Programme Agenda

Day 1 - 11/09/2023

PLENARY

REGISTRATION

08:00 - 10:00

Opening Session (1.01.a)

Chairs: Marcus Engdahl, ESA, Anna Hogg, University of Leeds, UK

10:00 - 10:40

10:00-10:06 | Fringe23 ESA Welcome Address (recorded video)

Presenting author: Josef Aschbacher

Josef Aschbacher, ESA, Director General

10:06-10:10 | Ministerial Welcome Address

Viscount Camrose, DSIT Space team, UK Government

10:10-10:20 | Earth Observation in the UK - the UK Space Agency perspective

Presenting author: Beth Greenaway

Beth Greenaway, UKSA

10:20-10:25 | Fringe23 Co-organisers Welcome

Presenting author: Anna Hogg

Anna Hogg, Leeds University

10:25-10:35 | Fringe23 Welcome & Scientific Programme

Presenting author: Marcus Engdahl

Marcus Engdahl, ESA

10:35-10:40 | Fringe23 Workshop Logistics

Presenting author: Ulla Vayrynen

Ulla Vayrynen, Serco for ESA

Sentinel-1 Session (1.02.a)

Chairs: Muriel Pinheiro, ESA-ESRIN, Nuno Miranda, ESA-ESRIN

11:10 - 12:50

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11:10-11:35 | Sentinel-1 Mission status

Presenting author: Nuno Miranda

Nuno Miranda, ESA

11:35-12:00 | Sentinel-1 Product performance

Presenting author: Muriel Pinhero

Muriel Pinhero Antonio Valentino Clément Albinet Guillaume Hajduch Pauline Vincent Andrea Recchia Alessandro Cotrufo Kersten Schmidt Christoph Gisinger, European Space Agency, Largo Galileo Galilei 1, 00044 Frascati, Italy RHEA for ESA, Via Galileo Galilei, 1, 00044 Frascati RM, Italy European Space Agency, Largo Galileo Galilei 1, 00044 Frascati, Italy CLS, Bâtiment Le Ponant, avenue La Pérouse, 29280 Plouzané, France CLS, Bâtiment Le Ponant, avenue La Pérouse, 29280 Plouzané, France Aresys, Via Flumendosa n.16, 20132 Milan, Italy Aresys, Via Flumendosa n.16, 20132 Milan, Italy DLR Microwaves and Radar Institute, Münchener Straße 20, 82234 Weßling, Germany DLR Remote Sensing Technology Institute, Münchener Straße 20, 82234 Weßling, Germany

12:00-12:20 | Sentinel-1 Interferometric Parameters Monitoring By SAR-MPC And Burst IDs In TOPS Products

Presenting author: Alessandro Cotrufo

Alessandro Cotrufo Andrea Recchia Niccol Franceschi Guillaume Hajduch Pauline Vincent Kersten Schmidt Christoph Gisinger Muriel Pinheiro Clement Albinet Antonio Valentino, Aresys s.r.l., Via Flumendosa 16, 20132, Milano, Italy Aresys s.r.l., Via Flumendosa 16, 20132, Milano, Italy Aresys s.r.l., Via Flumendosa 16, 20132, Milano, Italy Collecte Localisation Satellites, CLS, Av. la Pérouse Bâtiment le Ponant, 29280 Plouzané, France Collecte Localisation Satellites, CLS, Av. la Pérouse Bâtiment le Ponant, 29280 Plouzané, France German Aerospace Center (DLR), Oberpfaffenhofen, Germany German Aerospace Center (DLR), Oberpfaffenhofen, Germany ESA/ESRIN, Largo Galileo Galilei 1, 00044 Frascati (Roma), Italy ESA/ESRIN, Largo Galileo Galilei 1, 00044 Frascati (Roma), Italy RHEA for ESA/ESRIN, Largo Galileo Galilei 1, 00044 Frascati (Roma), Italy

12:20-12:40 | Improvement Of Interferometric Coherence Through RFI Mitigation In Sentinel-1 Products

Presenting author: Andrea Recchia

Andrea Recchia Laura Fioretti Alessandro Cotrufo Niccol Franceschi Hajduch Guillaume Pauline Vincent Muriel Pinheiro Clement Albinet Antonio Valentino, Aresys s.r.l., Italy Aresys s.r.l., Italy Aresys s.r.l., Italy Aresys s.r.l., Italy CLS, France CLS, France ESA, Italy ESA, Italy Rhea Group, Italy

12:40-12:50 | Questions & Answers

. ., ESA

Auditorium I

Atmosphere and Ionosphere (1.03.a.)

Chairs: Falk Amelung, U of Miami, Giovanni Nico, Consiglio Nazionale delle Ricerche

14:00 - 15:40

Programme Agenda

14:00-14:20 | Towards An Interferometric Autofocus For Ionospheric Phase Signatures In Biomass

Presenting author: Felipe Betancourt-Payan

Felipe Betancourt-Payan Marc Rodriguez-Cassola Pau Prats-Iraola Maria J. Sanjuan-Ferrer Gerhard Krieger, German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany

14:20-14:40 | Spaceborne InSAR VS Airborne InSAR for Water Level Change Monitoring in Coastal Wetlands

Presenting author: Saoussen Belhadj aissa

Saoussen Belhadj aissa Marc Simard Cathleen Jones Talib Oliver Cabrera Alexandra Christensen, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, USA. Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, USA. Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, USA. Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, USA. Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, USA.

14:40-15:00 | Can InSAR Meteorology Contribute To A Digital Twin Of The Atmosphere?

Presenting author: Giovanni Nico

Giovanni Nico Pedro Mateus Joo Catalo, Consiglio Nazionale delle Ricerche, Istituto per le Applicazioni del Calcolo, Bari, Italy Universidade de Lisboa, Faculdade de Cincias, Instituto Dom Luiz, Lisboa, Portugal Universidade de Lisboa, Faculdade de Cincias, Instituto Dom Luiz, Lisboa, Portugal

15:00-15:20 | InSAR Tropospheric Delay Modeling Based on Its Spatiotemporal Characteristics

Presenting author: Jihong Liu

Jihong Liu Sigurjón Jónsson Jun Hu Roland Burgmann, Division of Physical Sciences and Engineering, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia; School of Geosciences and Info-Physics, Central South University, Changsha, China Division of Physical Sciences and Engineering, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia School of Geosciences and Info-Physics, Central South University, Changsha, China Berkeley Seismological Laboratory and Department of Earth and Planetary Science, University of California, Berkeley, CA, USA

SAR Geodesy and InSAR atmospheric corrections (1.04.a)

Chairs: Michael Eineder, DLR, Riccardo Lanari, IREA-CNR

16:10 - 17:50

16:10-16:30 | Interferometric Phase Corrections Based On ESA's Extended Timing Annotation Dataset (ETAD) For Sentinel-1

Presenting author: Victor Diego Navarro Sanchez

Victor Diego Navarro Sanchez Christoph Gisinger Ramon Brcic Steffen Suchandt Lukas Krieger Thomas Fritz Antonio Valentino Muriel Pinheiro, Remote Sensing Technology Institute (IMF), German Aerospace Center (DLR) Remote Sensing Technology Institute (IMF),

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German Aerospace Center (DLR) Remote Sensing Technology Institute (IMF), German Aerospace Center (DLR) Remote Sensing Technology Institute (IMF), German Aerospace Center (DLR) Remote Sensing Technology Institute (IMF), German Aerospace Center (DLR) Remote Sensing Technology Institute (IMF), German Aerospace Center (DLR) RHEA GROUP for European Space Agency (ESA) European Space Agency (ESA) ESRIN

16:30-16:50 | Impact of ETAD-like corrections on OPERA Coregistered Single Look Complex products from Sentinel-1 data

Presenting author: Heresh Fattahi

Heresh Fattahi Virginia Brancato Seongsu Jeong Scott Staniewicz Mary Grace Bato Zhong Lu Jinwoo Kim Kang Liang Simran Sangha Bruce Chapman Alexander Handwerger Steven Chan David Bekaert, Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology Southern Methodist University Southern Methodist University Southern Methodist University Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology Jet Propulsion Laboratory, California Institute of Technology

16:50-17:10 | Exploiting ETAD Data For Estimating And Filtering Out The Atmospheric Phase Screen Component From Medium/High Resolution DInSAR Products

Presenting author: Ivana Zinno

Ivana Zinno Federica Casamento Francesco Casu Riccardo Lanari, CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy

17:10-17:30 | Capturing the Surface Deformation of the 112 km Deep Mw 6.8 2020 Earthquake, Northern Chile, using InSAR time series analysis

Presenting author: Fei Liu

Fei Liu John Elliott Tim Craig Susanna Ebmeier Milan Lazecky Yasser Maghsoudi Reza Bordbari, University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom

17:30-17:50 | A Comprehensive Observational Database of Deformation at Global Volcanoes for Machine Learning Applications

Presenting author: Lin Shen

Lin Shen Andrew Hooper Milan Lazecky Matthew Gaddes Camila Novoa Susanna Ebmeier, COMET, School of Earth and Environment, University of Leeds, UK COMET, School of Earth and Environment, University of Leeds, UK COMET, School of Earth and Environment, University of Leeds, UK COMET, School of Earth and Environment, University of Leeds, UK COMET, School of Earth and Environment, University of Leeds, UK COMET, School of Earth and Environment, University of Leeds, UK

Round Table Discussion (RT 1 Day 1)

17:50 - 18:20

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Auditorium II

Data products and services I (1.03.b)

Chairs: Nuno Miranda, ESA-ESRIN, Jose Manuel Delgado Blasco, RHEA Group

14:00 - 15:40

14:00-14:20 | TimeSAT - Ground Motion Pattern Detection and Classification in massive Satellite Image Time Series

Presenting author: Aline Déprez

Aline Déprez Floriane Provost Jean-Philippe Malet David Michéa Fabrizio Pacini Enguerran Boissier Clément Michoud Thierry Oppikofer, Ecole et Observatoire des Sciences de la Terre, EOST - CNRS/Université de Strasbourg, Strasbourg, France Ecole et Observatoire des Sciences de la Terre, EOST - CNRS/Université de Strasbourg, Strasbourg, France; Institut Terre et Environnement, ITES - CNRS/Université de Strasbourg, Strasbourg, France Ecole et Observatoire des Sciences de la Terre, EOST - CNRS/Université de Strasbourg, Strasbourg, France; Institut Terre et Environnement, ITES - CNRS/Université de Strasbourg, Strasbourg, France Ecole et Observatoire des Sciences de la Terre, EOST - CNRS/Université de Strasbourg, Strasbourg, France Terradue srl., Roma, Italy Terradue srl., Roma, Italy Terranum, Bussigny, Switzerland Terranum, Bussigny, Switzerland

