irena; Papathanassiou, Kostas; Iodice, Antonio,

The significance of transmitting a circular polarized component over a linear polarized

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component of RISAT-1 data for land cover classification

DASARI, KIRAN; LOKAM, ANJANEYULU, NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL, INDIA

Incoherent Polarimetric target scattering decomposition: A overview and their implementation in TerraLib system

Carvalho, Naiallen; Sant'Anna, Sidnei; Bins, Leonardo,

A wetland mapping method by temporal integrals derived from H/A/alpha decomposition of Sentinel-1 images

Pacskó, Vivien; Petrik, Ottó; Friedl, Zoltán; Nádor, Gizella; Kristóf, Dániel; Belényesi, Márta; Molnár, Gábor,

Improved wetland vegetation mapping by using bistatic coherence of the TanDEM-X mission.

Mleczko, Magdalena; Mróz, Marek; Fitrzyk, Magdalena,

Monitoring agricultural fields in South America using Sentinel 1: The Asparagus case study in Peru

Silva, Cristian; Marino, Armando; Cameron, Iain,

Review of Classification Methods and Algorithms for Optical and Radar Remote Sensing Images

El kharki, Omar; Mechbouh, Jamila, Faculty of Sciences and Techniques of Tangier, Tangier, Morocco, Morocco

Assessment of a Ku-Band polarimetric bistatic terrestrial radar: KAPRI

Stefko, Marcel; Baffelli, Simone; Hajnsek, Irena,

Exploring polarimetric features of land surface in wetlands and agricultural ecosystems using quad-pol C-band and X-band SAR.

Fitrzyk, Magdalena; Mróz, Marek; Mleczko, Magdalena; Patruno, Jolanda; Delgado Blasco, Jose Manuel,

Use of polarimetric information for improving object detection for fully polarimetric SAR

Connetable, Paul; Skriver, Henning; Nielsen, Allan Aasbjerg,

Forest above ground biomass estimation approach based on multi-dimensional SAR data

Zhao, Lei; Chen, Erxue; Li, Zengyuan; Zhang, Wangfei,

Investigating the Dual-pol Behavior for the Derivation of Sea-Ice Surface Topographic Height from TanDEM-X Interferometric SAR Data

Huang, Lanqing; Hajnsek, Irena,

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Vegetation Sesonal Monitoring with Sentinel-1 Dual Polarization Data

FRISON, Pierre-Louis; FRUNEAU, Bénédicte; KMIHA, Syrine; DUFRENE, Eric; SOUDANI, Kamel; KOLECK, Thierry; VILLARD, Ludovic; LE TOAN, Thuy; MOUGIN, Eric; RUDANT, Jean-Paul,

Application of Dual-Pol Multi-temporal Sentinel -1 SAR data for Flash Floods Mapping

Mwaniki, Mercy Wanjiru,

Investigating the implementation issues of speckle filters for Single look Hybrid PolSAR data

Sharma, Rakesh (1); Kumar, Ajeet (2); Panigrahi, Rajib (2), 1: NIT Hamirpur, India; 2: IIT Roorkee, India

POLARIMETRIC SAR INTERFEROMETRY SATELLITE SYSTEM AND PARAMETER OPTIMIZATION DESIGN

Xu, Liying; Wei, Li; Fang, Dong; Wang, Haitao; Tong, QingWei; Yu, Yingjun; Chen, JunLi, Shanghai Institute of Satellite Engineering, Shanghai, 200240, China

Day 3 - 30/01/2019

Room: Magellan, Bld.1

SAR Tomography (Tomo-SAR)

Chairs: Ferro-Famil, Laurent (University of Rennes 1), Tebaldini, Stefano (Politecnico di Milano)

09:30 - 10:10

09:30 **TanDEM-X tomography: Perspectives from experiments over multi-species Indian tropical forest**

Khati, Unmesh (1); Lavallo, Marco (2); Singh, Gulab (1), 1: CSRE, Indian Institute of Technology Bombay, Mumbai, India; 2: Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA

09:50 **Ground Topography Below Tropical Forests through Polarimetric SAR Tomography**

Mariotti d'Alessandro, Mauro; Tebaldini, Stefano, Politecnico di Milano

Coffee Break

10:10 - 10:40

SAR Tomography (Tomo-SAR) (cont'd)

Chairs: Ferro-Famil, Laurent (University of Rennes 1), Tebaldini, Stefano (Politecnico di Milano)