14:20-14:40 | OPERA Analysis-Ready SAR and Optical Products for Mapping Water Extent, Disturbance, and Displacement at Continental to Near-Global Scales

Presenting author: David Bekaert

David Bekaert Nick Arena Grace Bato Matthew Bonnema Virginia Brancato Steven Chan Bruce Chapman Luca Cinquini Heresh Fattahi Alexander Handwerger Matthew Hansen Seongsu Jeong John Jones Jungkyo Jung Hyun Lee Steven Lewis Zhong Lu Charlie Marshak Franz Meyer Sam Niemoeller Batu Osmanoglu Amy Pickens Christopher Rivas Simran Sangha Gustavo Shiroma Zhen Song Phil Yoon Rishi Verma, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA University of Maryland, College Park, MD, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA United States Geological Survey, Kearneysville, WV, USA, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Southern Methodist University, Dallas, TX, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA University of Alaska Fairbanks, Fairbanks, AK, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA NASA Goddard Space Flight Center, Greenbelt, MD, USA University of Maryland, College Park, MD, USA Raytheon Technologies, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA United States Geological Survey, Kearneysville, WV, USA, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA

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14:40-15:00 | Supporting Civil Protection Activities With Spaceborne And Airborne InSAR Products In Volcanic And Seismic Regions

Presenting author: Francesco Casu

Francesco Casu Paolo Berardino Manuela Bonano Sabatino Buonanno Federica Casamento Federica Cotugno Claudio De Luca Alessandro Di Vincenzo Carmen Esposito Marianna Franzese Adele Fusco Michele Manunta Fernando Monterroso Antonio Natale Giovanni Onorato Stefano Perna Yenni Lorena Belen Roa Pasquale Striano Muhammad Yasir Giovanni Zeni Ivana Zinno Riccardo Lanari, CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy; Universit degli studi di Napoli "Parthenope", Italy CNR-IREA, Italy; Universit degli studi di Napoli Federico II, Italy CNR-IREA, Italy CNR-IREA, Italy; Universit degli studi di Napoli "Parthenope", Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy Universit degli studi di Napoli "Parthenope", Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy; Universit degli studi di Napoli "Parthenope", Italy CNR-IREA, Italy CNR-IREA, Italy CNR-IREA, Italy

15:00-15:20 | Nationwide Sentinel-1 PSI Surface Motion of Greece Using On-Demand SNAPPING Service of the Geohazards Exploitation Platform

Presenting author: Michael Foumelis

Michael Foumelis Jose Manuel Delgado Blasco Elena Papageorgiou Giorgos Siavalas Fabrizio Pacini Philippe Bally, Aristotle University of Thessaloniki (AUTh), Department of Physical and Environmental Geography, Greece; Center for Interdisciplinary Research and Innovation (CIRI-AUTh), Balkan Center, Greece Grupo de investigación Microgeodesia Jaén, Universidad de Jaén, Spain Aristotle University of Thessaloniki (AUTh), Department of Physical and Environmental Geography, Greece; Center for Interdisciplinary Research and Innovation (CIRI-AUTh), Balkan Center, Greece Aristotle University of Thessaloniki (AUTh), Department of Physical and Environmental Geography, Greece; Center for Interdisciplinary Research and Innovation (CIRI-AUTh), Balkan Center, Greece Terradue s.r.l., Italy European Space Agency (ESA), Italy

15:20-15:40 | Land Motion Monitoring Service Of Switzerland Through Interferometric Multi-Temporal Analyses Of Sentinel-1 SAR Data

Presenting author: Giulia Tessari

Giulia Tessari Paolo Riccardi Alessio Cantone Marco Defilippi Andrey Giosu Giardino Francesco Arrigo Tomas Zajc Paolo Pasquali, sarmap SA, Caslano, Switzerland sarmap SA, Caslano, Switzerland sarmap SA, Caslano, Switzerland sarmap SA, Caslano, Switzerland sarmap SA, Caslano, Switzerland sarmap SA, Caslano, Switzerland sarmap SA, Caslano, Switzerland sarmap SA, Caslano, Switzerland

Data products and services II (1.04.b)

Chairs: Marcus Engdahl, ESA, Jean-Philippe Malet, CNRS / EOST

16:10 - 17:50

16:10-16:30 | SNAP Microwave Toolbox

Presenting author: Michael Foumelis

Carsten Brockmann Michael Foumelis, Brockmann/Skywatch Aristotle University of Thessaloniki (AUTh), Greece

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16:30-16:50 | SAR2CUBE - an Open Framework for an Efficient Setup of InSAR Application in Analysis Ready Data CUBES

Presenting author: Giuseppe Centolanza

Giuseppe Centolanza Michele Claus Alexander Jacob, DARES TECHNOLOGY, Spain Institute for Earth Observation, Eurac Research, Bolzano, Italy Institute for Earth Observation, Eurac Research, Bolzano, Italy

16:50-17:10 | SNAP2StaMPSv2: Increasing Features and Supported Sensors in the Open Source SNAP2StaMPS Processing Scheme

Presenting author: Jose Manuel Delgado Blasco

Jose Manuel Delgado Blasco Jonas Ziemer Michael Foumelis Clémence Dubois, Research Group “Microgeodesia” Jaen, University of Jaen Department for Earth Observation, Friedrich Schiller University Jena (FSU) Aristotle University of Thessaloniki (AUTh) Department for Earth Observation, Friedrich Schiller University Jena (FSU)

17:10-17:30 | ALUs Toolbox: GPU-Accelerated Sentinel-1 and ALOS PALSAR Processing Tools

Presenting author: Martin Jüssi

Martin Jüssi Sven Kautlenbach Priit Pender Anton Perepelenko, AS CGI Eesti, Estonia AS CGI Eesti, Estonia AS CGI Eesti, Estonia AS CGI Eesti, Estonia

17:30-17:50 | GIS-based workflows for SAR/ InSAR Science Data Systems

Presenting author: Piyush Agram

Piyush Agram Matthew Calef Scott Arko, Descartes Labs Inc, United States of America Descartes Labs Inc, United States of America Descartes Labs Inc, United States of America

Round Table Discussion (RT 2 Day 1)

17:50 - 18:20

Coffee Break

10:40 - 11:10

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12:50 - 14:00

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Coffee Break

15:40 - 16:10

Welcome Cocktail - Ice breaker

18:20 - 20:00

Day 2 - 12/09/2023

PLENARY

Future InSAR ESA (2.01.a)

Chairs: Björn Rommen, ESA/ESTEC, Malcom Davidson, ESA-ESTEC

09:00 - 10:40

09:00-09:20 | Overview and preparation status of ESA's Earth Explorer 7 Biomass mission

Presenting author: Björn Rommen

Björn Rommen Philip Willemsen Tristan Simon Antonio Leanza Sérgio Bras Michael Fehringer, ESA ESA ESA ESA ESA ESA

09:20-09:40 | The future Copernicus SAR mission constellation ROSE-L and Sentinel-1 NG

Presenting author: Malcolm Davidson

Malcolm Davidson Julia Kubanek Lorenzo Iannini Ramon Torres Gianluigi Di Cosimo, ESA ESA ESA ESA ESA

09:40-10:00 | Status of ESA's Earth Explorer 10 Harmony mission

Presenting author: Björn Rommen

Björn Rommen Paco Lopez-Dekker Pedro Jurado Erik De Witte Florence Hélire, ESA TU Delft ESA ESA ESA

10:00-10:20 | Performance Analysis of the Harmony Mission for Land Applications: Results from the Phase A Study

Presenting author: Pau Prats-Iraola

Pau Prats-Iraola Andrea Pulella Andreas Benedikter Andy Hooper Juliet Biggs Andreas Kääb Bernhard Rabus Thomas Nagler Helmut Rott Odysseas Pappas Francesco De Zan Victor Navarro Ramon Brcic Nida Sakar Gustavo Martin del Campo Simon Trumpf Johannes Kramp Georg Fischer Marc Rodriguez-Cassola Paco Lopez-Dekker Björn Rommen, German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany University of Leeds, UK University of Bristol, UK University of Oslo, NO Simon Fraser University, CA ENVEO IT GmbH, AT ENVEO IT GmbH, AT University of Bristol, UK Delta Phi Remote Sensing GmbH, DE German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR),

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Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany Delft University of Technology, NL ESA, NL

10:20-10:40 | Round table + Q&A

. ., ESA

Auditorium I

Ice and Snow 1 (2.02.a)

Chairs: Thomas Nagler, ENVEO IT GmbH, Anna Hogg, University of Leeds, UK

11:10 - 12:50

11:10-11:30 | Ice Velocity and Discharge from Ice Sheets using Complementarity of C-and L-band SAR

Presenting author: Thomas Nagler

Thomas Nagler Jan Wuite Markus Hetzenecker Helmut Rott, ENVEO IT GmbH ENVEO IT GmbH ENVEO IT GmbH ENVEO IT GmbH

11:30-11:50 | Towards a Multi-Frequency Virtual SAR Constellation for Grounding Line Measurements

Presenting author: Bernd Scheuchl

Bernd Scheuchl Eric Rignot Enrico Ciraci Hanning Chen Pietro Milillo, University of California, Irvine, United States of America University of California, Irvine, United States of America; Jet Propulsion Laboratory, United States of America University of California, Irvine, United States of America; Jet Propulsion Laboratory, United States of America University of California, Irvine, United States of America University of Houston, Cullen College of Engineering, United States of America

11:50-12:10 | A New Methodology For Ice Shelf And Glacier Grounding Line Delineation With Synthetic Aperture Radar In Low Coherence Regions Using Tidal Motion Correlation

Presenting author: Benjamin J. Wallis

Benjamin J. Wallis Yikai Zhu Anna E. Hogg Andrew Hooper, Institute for Climate and Atmospheric Science, University of Leeds, Leeds, United Kingdom Chinese Antarctic Centre of Mapping and Surveying, Wuhan University, Wuhan, People's Republic of China; COMET, University of Leeds, Leeds, United Kingdom Institute for Climate and Atmospheric Science, University of Leeds, Leeds, United Kingdom COMET, University of Leeds, Leeds, United Kingdom

12:10-12:30 | Supervised Learning for Tracking Inland Glacier Flows Using TOPS Data

Presenting author: Andrea Pulella

Andrea Pulella Claire Renaud Pau Prats-Iraola Francescopaolo Sica, German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany University of the Bundeswehr Munich, Germany

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12:30-12:50 | Geodetic Mass Balance of Glaciers and Icecaps from TanDEM-X in Northern High Latitudes

Presenting author: Philipp Malz

Philipp Malz Christian Sommer Thorsten Seehaus Matthias Braun, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

Ice and Snow 2 (2.03.a)

Chairs: Othmar Frey, Gamma Remote Sensing / ETH Zurich, Line Rouyet, NORCE Norwegian Research Centre

14:00 - 15:40

14:00-14:20 | Snow Depth Penetration Experiment For ESA Harmony Mission

Presenting author: Usman Iqbal Ahmed

Usman Iqbal Ahmed Jeff Stacey Bernhard Rabus, Simon Fraser University, Canada Simon Fraser University, Canada Simon Fraser University, Canada

14:20-14:40 | Exploiting the Sentinel-1 Extra Wide Swath Mode archive for InSAR applications within the terrestrial cryosphere

Presenting author: Jelte van Oostveen

Jelte van Oostveen Line Rouyet Tom Rune Lauknes Yngvar Larsen, NORCE Norwegian Research Centre, Norway NORCE Norwegian Research Centre, Norway NORCE Norwegian Research Centre, Norway NORCE Norwegian Research Centre, Norway

14:40-15:00 | Repeat Pass Interferometric and Polarimetric SAR Data for Snow Water Equivalent Retrieval

Presenting author: Kristina Belinska

Kristina Belinska Georg Fischer Christian Barthlott Julia Boike Irena Hajnsek, Microwaves and Radar Institute, German Aerospace Center; Institute of Environmental Engineering, ETH Zurich Microwaves and Radar Institute, German Aerospace Center Institute of Meteorology and Climate Research, KIT Alfred-Wegener-Institute, AWI Microwaves and Radar Institute, German Aerospace Center; Institute of Environmental Engineering, ETH Zurich

15:00-15:20 | Assessing Rock Glacier Activity In Val Senales By Exploiting Multiband SAR Data Through Differential SAR Interferometry And Offset Tracking

Presenting author: Fabio Bovenga

Fabio Bovenga Ilenia Argentiero Antonella Belmonte Alberto Refice Giovanni Cuozzo Melisa Soledad Heredia Mattia Callegari Claudia Notarnicola Davide Oscar Nitti Raffaele Nutricato, Institute for Electromagnetic Sensing of the Environment, National Research Council of Italy (CNR-IREA) Institute for Electromagnetic Sensing of the Environment, National Research Council of Italy (CNR-IREA) Institute for Electromagnetic Sensing of the Environment, National Research Council of Italy (CNR-IREA) Institute for Electromagnetic Sensing of the Environment, National Research Council of Italy (CNR-IREA) EURAC Research - Institute for Earth Observation EURAC Research - Institute for Earth Observation EURAC Research - Institute for Earth Observation EURAC Research - Institute for Earth Observation GAP s.r.l. GAP

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15:20-15:40 | Experimental Studies on Dual Frequency InSAR Application for Snow Mass Monitoring

Presenting author: Thomas Nagler

Thomas Nagler Helmut Rott Stefan Scheiblauer Jens Fischer Ralf Horn Julia Kubanek, ENVEO IT GmbH ENVEO IT GmbH ENVEO IT GmbH German Aerospace Center German Aerospace Center European Space Agency (ESA)

Round Table Discussion (RT 1 Day 2)

15:40 - 16:30

Auditorium II

InSAR methods (2.02.b.)

Chairs: Michele Crosetto, CTTC, Dinh Ho Tong Minh, INRAE

11:10 - 12:50

11:10-11:30 | Estimating Peatland Surface Motion With Discontinuous InSAR Time Series Data

Presenting author: Philip Conroy

Philip Conroy Simon van Diepen Freek van Leijen Ramon Hanssen, Delft University of Technology, Delft, The Netherlands Delft University of Technology, Delft, The Netherlands Delft University of Technology, Delft, The Netherlands Delft University of Technology, Delft, The Netherlands

11:30-11:50 | Spatial Unmixing of Pixels for More Accurate Displacement Time Series Obtained With a Small Baseline Strategy: Application on France

Presenting author: Aya Cheaib

Aya Cheaib Marie-Pierre Doin, Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, IRD, Univ. Gustave Eiffel, ISTerre, 38000 Grenoble, France Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, IRD, Univ. Gustave Eiffel, ISTerre, 38000 Grenoble, France

11:50-12:10 | A Novel Algorithm for Identification of Persistent Scatterers

Presenting author: Mario Costantini

Francesco Vecchioli Mario Costantini Federico Minati Massimo Zavagli, B-Open Solutions, Rome, Italy B-Open Solutions, Rome, Italy B-Open Solutions, Rome, Italy B-Open Solutions, Rome, Italy

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12:10-12:30 | Near Real Time Estimation of Unbiased Ground Displacement Time-Series With InSAR Big Data

Presenting author: Scott Staniewicz

Sara Mirzaee Heresh Fattahi Scott Staniewicz, California Institute of Technology, United States of America NASA Jet Propulsion Laboratory, United States of America NASA Jet Propulsion Laboratory, United States of America

Ground motion service (2.03.b)

Chairs: Philippe Bally, ESA, Michele Crosetto, CTTC

14:00 - 15:40

14:00-14:20 | A Comparison of the German and the European Ground Motion Services

Presenting author: Markus Even

Markus Even Malte Westerhaus Hansjörg Kutterer, Karlsruhe Institute of Technology, Germany Karlsruhe Institute of Technology, Germany Karlsruhe Institute of Technology, Germany

14:20-14:40 | European Ground Motion Service Validation

Presenting author: Joan Sala Calero

Joan Sala Calero Amalia Vradi Malte Vöge Daniel Raucoules Marcello de Michelle Joana Esteves Martins Miguel Caro Cuenca Filippo Vechiotti Marian Neagul Lorenzo Solari Joanna Balasis-Levinsen, Sixense Iberia, Barcelona, Spain Sixense Iberia, Barcelona, Spain NGI (Norwegian Geotechnical Institute), Oslo, Norway BRGM (French Geological Survey), Orleans, France BRGM (French Geological Survey), Orleans, France TNO (Netherlands Geological Survey), The Hague, Netherlands TNO (Netherlands Geological Survey), The Hague, Netherlands GBA (Austrian Geological Survey), Vienna, Austria Terrasigna, Bucharest, Romania EEA (European Environment Agency), Copenhagen, Denmark EEA (European Environment Agency), Copenhagen, Denmark

14:40-15:00 | Validation of the Ortho Product of European Ground Motion Service (EGMS) with the Previous InSAR-based Studies: a Case Study in Gävle City, Sweden

Presenting author: Nureldin Ahmed Adam Gido

Nureldin Ahmed Adam Gido Faramarz Nilfouroushan Chrishan Gedara, Lantmäteriet, Sweden Lantmäteriet, Sweden Lantmäteriet, Sweden

15:00-15:20 | The European Ground Motion Service For Cultural Heritage Monitoring

Presenting author: Federica Ferrigno

Daniele Spizzichino Federica Ferrigno Luca Guerrieri Gabriele Leoni Francesco Menniti, ISPRA, Italy ISPRA, Italy ISPRA, Italy ISPRA, Italy

15:20-15:40 | Automatic Ground Deformation Area Extraction From European Ground Motion Service Products

Presenting author: Riccardo Palam

Riccardo Palam María Cuevas-González Anna Barra Qi Gao Saeedeh Shahbazi Oriol Monserrat Michele Crosetto, Centre Tecnologic de Telecomunicacions de Catalunya, Spain Centre Tecnologic de Telecomunicacions de Catalunya, Spain Centre Tecnologic de

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Telecomunicacions de Catalunya, Spain Centre Tecnologic de Telecomunicacions de Catalunya, Spain Centre Tecnologic de Telecomunicacions de Catalunya, Spain Centre Tecnologic de Telecomunicacions de Catalunya, Spain Centre Tecnologic de Telecomunicacions de Catalunya, Spain

Round Table Discussion (RT 2 Day 2)

15:40 - 16:30

Poster Session/Exhibition

Coffee Break

10:40 - 11:10

LUNCH

12:50 - 14:00

Day 3 - 13/09/2023

Auditorium I

Advances in InSAR theory I (3.01.a)

Chairs: Pau Prats-Iraola, German Aerospace Center (DLR), Yngvar Larsen, NORCE

09:00 - 10:40

09:00-09:20 | A Comparative Study of Phase Bias in C-band and L-band InSAR

Presenting author: Jacob Connolly

Jacob Connolly Andrew Hooper Tim Wright Tom Ingleby Stuart King David Bekaert, University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom SatSense, United Kingdom University of Edinburgh, United Kingdom NASA JPL, USA

Programme Agenda

09:20-09:40 | Towards a Universally Applicable Phase Bias Correction for Short-Term Multi-Looked Interferograms: Challenges and Progress

Presenting author: Yasser Maghsoudi

Yasser Maghsoudi Andrew Hooper Tim Wright Milan Lazecky, COMET, School of Earth and Environment, University of Leeds, LS2 9JT, UK COMET, School of Earth and Environment, University of Leeds, LS2 9JT, UK COMET, School of Earth and Environment, University of Leeds, LS2 9JT, UK COMET, School of Earth and Environment, University of Leeds, LS2 9JT, UK

09:40-10:00 | InSAR Closure Phase Time Series for Soil Moisture Measurement

Presenting author: Elizabeth Paige Wig

Elizabeth Paige Wig Roger Michaelides Howard Zebker, Stanford University, United States of America Washington University in St. Louis, United States of America Stanford University, United States of America

10:00-10:20 | Efficient Earth Surface Monitoring with TomoSAR: From PSDS to ComSAR and the Vital Role of Phase Linking Technique

Presenting author: Dinh Ho Tong Minh

Dinh Ho Tong Minh, UMR TETIS, INRAE, France

10:20-10:40 | Modeling Soil Moisture with Cumulated Closure Phase of Interferometric SAR Measurements

Presenting author: Yujie Zheng

Yujie Zheng Heresh Fattahi, California Institute of Technology, United States of America Jet Propulsion Laboratory, California Institute of Technology, United States of America