Programme Agenda

10:40 - 12:00

10:40 SARSIM and SARSIM+: data-bases for the development of SAR Tomography in forestry applications

Tebaldini, Stefano (1); Mariotti d'Alessandro, Mauro (1); Pardini, Matteo (2); Ferro-Famil, Laurent (3); Huang, Yue (3); Papathanassiou, Kostas (2); Ulander, Lars (4); Blomberg, Erik (4); Wasik, Valentine (5); Dupuis, Xavier (5); Lavalle, Marco (6); Hensley, Scott (6); Scipal, Klaus (7); Albinet, Clement (7), 1: Politecnico di Milano, Italy; 2: DLR - Department Radar Concepts; 3: Université de Rennes 1; 4: Chalmers University of Technology; 5: ONERA; 6: NASA JPL; 7: European Space Agency

11:00 The role of polarimetry on the estimation of forest structure from SAR tomography

Cazcarra-Bes, Victor; Pardini, Matteo; Tello-Alonso, Marivi; Papathanassiou, Konstantinos, German Aerospace center (DLR), Germany

11:20 Analysis of Temporal Decorrelation Effects on Point Spread Function of 3-D Tomo Beamforming

Lombardini, Fabrizio (1); Aghababae, Hossein (2); Schirinzi, Gilda (2), 1: University of Pisa, Italy; 2: University of Napoli Parthenope, Italy

11:40 Sparse Signal Analysis for Full Rank Polarimetric Reconstruction of Coherence Matrix T3

Aghababae, Hossein (1); Ferro-Famil, Laurent (2); Ferraioli, Giampaolo (1); Schirinzi, Gilda (1), 1: Università di Napoli Parthenope, Italy; 2: Université de Rennes 1

Lunch Break

12:00 - 13:00

SAR Tomography (Tomo-SAR) (cont'd)

Chairs: Ferro-Famil, Laurent (University of Rennes 1), Tebaldini, Stefano (Politecnico di Milano)

13:00 - 13:40

13:00 On the role of ground/volume decomposition for AGB retrieval

Banda, Francesco (1); Mariotti d'Alessandro, Mauro (2); Tebaldini, Stefano (2); Giudici, Davide (1), 1: aresys, Italy; 2: Polimi, Italy

13:20 Polarimetric coherence optimization for 3-D imaging applications

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Ferro-Fami, Laurent (1); Huang, Yue (1); Tebaldini, Stefano (2), 1: University of Rennes 1, France; 2: Politecnico di Milano, Milano, Italy

Round Table SAR Tomography (Tomo-SAR)

13:40 - 14:00

Forest and BIOMASS

Chairs: Albinet, Clément (ESA), Pardini, Matteo (German Aerospace Center (DLR))

14:00 - 15:20

14:00 Biomass mission: Biophysical products retrieval

Quegan, Shaun (1); Giudici, Davide (2); Banda, Francesco (2); Scipal, Klaus (3); Papathanassiou, Kostas (4); Villard, Ludovic (5); Ulander, Lars (6); Soja, Maciej (6); Mariotti d'Alessandro, Mauro (7); Tebaldini, Stefano (7); Le Toan, Thuy (5), 1: University of Sheffield, England; 2: aresys, Italy; 3: ESA; 4: DLR; 5: Cesbio; 6: Chalmers University; 7: Polimi

14:20 RVoG Model Validity for Forest Height Estimation using SAR L Band over a Heterogeneous Tropical Forest

Presenting author: Pourshamsi, Maryam

Pourshamsi, Maryam (1); Pardini, Matteo (2); Papathanassiou, Kostas (2); Balzter, Heiko (1), 1: University of Leicester, United Kingdom; 2: DLR (Germany)

14:40 An evaluation of Pol-InSAR complementarities between L- and S-band in forest structure observation

Pardini, Matteo; Cazcarra-Bes, Victor; Papathanassiou, Konstantinos, German Aerospace Center (DLR), Germany

15:00 Combined use of PolSAR and PolInSAR based indicators dedicated to forest biomass estimation from P-Band multibaseline SAR data

GELAS, Colette (1); VILLARD, Ludovic (1); KOLECK, Thierry (1); LE TOAN, Thuy (1); DANIEL, Sandrine (2); POLIDORI, Laurent (1), 1: CESBIO, France; 2: Capgemini, France