Displacements and deformations 1 (3.02.a)

Chairs: Mario Costantini, B-Open Solutions, Rachel Holley, CGG Satellite Mapping

11:10 - 12:50

11:10-11:30 | Iron Mining Induced Subsidence Mapping Of Musan, North Korea Derived By Improved Combination Scatterers With Optimized Point Scatterers (ICOPS) For Insar Time-Series Analysis

Presenting author: Muhammad Fulki Fadhillah

Muhammad Fulki Fadhillah Wahyu Luqmanul Hakim Chang-Wook Lee, Division of Science Education, Kangwon National University, Korea, Republic of (South Korea) Division of Science Education, Kangwon National University, Korea, Republic of (South Korea) Division of Science Education, Kangwon National University, Korea, Republic of (South Korea)

11:30-11:50 | InSAR Monitoring In Areas With Rapidly Changing Elevation

Presenting author: Rachel Holley

Rachel Holley Nathan Magnall Edward Sage Narayanee Vummidi Benedict Conway-Jones, CGG Satellite Mapping, United Kingdom CGG Satellite Mapping, United Kingdom CGG Satellite Mapping, United Kingdom CGG Satellite Mapping, United Kingdom CGG Satellite Mapping, United Kingdom

Programme Agenda

11:50-12:10 | InSAR analysis and Corner Reflector Experiments for Infrastructure Stability Monitoring Using Sentinel-1 Imagery

Presenting author: Zahra Sdeghi

Zahra Sdeghi Stephan Hobbs Mushfiqul Alam Michael Seller James Deas Sean Coleman Lucy Kennedy, Spottitt Ltd., Electron Building, Fermi Ave, Harwell, UK School of Aerospace, Transport & Manufacturing, Cranfield University School of Aerospace, Transport & Manufacturing, Cranfield University School of Aerospace, Transport & Manufacturing, Cranfield University Strategy and Innovation, Network Strategy and Operations, Electricity Transmission, National Grid Strategy and Innovation, Network Strategy and Operations, Electricity Transmission, National Grid Spottitt Ltd., Electron Building, Fermi Ave, Harwell, UK

12:10-12:30 | Concurrent Car-Borne Repeat-Pass SAR Interferometry at L-Band and Ku-Band For Mobile Mapping of Ground Motion on Alpine Valley Slopes

Presenting author: Othmar Frey

Othmar Frey Charles Werner Rafael Caduff, Gamma Remote Sensing, Gümligen, Switzerland; ETH Zurich, Zurich, Switzerland Gamma Remote Sensing, Gümligen, Switzerland Gamma Remote Sensing, Gümligen, Switzerland

12:30-12:50 | Extensive Analysis Of The Built-up Environment Deformations Through The Full Resolution P-SBAS DInSAR Processing Of COSMO-SkyMed And SAOCOM-1 Data

Presenting author: Manuela Bonano

Manuela Bonano Sabatino Buonanno Francesco Casu Claudio De Luca Federica Cotugno Marianna Franzese Adele Fusco Michele Manunta Yenni Lorena Belen Roa Pasquale Striano Maria Virelli Muhammad Yasir Giovanni Zeni Ivana Zinno Riccardo Lanari, IREA-CNR, Italy IREA-CNR, Italy IREA-CNR, Italy IREA-CNR, Italy IREA-CNR, Italy; Universit degli Studi di Napoli “Federico II”, Napoli, Italy IREA-CNR, Italy IREA-CNR, Italy IREA-CNR, Italy IREA-CNR, Italy IREA-CNR, Italy Italian Space Agency (ASI), Roma, Italy Universit degli Studi di Napoli “Parthenope”, Napoli, Italy IREA-CNR, Italy IREA-CNR, Italy IREA-CNR, Italy

Displacements and deformations 2 (3.03.a)

Chairs: Deodato Tapete, Italian Space Agency (ASI), John F. Dehls, Geological Survey of Norway

14:00 - 15:40

14:00-14:20 | ICEYE DInSAR and InSAR Time Series for Ground Displacement Mapping

Presenting author: Urs Wegmüller

Urs Wegmüller Rafael Caduff Christophe Magnard Nina Jones Tazio Strozzi, Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland

14:20-14:40 | All Slopes In Iceland Are Moving

Presenting author: Sigurjon Jonsson

Sigurjon Jonsson Yunmeng Cao, King Abdullah University of Science and Technology (KAUST), Saudi Arabia King Abdullah University of Science and Technology (KAUST), Saudi Arabia; Now at GNS Science, Lower Hutt, New Zealand

Programme Agenda

14:40-15:00 | From the European Ground Motion Sercive to the Displacement Gradients: A Tool to Assess the Potential Damage of Structure and Infrastructure

Presenting author: Saeedeh Shahbazi

Saeedeh Shahbazi Anna Barra Michele Crosetto Jose Navarro Maria Cuevas-Gonzalez, Centre Tecnolgic de Telecomunicacions de Catalunya (CTTC), Spain Centre Tecnolgic de Telecomunicacions de Catalunya (CTTC), Spain Centre Tecnolgic de Telecomunicacions de Catalunya (CTTC), Spain Centre Tecnolgic de Telecomunicacions de Catalunya (CTTC), Spain Centre Tecnolgic de Telecomunicacions de Catalunya (CTTC), Spain

15:00-15:20 | Ground Displacement Mapping with L-band Persistent Scatterer Interferometry

Presenting author: Urs Wegmüller

Urs Wegmüller Christophe Magnard Tazio Strozzi Rafael Caduff Nina Jones, Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland Gamma Remote Sensing, Switzerland

15:20-15:40 | Quasi-continental Sentinel-1 InSAR Investigation of Land Subsidence and Aquifer-system Storage Loss in Central Mexico

Presenting author: Francesca Cigna

Francesca Cigna Deodato Tapete, National Research Council, Italy Italian Space Agency, Italy

Earthquake and Tectonics 1 (3.04.a)

Chairs: Ekaterina Tymofyeyeva, NASA Jet Propulsion Laboratory, Tim J Wright, University of Leeds

16:10 - 17:50

16:10-16:30 | The Importance of InSAR Data in Mapping Subduction Zone: The example of the Coupling over the Hikurangi Subduction Zone

Presenting author: Louise Maubant

Louise Maubant William Frank Laura Wallace Charles Williams Ian Hamling Marie-Pierre Doin, Massachusetts Institute of Technology, United States of America Massachusetts Institute of Technology, United States of America GNS Science, New Zealand; Institute for Geophysics, University of Texas, Austin, Texas 78758, USA GNS Science, New Zealand GNS Science, New Zealand Intitut des Sciences de la Terre, Universite Grenoble Alpes

16:30-16:50 | Evidence for Slip Partitioning and Active Faulting Along the Longmu Gozha Co Fault (LGCF) System from Continental-scale, Sentinel-1 InSAR Time-series analysis

Presenting author: Marguerite Mathey

Marguerite Mathey Raphaël Grandin Cécile Lasserre Martine Simoes Marie-Pierre Doin Philippe Durand Flatsim Working Group, Université de Paris, Institut de Physique du Globe de Paris, France, Now at Institut de Radioprotection et Sreté Nucléaire (IRSN), PSE-ENV, SCAN, BERSSIN, Fontenay-aux-Roses, 92262, France Université de Paris, Institut de Physique du Globe de Paris, France Univ Lyon, Univ Lyon 1, ENSL, CNRS, LGL-TPE, F-69622, Villeurbanne, France Université de Paris, Institut de Physique du Globe de Paris, France University Grenoble Alpes, University Savoie Mont Blanc, CNRS, IRD, IFSTTAR, ISTerre, Grenoble, France CNES: Centre National d'Études Spatiales, 75039 Toulouse, France Université de Paris, Institut de Physique du Globe de Paris, France; Univ Lyon, Univ Lyon 1,

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ENSL, CNRS, LGL-TPE, F-69622, Villeurbanne, France; University Grenoble Alpes, University Savoie Mont Blanc, CNRS, IRD, IFSTTAR, ISTerre, Grenoble, France; CNES: Centre National d'Études Spatiales, 75039 Toulouse, France

16:50-17:10 | Thirty Years Of Postseismic Deformation On Continental Normal Faults Measured By Multi-Satellite InSAR Time-Series

Presenting author: Natalie Forrest

Natalie Forrest Tim Craig Tim Wright Laura Gregory Ekbal Hussain Alex Copley, University of Leeds University of Leeds University of Leeds University of Leeds British Geological Survey University of Cambridge

17:10-17:30 | Can we observe North Andean Sliver motion using Sentinel-1 InSAR time-series analysis?

Presenting author: Léo Marconato

Léo Marconato Marie-Pierre Doin Laurence Audin Jean-Mathieu Nocquet Frédérique Rolandonne Paul Jarrin, University Grenoble Alpes, University Savoie Mont Blanc, CNRS, IRD, ISTerre, Grenoble, France University Grenoble Alpes, University Savoie Mont Blanc, CNRS, IRD, ISTerre, Grenoble, France University Grenoble Alpes, University Savoie Mont Blanc, CNRS, IRD, ISTerre, Grenoble, France Université Côte d'Azur, IRD, CNRS, Observatoire de la Côte d'Azur, Géoazur, 06560 Valbonne, France; Université Paris Cité, Institut de Physique du Globe de Paris, Paris, France Sorbonne Université, Institut des Sciences de la Terre Paris, ISTeP, UMR 7193, F-75005 Paris, France Université Côte d'Azur, IRD, CNRS, Observatoire de la Côte d'Azur, Géoazur, 06560 Valbonne, France; Sorbonne Université, Institut des Sciences de la Terre Paris, ISTeP, UMR 7193, F-75005 Paris, France

17:30-17:50 | Strain Accumulation Mapping and Modeling Along the Central-eastern Altyn Tagh Fault (NW Tibet) with Sentinel-1 InSAR and GNSS Data

Presenting author: Dehua Wang

Dehua Wang John Elliott Gang Zheng Tim Wright Andrew Watson, COMET, School of Earth and Environment, University of Leeds, Leeds, UK COMET, School of Earth and Environment, University of Leeds, Leeds, UK COMET, School of Earth and Environment, University of Leeds, Leeds, UK COMET, School of Earth and Environment, University of Leeds, Leeds, UK COMET, School of Earth and Environment, University of Leeds, Leeds, UK

Round Table Discussion (RT 1 Day 3)

17:50 - 18:10

Coffee Break

10:40 - 11:10

Programme Agenda

LUNCH

12:50 - 14:00

Coffee Break

15:40 - 16:10

Lecture 3/Roger Stevens Bld

Volcanoes I (3.02.b)

Chairs: Fabien Albino, ISTerre, Université Grenoble-Alpes, Julia Kubanek, European Space Agency (ESA)

11:10 - 12:50

11:10-11:30 | Ground Deformation in the Western Galápagos: Shallow Unrest and Shared Magma Dynamics

Presenting author: Susanna K. Ebmeier

Susanna K. Ebmeier Eoin Reddin Eleonora Rivalta Marco Bagnardi Scott Baker Andrew F. Bell Patricia Mothes Santiago Aguaiza, School of Earth and Environment, University of Leeds, Leeds, UK School of Earth and Environment, University of Leeds, Leeds, UK Department of Physics and Astronomy, University of Bologna, Bologna, Italy Cryospheric Sciences Laboratory, NASA Goddard Space Flight Center, Greenbelt, MD, USA BOS Technologies LLC, Lafayette, CO, USA School of GeoSciences, University of Edinburgh, Edinburgh, UK Instituto Geofísico, Escuela Politécnica Nacional, Quito, Ecuador Instituto Geofísico, Escuela Politécnica Nacional, Quito, Ecuador

11:30-11:50 | InSAR Reveals Interaction Between an Inflating Magma Chamber and Caldera Ring Faults at Askja Volcano, Iceland

Presenting author: Adriano Nobile

Adriano Nobile Hannes VasyuraBathke Sigurjón Jónsson, KAUST, Saudi Arabia GFZ - Potsdam, Germany KAUST, Saudi Arabia

11:50-12:10 | The ISVOLC Project - Addressing the Effects of Climate Change-induced Ice Retreat on Seismic and Volcanic Activity

Presenting author: Michelle Maree Parks

Michelle Maree Parks Freysteinn Sigmundsson Peter Schmidt Rémi Vachon Elisa Trasatti Fabien Albino Halldór Geirsson Vincent Drouin Benedíkt Gunnar Ófeigsson Finnur Pálsson Gufinna Aalgeirsdóttir Eyjólfur Magnússon Joaquin Belart Andrew Hooper Erik Sturkell John Maclennan Kristín Vogfjör Sigrún Hreinsdóttir Sara Barsotti Björn Oddsson Josefa Sepúlveda Chiara Lanzi Yilin Yang Catherine O´Hara Siqi Li, Icelandic Meteorological Office, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Department of Earth Sciences, Uppsala University, Sweden Department of Earth Sciences, Uppsala University, Sweden Istituto Nazionale di Geofisica e Vulcanologia, Italy Université Grenoble-Alpes, France Nordic Volcanological Center, Institute of Earth Sciences,

Programme Agenda

University of Iceland, Iceland Icelandic Meteorological Office, Iceland Icelandic Meteorological Office, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Icelandic Meteorological Office, Iceland COMET, School of Earth and Environment, University of Leeds, UK Department of Earth Sciences, University of Gothenburg, Sweden Department of Earth Sciences, University of Cambridge, UK Icelandic Meteorological Office, Iceland GNS Science, Lower Hutt, New Zealand Icelandic Meteorological Office, Iceland Icelandic Department of Civil Protection and Emergency Management, Iceland COMET, School of Earth and Environment, University of Leeds, UK Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland

12:10-12:30 | InSAR for Ground Deformation Processes at the Tulu Moye Volcanic Complex, Main Ethiopian Rift

Presenting author: Alessandro La Rosa -

Birhan Abera Kebede Carolina Pagli - Freysteinn Sigmundsson - Derek Keir - Alessandro La Rosa - Snorri Gudbrandsson -, University of Pisa, University of Florence University of Pisa University of Iceland University of Florence, University of Southampton University of Pisa TMGO/Rekjavik Geothermal

Volcanoes II (3.03.b)

Chairs: Paul Randall Lundgren, Jet Propulsion Laboratory, Juliet Biggs, University of Bristol

14:00 - 15:40

14:00-14:20 | 2021-2023 Unrest and Geodetic Observations at Askja Volcano, Iceland

Presenting author: Michelle Maree Parks

Michelle Maree Parks Andrew Hooper Vincent Drouin Benedíkt Gunnar Ófeigsson Freysteinn Sigmundsson Erik Sturkell Ásta Rut Hjartadóttir Ronni Grapenthin Halldór Geirsson Sigrún Hreinsdóttir Hildur María Fririksdóttir Rikke Pedersen Sara Barsotti Bergrún Arna Óladóttir Josefa Sepúlveda Chiara Lanzi Yilin Yang Catherine O´Hara, Icelandic Meteorological Office, Iceland COMET, School of Earth and Environment, University of Leeds, UK Icelandic Meteorological Office, Iceland Icelandic Meteorological Office, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Department of Earth Sciences, University of Gothenburg, Sweden Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Geophysical Institute, University of Alaska Fairbanks, United States Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland GNS Science, Lower Hutt, New Zealand Icelandic Meteorological Office, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Icelandic Meteorological Office, Iceland Icelandic Meteorological Office, Iceland COMET, School of Earth and Environment, University of Leeds, UK Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland Nordic Volcanological Center, Institute of Earth Sciences, University of Iceland, Iceland

14:20-14:40 | What's Next for Mauna Loa Volcano? Stress Changes Due to the 2022 Intrusion and Eruption

Presenting author: Falk Amelung

Programme Agenda

Falk Amelung Bhuvan Varugu, U of Miami, United States of America U of Miami, United States of America

14:40-15:00 | Variable Ground Deformation Rates Since May 2022 at Chiles-Potrerillos Volcanoes, Ecuadorian-Colombia Border

Presenting author: Patricia Ann Mothes

Patricia Ann Mothes Marco A. Yépez Pedro A. Espin Bedón Andrea Córdova Daniel Pacheco Lourdes Narváez Medina Darió F. Arcos Maurizio Battaglia, Escuela Politécnica Nacional, Instituto Geofísico, Quito-Ecuador Escuela Politécnica Nacional, Instituto Geofísico, Quito-Ecuador University of Leeds, School of Earth and Environment, Leeds-United Kingdom Escuela Politécnica Nacional, Instituto Geofísico, Quito-Ecuador Escuela Politécnica Nacional, Instituto Geofísico, Quito-Ecuador Observatorio Vulcanológico y Sismologico, Colombian Geological Survey, Pasto-Colombia Observatorio Vulcanológico y Sismologico, Colombian Geological Survey, Pasto-Colombia Volcano Disaster Assistance Program, U.S. Geological Survey, Moffett Field-California

15:00-15:20 | Simulating Satellite Radar Measurements of Volcanic Eruptions in Preparation for ESA's Harmony Mission.

Presenting author: Odysseas Pappas

Odysseas Pappas Juliet Biggs Pau Prats Andrea Pulella Alin Achim, School of Earth Sciences, University of Bristol, UK.; Visual Information Laboratory, University of Bristol, UK. School of Earth Sciences, University of Bristol, UK. German Aerospace Center (DLR), Microwaves and Radar Institute, DE. German Aerospace Center (DLR), Microwaves and Radar Institute, DE. Visual Information Laboratory, University of Bristol, UK.

15:20-15:40 | Volcano Science and Applications Observation Needs From Future Topography Missions

Presenting author: Paul Lundgren

Paul Lundgren Alberto Roman Mary Grace Bato Brett Carr Hannah Dietterich Raphaël Grandin Tara Shreve Michael Poland Kyle Anderson Francisco Delgado, Jet Propulsion Laboratory, California Institute of Technology, United States of America Jet Propulsion Laboratory, California Institute of Technology, United States of America Jet Propulsion Laboratory, California Institute of Technology, United States of America University of Arizona, United States of America USGS Alaska Volcano Observatory, United States of America Institut de Physique du Globe de Paris, Université de Paris, France Geophysical Institute, University of Alaska, United States of America USGS Yellowstone Volcano Observatory, United States of America USGS California Volcano Observatory, United States of America Universidad de Chile, Chile

Volcanoes III (3.04.b)

Chairs: Susanna Ebmeier, University of Leeds, Adriano Nobile, KAUST

16:10 - 17:50

16:10-16:30 | Deep Learning Approaches To Detecting Volcano Deformation In The Global Sentinel-1 Dataset

Presenting author: Juliet Biggs

Juliet Biggs Pui Anantrasirichai Susanna Ebmeier Scott Watson Fabien Albino Robert Popescu Milan Lazecky Yasser Maghsoudi, University of Bristol, United Kingdom University of Bristol, United Kingdom University of Leeds, United Kingdom University of Leeds,

Programme Agenda

United Kingdom ISTerre, France University of Bristol, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom

16:30-16:50 | Machine Learning for Volcano Deformation: Moving Beyond Detection and Classification to Forecasting

Presenting author: Andy Hooper

Andy Hooper Matthew Gaddes Camila Novoa Lizama Lin Shen Rachel Bilsland Eilish O'Grady Josefa Sepulveda Araya Milan Lazecky Yasser Maghsoudi Richard Rigby Juliet Biggs Susanna Ebmeier David Hogg, COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Leeds, United Kingdom COMET, University of Bristol, United Kingdom COMET, University of Leeds, United Kingdom School of Computing, University of Leeds, United Kingdom

16:50-17:10 | Routine Global Volcano Monitoring Using Sentinel-1 Data and the LiCSAlert Algorithm

Presenting author: Matthew Edward Gaddes

Matthew Edward Gaddes Andrew Hooper Lin Shen, University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom

17:10-17:30 | The Government of Canada's First Operational InSAR Based Volcano Monitoring System

Presenting author: Drew Rotheram-Clarke

Drew Rotheram-Clarke Melanie Kelman Nick Ackerley Yannick Lemoigne Mandip Sond, Geological Survey of Canada, Canada Geological Survey of Canada, Canada Canadian Hazards Information Service Geological Survey of Canada, Canada Canadian Hazards Information Service

Round Table Discussion (RT 2 Day 3)

17:50 - 18:10

Day 4 - 14/09/2023

PLENARY

Advances in InSAR theory II (4.01.a)

Chairs: Ramon Hanssen, Delft University of Technology, Faculty of Civil Engineering and Geosciences,, Howard A Zebker, Stanford University