Coffee Break

15:20 - 15:40

Programme Agenda

Forest and BIOMASS (cont'd)

Chairs: Albinet, Clément (ESA), simard, Marc (Jet Propulsion Laboratory)

15:40 - 17:20

15:40 The concept of multi-Mission Algorithm and Analysis Platform (MAAP) for the BIOMASS mission

Albinet, Clément (1); Frommknecht, Björn (1); Laur, Henri (1); Costa, Gabriella (1); Whitehurst, Amanda (2); Murphy, Kevin (2); Scipal, Klaus (3), 1: ESA-ESRIN, Frascati, Italy; 2: NASA-HQ, Washington, USA; 3: ESA-ESTEC, Noordwijk, The Netherlands

16:00 BRIX: The first Biomass Retrieval Inter-comparison eXercise

Albinet, Clément (1); Balzter, Heiko (2); da Conceição Bispo, Polyanna (2); García, Mariano (3); Gelas, Colette (4); Notarnicola, Claudia (5); Pacheco-Pascagaza, Ana María (2); Padovano, Antonio (5); Paloscia, Simonetta (6); Pettinato, Simone (6); Pourshamsi, Maryam (2); Rodríguez-Veiga, Pedro (2); Santi, Emanuele (6); Scipal, Klaus (7); Villard, Ludovic (4), 1: ESA-ESRIN, Frascati, Italia; 2: University of Leicester, Leicester, United Kingdom; 3: University of Alcalá, Alcalá de Henares, Espaa; 4: CESBIO, Toulouse, France; 5: EURAC, Bolzano, Italia; 6: IFAC-CNR, Firenze, Italia; 7: ESA-ESTEC, Noordwijk, The Netherlands

16:20 MACHINE LEARNING APPLICATION FOR THE FOREST BIOMASS RETRIEVAL IN THE FRAMEWORK OF ESA BRIX

Santi, Emanuele (1); Paloscia, Simonetta (1); Pettinato, Simone (1); Cuzzo, Giovanni (2); Padovano, Antonio (2); Notarnicola, Claudia (2), 1: IFAC - CNR, Italy; 2: EURAC, Italy

16:40 Multibaseline PolinSAR in Mangrove Forests of Gabon

simard, Marc (1); Denbina, Michael (1); Fatoyinbo, Lola (2); Pinto, Naiara (1), 1: Jet Propulsion Laboratory, California Institute of Technology, United States of America; 2: Goddard Space Flight Center, USA

17:00 Mangroves detection and classification using full-polarimetric SAR data

Nunziata, Ferdinando (1); Ferrentino, Emanuele (1); Migliaccio, Maurizio (1); Zhang, Hongsheng (2), 1: Universit di Napoli Parthenope, Italy; 2: The Chinese University of Hong Kong, China

Round Table Forest and BIOMASS

17:20 - 17:40

Day 4 - 31/01/2019

Programme Agenda

Room: Magellan, Bld.1

Applications of SAR Polarimetry on Land

Chairs: Biondi, Filippo (University of L'Aquila), KOENIGUER, Elise (Onera)

09:30 - 10:30

09:30 **Precise Detection of Oil Palm Trees Areas by a single Fully Polarimetric Synthetic Aperture Radar Image and Multi Chromatic Analysis**

Biondi, Filippo, University of L'Aquila, Italy

09:50 **DOUBLE-BOUNCE CONTRIBUTION EFFECT IN THE ESTIMATION OF BIOPHYSICAL PARAMETERS OF VEGETATION BASED ON POLINSAR TANDEM-X BISTATIC DATA**

Romero-Puig, Noelia; López-Sánchez, Juan M.; Ballester-Berman, J. David, Instituto Universitario de Investigación Informática, Universidad de Alicante, Spain

10:10 **POL-timeSAR: Benefits of polarimetry on change detection in time-series**

KOENIGUER, Elise, Onera, France

Coffee Break

10:30 - 11:00

Applications of SAR Polarimetry on Land (cont'd)

Chairs: Biondi, Filippo (University of L'Aquila), KOENIGUER, Elise (Onera)

11:00 - 12:00

11:00 **Nonlocal filtering of polarimetric SAR images applied to change detection for volcano monitoring**

D'Hondt, Olivier; Valade, Sébastien; Hellwich, Olaf, TU Berlin, Germany

11:20 **Monitoring and detecting archaeological features with multi-frequency polarimetric analysis**