09:00 - 10:40

Programme Agenda

09:00-09:20 | A Novel Multi-Temporal DInSAR Phase Unwrapping Algorithm Based On Compressive Sensing and Minimum Cost Flow Techniques

Presenting author: Muhammad Yasir

Muhammad Yasir Francesco Casu Claudio De Luca Riccardo Lanari Giovanni Onorato Michele Manunta, Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy; Universit di Napoli "Parthenope", Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy

09:20-09:40 | Fine-Scale Measurement Of Deformation From Removal Of Decorrelated Pixels In InSAR Time Series – A Proposed Data Flow For High-Volume InSAR Systems

Presenting author: Howard A Zebker

Howard A Zebker, Stanford University, United States of America

09:40-10:00 | A Reinterpretation of Temporal InSAR Coherence for Multitemporal SAR and Polarimetric SAR Data Classification

Presenting author: Carlos López-Martínez

Carlos López-Martínez Jun Ni, Universitat Politecnica de Catalunya, Spain; Institut d'Estudis Espacials de Catalunya, Spain Yunnan University, China

10:00-10:20 | A Generic Noise Model for InSAR Time Series Based on Stepwise Error Propagation

Presenting author: Sami Samiei-Esfahany

Sami Samiei-Esfahany Sasan Babaee Masoud Mashhadi Hossainali, School of Surveying and Geospatial Engineering, University of Tehran, Iran Department of Geodesy and Geomatics Engineering, K. N. Toosi University of Technology, Iran Department of Geodesy and Geomatics Engineering, K. N. Toosi University of Technology, Iran

Auditorium I

Earthquake and Tectonics 2 (4.02.a)

Chairs: Andy Hooper, University of Leeds, David Thomas Sandwell, UCSD

11:10 - 12:50

11:10-11:30 | Calibration of Seismogenic Thickness for Estimation of Seismic Moment Accumulation Rate from Strain Rate

Presenting author: Katherine Guns

Katherine Guns David Sandwell Xiaohua Xu Yehuda Bock Bridget Smith-Konter, Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA, USA Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA, USA University of Texas at Austin, Austin, TX, USA; University of Science and Technology of China, Hefei, Anhui 230036, China Scripps

Programme Agenda

Institution of Oceanography, University of California San Diego, La Jolla, CA, USA University of Hawaii at Manoa, Honolulu, HI, USA

11:30-11:50 | Consensus InSAR Time Series and Velocity Model for Southern California

Presenting author: Ekaterina Tymofyeyeva

Ekaterina Tymofyeyeva Michael Floyd Katherine Guns Xiaohua Xu Kathryn Materna Zhen Liu Kang Wang Gareth Funning Eric Fielding Simran Sangha, NASA Jet Propulsion Laboratory, Pasadena, CA, USA Massachusetts Institute of Technology, Cambridge, MA, USA Scripps Institute of Oceanography, University of California San Diego, San Diego, CA, USA University of Texas Austin, Austin, TX, USA Earthquake Science Center, U.S. Geological Survey, Moffett Field, CA, USA NASA Jet Propulsion Laboratory, Pasadena, CA, USA Berkeley Seismology Laboratory, Berkeley, CA, USA University of California Riverside, Riverside, CA, USA NASA Jet Propulsion Laboratory, Pasadena, CA, USA NASA Jet Propulsion Laboratory, Pasadena, CA, USA

11:50-12:10 | Locus And Type Of Synseismic, Secondary, Fault Slip During Large-magnitude Earthquakes

Presenting author: Henriette Sudhaus

Henriette Sudhaus John Begg Vasiliki Mouslopoulou Tilman May, Kiel University, Germany J Begg Geo Ltd, New Zealand Institute of Geodynamics, Athens, Greece Kiel University, Germany

12:10-12:30 | Recovering The Post-seismic Slip Of The 2019 Mw 7.1 Ridgecrest Earthquake Using InSAR, Along-track Burst Overlap Interferometry And GNSS Measurements

Presenting author: Yohai Magen

Yohai Magen Gidon Baer Asaf Inbal Alon Ziv Ran N. Nof, Department of Geophysics, Tel-Aviv University, Tel Aviv, Israel; Geological Survey of Israel, Jerusalem, Israel Geological Survey of Israel, Jerusalem, Israel Department of Geophysics, Tel-Aviv University, Tel Aviv, Israel Department of Geophysics, Tel-Aviv University, Tel Aviv, Israel Geological Survey of Israel, Jerusalem, Israel

12:30-12:50 | Automatic Seismic Source Model Retrieval By Exploiting The Sentinel-1 DInSAR Co-seismic Displacement Maps Available Through The EPOSAR Service

Presenting author: Fernando Monterroso

Fernando Monterroso Simone Atzori Andrea Antonioli Claudio De Luca Nikos Svigkas Michele Manunta Matteo Quintiliani Riccardo Lanari Francesco Casu, IREA-CNR, Naples, Italy INGV, Rome, Italy INGV, Rome, Italy IREA-CNR, Naples, Italy INGV, Rome, Italy IREA-CNR, Naples, Italy INGV, Rome, Italy IREA-CNR, Naples, Italy IREA-CNR, Milan, Italy

Earthquake and Tectonics 3 (4.03.a)

Chairs: Qi Ou, University of Leeds, Sang-Ho Yun, Earth Observatory of Singapore

14:00 - 16:00

14:00-14:20 | Surface Displacements throughout the Earthquake Cycle over Haiti's Southern Peninsula

Presenting author: Bryan Raimbault

Bryan Raimbault Romain Jolivet Eric Calais Steeve Symithe, Laboratoire de Géologie, Département de Géosciences, Ecole normale supérieure, CNRS UMR 8538, PSL University; Paris, France Laboratoire de Géologie, Département de Géosciences, Ecole normale

Programme Agenda

supérieure, CNRS UMR 8538, PSL University; Paris, France; Institut Universitaire de France; Paris, France Laboratoire de Géologie, Département de Géosciences, Ecole normale supérieure, CNRS UMR 8538, PSL University; Paris, France; Institut Universitaire de France; Paris, France; Université Côte d'Azur, Institut de Recherche pour le Développement, CNRS, Observatoire de la Côte d'Azur, Géoazur; Valbonne, France.; CARIBACT Joint Research Laboratory, Université d'Etat d'Hati, Université Côte d'Azur, Institut de Recherche pour le Développement; Port-au-Prince, Hati. CARIBACT Joint Research Laboratory, Université d'Etat d'Hati, Université Côte d'Azur, Institut de Recherche pour le Développement; Port-au-Prince, Hati.; URGéo, Faculté des Sciences, Université d'Etat d'Hati; Port-au-Prince, Hati.

14:20-14:40 | Large-scale velocity mapping over the Tianshan Mountains

Presenting author: Qi Ou

Qi Ou John Elliott Yasser Maghsoudi Mehrani Milan Lazecky Tim Wright, University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom University of Leeds, United Kingdom

14:40-15:00 | Optimally Balancing InSAR Observations for the Damaging November 2022 Mw 5.6 earthquake in West Java, Indonesia

Presenting author: Sang-Ho Yun

Sang-Ho Yun Rino Salman Shengji Wei Susilo Susilo Lujia Feng Dannie Hidayat Yukuan Chen Hendra Gunawan Christina Widiwijayanti Sukahar Saputra Lin Way Karen Lythgoe Iwan Hermawan Benoit Taisne Eleanor Ainscoe Shi Tong Chin, Earth Observatory of Singapore, Nanyang Technological University, Singapore; Asian School of the Environment, Nanyang Technological University, Singapore; School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore; Asian School of the Environment, Nanyang Technological University, Singapore National Agency for Research and Innovation (BRIN), Indonesia Earth Observatory of Singapore, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore Center for Volcanology and Geological Hazard Mitigation (CVGHM), Indonesia Earth Observatory of Singapore, Nanyang Technological University, Singapore Center for Geological Survey (CGS), Indonesia Earth Observatory of Singapore, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore; Asian School of the Environment, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore Earth Observatory of Singapore, Nanyang Technological University, Singapore

15:00-15:20 | From Türkiye to China: tectonic strains and velocities in the Alpine-Himalayan Belt from Sentinel-1 InSAR and GNSS

Presenting author: Tim J Wright

Tim J Wright Yasser Maghsoudi John Elliott Jin Fang Andrew Hooper Greg Houseman Milan Lazecky Qi Ou Barry Parsons Chris Rollins Lin Shen Andrew Watson Scott Watson Jonathan Weiss Gang Zheng, COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, Department of Earth Sciences, University of Oxford, United Kingdom GNS, New Zealand COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom COMET, School of Earth and Environment, University of Leeds, United Kingdom NOAA/NWS/Pacific Tsunami

Programme Agenda

Warning Center, Hawaii, United States of America COMET, School of Earth and Environment, University of Leeds, United Kingdom

15:20-15:40 | Strain Rates in the Anatolia-Caucasus Region from Sentinel-I InSAR and GNSS, and Quantitative Comparison with Earthquake Catalogues

Presenting author: Chris Rollins

Chris Rollins Tim Wright Yasser Maghsoudi Qi Ou Milan Lazecky Jonathan Weiss, GNS Science, New Zealand COMET, University of Leeds, UK COMET, University of Leeds, UK COMET, University of Leeds, UK COMET, University of Leeds, UK NOAA, Honolulu, Hawaii

Round Table Discussion (RT 1 Day 4)

16:00 - 16:50

Auditorium II

Missions 1 (4.02.b)

Chairs: Irena Hajnsek, ETH Zurich / DLR, Björn Rommen, ESA/ESTEC

11:10 - 12:50

11:10-11:30 | Exploitation of 2-Look ScanSAR with ROSE-L for Along-Track Surface Deformation Measurements

Presenting author: Simon Trumpf

David Tomsu Simon Trumpf Pau Prats-Iraola, German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany

11:30-11:50 | Co-Fliers Mission Concepts for NISAR and ROSE-L to Address Emerging Measurements Needs in Earth Science

Presenting author: Marco Lavalle

Marco Lavalle Paul Rosen Malcolm Davidson Stephen Horst Katia Tymofyeyeva Shadi Oveisgharan Ilgin Seker Eric Loria Shashank Joshil Razi Ahmed, NASA/JPL, United States of America NASA/JPL, United States of America European Space Agency NASA/JPL, United States of America NASA/JPL, United States of America NASA/JPL, United States of America NASA/JPL, United States of America NASA/JPL, United States of America NASA/JPL, United States of America NASA/JPL, United States of America