Patruno, Jolanda (1); Delgado Blasco, Jose Manuel (2); Fitrzyk, Magdalena (3), 1: Rhea Group c/o ESA/ESRIN, Via Galileo Galilei 00044 Frascati, Italy; 2: Universidad de Jaén, Campus Las Lagunillas s/n, 23071 Jaén, Spain; 3: RSAC c/o ESA/ESRIN, Via Galileo Galilei 00044 Frascati, Italy

Programme Agenda

- 11:40 Cultural effects on the Urban detection based on SAR polarimetric characteristics**
 Blasco, Jose Manuel (1); Patruno, Jolanda (2); Fitzryk, Magdalena (3), 1: Grupo de Investigación Microgeodesia Jaén (PAIDI RNM-282), Universidad de Jaén, Campus Las Lagunillas s/n, 23071 Jaén, Spain; 2: Rhea Group c/o ESA/ESRIN; 3: RSAC c/o ESA/ESRIN

Round Table Applications of SAR Polarimetry on Land

12:00 - 12:20

Lunch Break

12:20 - 13:40

Applications of SAR Polarimetry on Ocean

Chairs: Eltoft, Torbjørn (UiT), Migliaccio, Maurizio (Università degli Studi di Napoli Parthenope)

13:40 - 15:20

- 13:40 Investigating Detection Capabilities of Distressed Refugee Boats Using SAR**
 Lanz, Peter (1); Marino, Armando (2); Brinkhoff, Thomas (3); Köster, Frank (4); Möller, Matthias (5), 1: Dept. of Computing Science, Carl von Ossietzky Univ. of Oldenburg / Institute for Applied Photogrammetry and Geoinformatics, Jade Univ. Oldenburg; 2: Department of Biological and Environmental Sciences, University of Stirling; 3: Institute for Applied Photogrammetry and Geoinformatics, Jade University of Applied Sciences; 4: Institute of Transportation Systems, German Aerospace Center (DLR); 5: Faculty for Humanities and Cultural Sciences, Otto-Friedrich-University of Bamberg
- 14:00 Retrieval of the dielectric properties of oil slick using SAR via a Polarimetric Two-Scale Model**
 Quigley, Cornelius Patrick; Eltoft, Torbjørn, UiT The Arctic University of Norway, Norway
- 14:20 On the Co-Cross Polarization Coherence over Sea Surface from Sentinel-1 TOPS Data**
 Longépé, Nicolas (1); Husson, Romain (1); Mouche, Alexis (2); Pottier, Eric (3); Archer, Olivier (2), 1: CLS, France; 2: IFREMER, France; 3: University of Rennes I, France
- 14:40 A MULTI-POLARIZATION ANALYSIS OF AZIMUTH CUT-OFF FOR SAR WIND SPEED RETRIEVAL UNDER MODERATE AND EXTREME WEATHER CONDITIONS**

Programme Agenda

Corcione, Valeria (1); Nunziata, Ferdinando (1); Portabella, Marcos (2); Grieco, Giuseppe (3); Migliaccio, Maurizio (1), 1: Universit degli Studi di Napoli Parthenope, Italy; 2: The institute of Marine Sciences (ICM-CSIC), Spain; 3: Koninklijk Nederlands Meteorologisch Instituut (KNMI), De Bilt, The Netherlands

15:00 C-band Right-Circular Polarization Ocean Wind Retrieval

Zhang, Guosheng (1,2); Zhang, Biao (1); Perrie, Will (2); He, Yijun (1); Khurshid, Shahid (3); Warner, Kerri (3), 1: Nanjing University of Information Science and Technology; 2: Bedford Institute of Oceanography, Canada; 3: Environment Climate Change Canada

Coffee Break

15:20 - 15:50

Applications of SAR Polarimetry on Ocean (cont'd)

Chairs: Eltoft, Torbjørn (UIT), Migliaccio, Maurizio (Universit degli Studi di Napoli Parthenope)

15:50 - 16:10

15:50 Wind speed retrieval from simulated RADARSAT Constellation Mission (RCM) Compact Polarimetry (CP) SAR data for marine wind application

Khurshid, Shahid Khawaja (1); Perrie, William (2); Warner, Kerri (1); Geldzetsler, Torsten (3); Zhang, Guosheng (2); Flett, Dean (1), 1: Environment & Climate Change Canada, Canada; 2: Fisheries & Oceans Canada, Bedford Institute of Oceanography; 3: Independent Contractor