11:50-12:10 | Understanding the Impact of Short-Time Changes in Along-Track InSAR Ocean Signatures using TanDEM-X Data

Presenting author: Dominik Richter

Dominik Richter Marc Rodriguez-Cassola, German Aerospace Center, Germany German Aerospace Center, Germany

Programme Agenda

12:10-12:30 | Enabling 3D Deformation Monitoring with the CHORUS SAR Constellation

Presenting author: Fernando Greene Gondi

Fernando Greene Gondi Jayson Eppler Ron Caves, MDA, Canada MDA, Canada MDA, Canada

Missions 2 (4.03.b)

Chairs: Marco Lavalle, NASA/JPL, Nestor Yague-Martinez, Capella Space

14:00 - 16:00

14:00-14:20 | Capella Space Repeat-Pass InSAR Demonstration: current status

Presenting author: Nestor Yague-Martinez

Nestor Yague-Martinez Davide Castelletti Martin Kamme Victor Cazcarra Bes Scott Baker Shaunak De Gordon Farquharson Craig Stringham, Capella Space, United States of America Capella Space, United States of America Capella Space, United States of America Capella Space, United States of America Capella Space, United States of America Capella Space, United States of America Capella Space, United States of America Capella Space, United States of America

14:20-14:40 | A First Glimpse on the Interferometry and Multi-Temporal Capability of the Chinese GaoFen-3A/B/C Constellation

Presenting author: Yuxiao Qin

Yuxiao Qin Mengge Wang, Northwestern Polytechnical University, China, People's Republic of Northwestern Polytechnical University, China, People's Republic of

14:40-15:00 | The Ka-Band Interferometric RADAR Mission Proposal For Cold Environments

Presenting author: Irena Hajnsek

Irena Hajnsek Gufinna Th Aalgeirsdóttir Marc Rodriguez Cassola Georg Fischer Roland Gierlich Guido Grosse Christian Haas Sigurd Huber Katarina Jesswein Andreas Kääb Jung-hyo Kim Gerhard Krieger Karen Mak Alexander Mössinger Benoit Montpetit Alberto Moreira Ralf Münzenmayer Tobias Otto Kostas Papathanassiou Felipe Queiroz de Almeida Helmut Rott Tazio Strozzi Volker Tesmer Michelangelo Villano Sebastian Westermann Marwan Younis Mariantonietta Zonno, ETH Zurich / DLR, Germany University of Iceland, Faculty of Earth Science, IS ETH Zurich / DLR, Germany ETH Zurich / DLR, Germany Airbus Alfred-Wegner-Institute Alfred-Wegner-Institute ETH Zurich / DLR, Germany OHB University of Oslo, Norway Airbus ETH Zurich / DLR, Germany Airbus Airbus National Wildlife Research Center, Environment and Climate Change Canada ETH Zurich / DLR, Germany Airbus OHB ETH Zurich / DLR, Germany ETH Zurich / DLR, Germany ENVEO, AT Gamma Remote Sensing, Switzerland OHB ETH Zurich / DLR, Germany University of Oslo, Norway ETH Zurich / DLR, Germany ETH Zurich / DLR, Germany

15:00-15:20 | Quality Assessment of ICEYE and SAOCOM InSAR Data Within ESA's EDAP+ Activity

Presenting author: Juval Cohen

Juval Cohen Jorge Jorge Ruiz Andrea Recchia Laura Fioretti Amy Beaton Clément Albinet, Finnish Meteorological Institute Finnish Meteorological Institute Aresys s.r.l. Aresys s.r.l. Telespazio UK ESA-ESRIN

Programme Agenda

15:20-15:40 | Synspective's Small X-Band SAR Satellite (StriX) Constellation and its First InSAR Results

Presenting author: Yu Morishita

Yu Morishita Shuji Fujimaru Gerald Baier Mauro Mariotti D'Alessandro Krzysztof Orzel Mitsutoshi Hase Tomoyuki Imaizumi, Synspective, Japan Synspective, Japan Synspective, Japan Synspective, Japan Synspective, Japan Synspective, Japan Synspective, Japan

Round Table Discussion (RT 2 Day 4)

16:00 - 16:50

Poster Session/Exhibition

Lecture 3/Roger Stevens Bld

The 6 February 2023 KahramanmaraÅŸ, Türkiye earthquake sequence (4.01.c)

Chairs: Henriette Sudhaus, Kiel University, Mustapha Meghraoui, University of Strasbourg

09:20 - 10:40

09:20-09:40 | Earthquake Cycle Deformation along the East Anatolian Fault: Implications from 2023 Earthquake Sequence Rupture, Fault Slip Behavior and Historical Seismicity

Presenting author: Mustapha Meghraoui

Ziyadin Cakir Mustapha Meghraoui Semih Ergintav Ugur Dogan, Istanbul Technical University, Maaden Facultesi, Istanbul, Turkey ITES, CNRS-UMR 7063, University of Strasbourg, France Kandilli Observatory, Dept. of Geodesy, Istanbul, Turkey Yildiz Technical University, Faculty Of Civil Engineering, Istanbul, Turkey

09:40-10:00 | The French CIEST Initiative: Results From The 2023 Turkey-Syria Earthquakes Sequence

Presenting author: Marcello de Michele

Marcello de Michele Claude Boniface Yann Klinger Romain Jolivet Floriane Provost Jean-Philippe Malet Pascal Lacroix Emilie Bronner, BRGM French Geological Survey, France Centre National d'Etudes Spatiales (CNES), 18 Avenue Edouard Belin, F-31401 Toulouse, France Institut de Physique du Globe de Paris, Equipe de Tectonique et Mecanique de la Lithosphere, UMR 7254 CNRS, 1 rue Jussieu, Paris, France Ecole Normale Superieure de Paris, Laboratoire de Géologie, 24 Rue Lhomond, Paris, France 5 Institut Terre et Environnement de Strasbourg, ITES / CNRS UMR 7063, Strasbourg; 6 Ecole et Observatoire des Sciences de la Terre, EOST / CNRS UAR 830, Strasbourg 5 Institut Terre et Environnement de Strasbourg, ITES / CNRS UMR 7063, Strasbourg; 6 Ecole et Observatoire des Sciences de la Terre, EOST / CNRS UAR 830, Strasbourg ISTERRE, University Grenoble Alpes, University Savoie Mont Blanc, CNRS, IRD, UGE, Grenoble, France, Centre National d'Etudes Spatiales (CNES), 18 Avenue Edouard Belin, F-31401 Toulouse, France

Programme Agenda

10:00-10:20 | Fault-zone Damage and Fault Slip of the 2023 Kahramanmaraº Earthquakes Estimated from 3D Displacement Derivations of Satellite Radar Images

Presenting author: Jihong Liu

Jihong Liu Xing Li Adriano Nobile Yann Klinger Sigurjón Jónsson, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia Université de Paris Cité, Institut de Physique du Globe de Paris, CNRS, Paris, France King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia

10:20-10:40 | Coseismic and Early PostSeismic Deformation Associated with the 6 February 2023 Southeast Turkey Earthquake Doublet

Presenting author: Yohai Magen

Yohai Magen Gidon Baer Asaf Inbal Alon Ziv Yariv Hamiel Oksana Piatibratova Ran N. Nof Gökhan Gürbüz, Department of Geophysics, Tel-Aviv University, Tel Aviv, Israel; Geological Survey of Israel, Jerusalem, Israel Geological Survey of Israel, Jerusalem, Israel Department of Geophysics, Tel-Aviv University, Tel Aviv, Israel Department of Geophysics, Tel-Aviv University, Tel Aviv, Israel Geological Survey of Israel, Jerusalem, Israel Geological Survey of Israel, Jerusalem, Israel Geological Survey of Israel, Jerusalem, Israel Department of Aerospace Engineering, Faculty of Engineering, Zonguldak Bulent Ecevit University, 67100, Zonguldak, Turkey

Thematic mapping (4.02.c)

Chairs: Carlos López-Martínez, Universitat Politecnica de Catalunya, Alberto Refice, Consiglio Nazionale delle Ricerche

11:10 - 12:50

11:10-11:30 | The TanDEM-X DEM Change Maps Product And Their Application

Presenting author: Barbara Schweisshelm

Marie Lachaise Barbara Schweisshelm Carolina Gonzalez Paola Rizzoli Manfred Zink, German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany German Aerospace Center (DLR), Germany

11:30-11:50 | Combination of Multi-Track Sentinel-1 Multitemporal InSAR Coherence and Sentinel-2 data in Land Cover and Vegetation Mapping: the SInCohMap project.

Presenting author: Juan M. Lopez-Sanchez

Juan M. Lopez-Sanchez Mario Busquier Alexander Jacob Michele Claus Basil Tufail Carlos Lopez-Martinez Marc Herrera Luis Yam Azadeh Faridi Eduard Makhoul Oleg Antropov Marcus Engdahl, IUII, University of Alicante, Spain IUII, University of Alicante, Spain EURAC Research, Italy EURAC Research, Italy EURAC Research, Italy TSC Dept., Barcelona Tech (UPC), Spain TSC Dept., Barcelona Tech (UPC), Spain DARES Technology, Spain DARES Technology, Spain DARES Technology, Spain VTT, Finland ESA-ESRIN, Italy

11:50-12:10 | Improving the Versatility of Post-Disaster Damage Mapping Algorithms by Combining InSAR Coherence and SAR Intensity Correlation

Presenting author: Eleanor Ainscoe

Eleanor Ainscoe Jungkyo Jung Sang-Ho Yun, Earth Observatory of Singapore, Nanyang Technological University, Singapore Jet

Programme Agenda

Propulsion Laboratory, California Institute of Technology, USA Earth Observatory of Singapore, Nanyang Technological University, Singapore; Asian School of the Environment, Nanyang Technological University, Singapore ; School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore

12:10-12:30 | Innovation in InSAR Processing and Analysis of C-, X- and L-Band SAR Data for Natural Hazards, Agriculture, Marine and Coastal Applications in the framework of ASI's "Multi-Mission and Multi-Frequency SAR" Program

Presenting author: Deodato Tapete

Deodato Tapete Antonio Montuori Fabrizio Lenti Patrizia Sacco Maria Virelli Simona Zoffoli Alessandro Coletta, Italian Space Agency (ASI), Italy Italian Space Agency (ASI), Italy Italian Space Agency (ASI), Italy Italian Space Agency (ASI), Italy Italian Space Agency (ASI), Italy Italian Space Agency (ASI), Italy