Round Table Applications of SAR Polarimetry on Ocean

16:10 - 16:30

Day 5 - 01/02/2019

Room: Magellan, Bld.1

Applications of SAR Polarimetry on Cryosphere

Chairs: Papathanassiou, Kostas (DLR), Parrella, Giuseppe (German Aerospace Center (DLR))

09:30 - 10:30

Programme Agenda

09:30 Exploring the Potential of TanDEM-X Dual-Polarization Time Series to Monitor Snow Accumulation on an Alpine Glacier

Schoenfeldt, Miriam; Parrella, Giuseppe; Hajnsek, Irena,

09:50 L- and P- band tomographic imaging in dense forests: AfriSAR results

EL Moussawi, Ibrahim (1,2,3,4); Ho Tong Minh, Dinh (1); Baghdadi, Nicolas (1); Abdallah, Chadi (2); Jomaah, Jalal (3); Strauss, Olivier (4); Lavallo, Marco (5), 1: Irstea UMR TETIS University of Montpellier (UM); 2: CNRS-L; 3: Lebanese University (UL); 4: Lirmm University of Montpellier (UM); 5: NASA Jet Propulsion Laboratory JPL California Institute of Technology USA

10:10 POLARIZATION EFFECT ON GLACIER MOVEMENT ESTIMATION USING DIFFERENTIAL SAR INTERFEROMETRY (DInSAR)

Presenting author: Khati, Umesh

Nela, Bala Raju; Singh, Gulab; Khati, Umesh, Centre of Studies in Resources Engineering, IIT Bombay, India

Coffee Break

10:30 - 11:00

Applications of SAR Polarimetry on Cryosphere (cont'd)

Chairs: Papathanassiou, Kostas (DLR), Parrella, Giuseppe (German Aerospace Center (DLR))

11:00 - 12:00

11:00 Polarimetric Sensitivity of Multi-Frequency Airborne SAR Measurements to the Ice Zones of Greenland

Parrella, Giuseppe (1); Papathanassiou, Kostas (1); Hajnsek, Irena (1,2), 1: German Aerospace Center (DLR), Germany; 2: ETH Zurich, Switzerland

11:20 Ice thickness change in Indian Himalayas using SRTM and TanDEM-X global DEM

Presenting author: Khati, Unmesh

Bandyopadhyay, Debmita; Singh, Gulab; Khati, Unmesh, Indian Institute of Technology Bombay, India

W. Boerner Award Ceremony

12:00 - 12:20

Programme Agenda

Lunch Break

12:20 - 13:20

Applications of SAR Polarimetry on Cryosphere (cont'd)

Chairs: Papathanassiou, Kostas (DLR), Parrella, Giuseppe (German Aerospace Center (DLR))

13:20 - 13:40

13:20 Investigating the Potential to Retrieve Vertical Subsurface Structures of Ice Sheets by Means of Pol-InSAR Data

Fischer, Georg (1,2); Papathanassiou, Konstantinos (1); Hajnsek, Irena (1,2), 1: German Aerospace Center (DLR), Germany; 2: ETH Zurich, Institute of Environmental Engineering, Switzerland

Round Table Applications of SAR Polarimetry on Cryosphere

13:40 - 14:00

Airborne and Campaigns

Chairs: Mariotti d'Alessandro, Mauro (Politecnico di Milano), Papathanassiou, Kostas (DLR)

14:00 - 14:40

14:00 Analysis of PolSAR imagery from the DALOEX 2015 technology demonstration campaign in Greenland

Krogager, Ernst, Danish Defence Acquisition and Logistics Organisation, Denmark

14:20 DLR Airborne SAR Campaign on Permafrost Soils and Boreal Forests in the Canadian Northwest Territories, Yukon and Saskatchewan: PermASAR

Hajnsek, Irena (1,2); Joerg, Hannah (1); Horn, Ralf (1); Keller, Martin (1); Gesswein, Daniel (1); Jaeger, Marc (1); Scheiber, Rolf (1); Bernhard, Philipp (2); Zwieback, Simon (2), 1: Microwaves and Radar Institute DLR, Germany; 2: Institute of Environmental Engineering ETH Zürich

Round Table Airborne and Campaigns

14:40 - 15:00

Programme Agenda

Summary and reccomendations

15:00 - 15:30

Workshop Closing

15:30 - 15:40