12:30-12:50 | InSAR Coherence Analysis: A Proxy for Change Detection of Pavements

Presenting author: Tesfaye Temtime Tessema

Tesfaye Temtime Tessema Valerio Gagliardi Andrea Benedetto Fabio Tosti, School of Computing and Engineering, University of West London, St Mary's Road, Ealing, London W5 5RF, UK; The Faringdon Research Centre for Non-Destructive Testing and Remote Sensing, University of West London, St Mary's Road, Ealing, London W5 5RF, UK Department of Civil, Computer Science and Aeronautical Engineering, Roma Tre University, Via Vito Volterra 62, 00146, Rome, Italy Department of Civil, Computer Science and Aeronautical Engineering, Roma Tre University, Via Vito Volterra 62, 00146, Rome, Italy School of Computing and Engineering, University of West London, St Mary's Road, Ealing, London W5 5RF, UK; The Faringdon Research Centre for Non-Destructive Testing and Remote Sensing, University of West London, St Mary's Road, Ealing, London W5 5RF, UK

Round Table Discussion (RT 3 Day 4)

From 14:00 to 14:40

14:00 - 16:00

Coffee Break

10:40 - 11:10

LUNCH

12:50 - 14:00

Programme Agenda

Day 5 - 15/09/2023

PLENARY

Session Summaries (5.02.a)

11:30 - 13:30

Closing

13:30 - 13:40

Auditorium I

C-and L-band synergies: ESA-JAXA cooperation and beyond (5.01.a)

Chairs: Julia Kubanek, European Space Agency (ESA), Takeo Tadono, JAXA

09:00 - 10:40

| On the P-SBAS Processing Chain New Developments For The Generation Of SAOCOM-1 Advanced DInSAR Products

Presenting author: Claudio De Luca

Claudio De Luca Yenni Lorena Belen Roa Manuela Bonano Francesco Casu Leonardo Euillades Pablo Euillades Marianna Franzese Michele Manunta Yasir Muhammad Giovanni Onorato Pasquale Striano Ivana Zinno Riccardo Lanari, Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Conicet, Instituto CEDIAC, Facultad de Ingeniera, Universidad Nac de Cuyo, Mendoza, Argentina Conicet, Instituto CEDIAC, Facultad de Ingeniera, Universidad Nac de Cuyo, Mendoza, Argentina Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy Istituto per il Rilevamento Elettromagnetico dell'Ambiente (IREA), CNR, Napoli, Italy

09:00-09:20 | Characteristics of L-and C-Band A-DInSAR datasets in the Saar Mining District, Germany

Presenting author: A. C. Kalia

A. C. Kalia V. Spreckels T. Lege, Remote Sensing Section, Federal Institute for Geosciences and Natural Resources (BGR), Hannover,

Programme Agenda

Germany RAG K-SG -Post Mining -Geodata -Remote Sensing, RAG Aktiengesellschaft, Essen, Germany Remote Sensing Section, Federal Institute for Geosciences and Natural Resources (BGR), Hannover, Germany

09:20-09:40 | Soil Moisture Derived from InSAR: Experiments at C-band and Contributions from L-band

Presenting author: Francesco De Zan

Francesco De Zan Luca Brocca Paolo Filippucci Christian Massari Jacopo Dari, delta phi remote sensing GmbH, Germany Research Institute for Geo-Hydrological Protection, National Research Council, Perugia, Italy Research Institute for Geo-Hydrological Protection, National Research Council, Perugia, Italy Department of Civil and Environmental Engineering, University of Perugia, Perugia, Italy Research Institute for Geo-Hydrological Protection, National Research Council, Perugia, Italy; Department of Civil and Environmental Engineering, University of Perugia, Perugia, Italy

09:40-10:00 | Status of ALOS-2 Mission Operation and Cal/Val Plan of ALOS-4

Presenting author: Takeo Tadono

Takeo Tadono Takeshi Motohka Masato Ohki Shinichi Sobue, Japan Aerospace Exploration Agency Japan Aerospace Exploration Agency Japan Aerospace Exploration Agency Japan Aerospace Exploration Agency

10:00-10:20 | A Case Study of ALOS-2 Emergency Disaster Prevention for Slope Failure in Sakae-mura, Simominochi-gun, Nagano Prefecture, Japan

Presenting author: Ryosuke Inabe

Ryosuke Inabe Ryoichi Furuta Yoshikazu Shimizu Asako Inanaga Kai Kubo Takanori Suetani Ryoko Iyadomi, Remote Sensing Technology Center of Japan Remote Sensing Technology Center of Japan Remote Sensing Technology Center of Japan Remote Sensing Technology Center of Japan Remote Sensing Technology Center of Japan Japan Aerospace Exploration Agency Japan Aerospace Exploration Agency

Round Table Discussion (RT 1 Day 5)

10:40 - 11:00

Auditorium II

AI and Machine Learning (5.01.b)

Chairs: Michele Martone, German Aerospace Center

09:00 - 10:40

09:00-09:20 | Monitoring and Interpreting Deformation along Linear Infrastructure Using Deep Clustering of MT-InSAR Analyses

Presenting author: Ru Wang

Ru Wang Andy Hooper Matthew Gaddes Mingsheng Liao, State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, Wuhan, China; COMET, School of Earth and Environment, University of Leeds, Leeds, UK COMET,

Programme Agenda

School of Earth and Environment, University of Leeds, Leeds, UK COMET, School of Earth and Environment, University of Leeds, Leeds, UK State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, Wuhan, China

09:20-09:40 | Learning Displacement Signals Directly from the Wrapped Interferograms Using Sentinel-1 and Artificial Intelligence

Presenting author: Lama Moualla

Lama Moualla Alessio Rucci Giampiero Naletto Nantheera Anantrasirichai, Giuseppe Colombo University Center for Space Studies and Activities - CISAS, University of Padova, Italy TRE-ALTAMIRA s.r.l., Milano, Italy Department of Physics and Astronomy "Galileo Galilei" - DFA, Padova University, Italy Visual Information Laboratory, University of Bristol, UK

09:40-10:00 | Deep Transformers Machine Learning Method To Improve Spatial Coverage Of InSAR Velocity Maps

Presenting author: Carolina Pagli

Diana Orlandi Federico A. Galatolo Mario G. C. A. Cimino Alessandro La Rosa Carolina Pagli Nicola Perilli, Dept. of Information Engineering, University of Pisa Dept. of Information Engineering, University of Pisa Dept. of Information Engineering, University of Pisa Dept. of Earth Science, University of Pisa Dept. of Earth Science, University of Pisa Dept. of Civil Engineering, University of Pisa

10:00-10:20 | Exploiting Artificial Intelligence for Performance-Optimized Raw Data Quantization in InSAR Systems

Presenting author: Michele Martone

Michele Martone Nicola Gollin Paola Rizzoli Gerhard Krieger, Microwaves and Radar Institute, German Aerospace Center (DLR), Wessling, Germany Microwaves and Radar Institute, German Aerospace Center (DLR), Wessling, Germany Microwaves and Radar Institute, German Aerospace Center (DLR), Wessling, Germany Microwaves and Radar Institute, German Aerospace Center (DLR), Wessling, Germany

10:20-10:40 | A Deep Learning Framework for Regularly Monitoring the Amazon Forest with Sentinel-1 InSAR data: Seasonal Challenges and Insights

Presenting author: Ricardo Dal Molin Jr.

Ricardo Dal Molin Jr. Paola Rizzoli Laetitia Thirion-Lefevre Régis Guinvarc'h, Microwaves and Radar Institute, German Aerospace Center (DLR), 82234 Wessling, Germany; SONDRA, CentraleSupélec, Université Paris-Saclay, 91190 Gif-sur-Yvet, France Microwaves and Radar Institute, German Aerospace Center (DLR), 82234 Wessling, Germany SONDRA, CentraleSupélec, Université Paris-Saclay, 91190 Gif-sur-Yvet, France SONDRA, CentraleSupélec, Université Paris-Saclay, 91190 Gif-sur-Yvet, France

Round Table Discussion (RT 2 Day 5)

10:40 - 11:00

Lecture 3/Roger Stevens Bld

Programme Agenda

Landslides (5.01.c)

Chairs: Jose Manuel Delgado Blasco, RHEA Group, Maya Ilieva, UPWr

09:00 - 10:40

09:00-09:20 | A Multi-sensor And Multi-variable Satellite Observation Approach For Investigating The Reactivation and Failure Of An Old Landslide In North Central Iran Following Reservoir Impoundment

Presenting author: Magdalena Vassileva

Magdalena Vassileva Mahdi Motagh Sigrid Roessner Bahman Akbari Zhuge Xia, GFZ German Research Centre for Geosciences, Germany; Leibniz University Hannover, Institute of Photogrammetry and GeoInformation, Germany GFZ German Research Centre for Geosciences, Germany; Leibniz University Hannover, Institute of Photogrammetry and GeoInformation, Germany GFZ German Research Centre for Geosciences, Germany Natural Resources and Watershed Management Organization of the I.R of Iran, Iran; Kharazmi University, Faculty of Earth Sciences, Iran GFZ German Research Centre for Geosciences, Germany

09:20-09:40 | Exploring the Potential of ICEYE Imagery for Operational Landslide Mapping & Monitoring

Presenting author: John F. Dehls

John F. Dehls Yngvar Larsen Lene Kristensen Marie Bredal Gökhan Aslan Tom Rune Lauknes Petar Marinkovic, Geological Survey of Norway, Norway NORCE, Norway Norwegian Water and Energy Directorate, Norway Geological Survey of Norway, Norway Geological Survey of Norway, Norway NORCE, Norway PPO.labs, Netherlands

09:40-10:00 | Applications of Sentinel-1 Amplitude and Coherence Time Series to Rapid Landslides Triggered During Long Rainfall Events.

Presenting author: Katy Aline Burrows

Katy Aline Burrows Odin Marc Dominique Remy, ESA ESRIN, Italy; Géosciences Environnement Toulouse (GET), UMR 5563, CNRS/IRD/CNES/UPS, Observatoire Midi-Pyrénées, Géosciences Environnement Toulouse (GET), UMR 5563, CNRS/IRD/CNES/UPS, Observatoire Midi-Pyrénées, Géosciences Environnement Toulouse (GET), UMR 5563, CNRS/IRD/CNES/UPS, Observatoire Midi-Pyrénées,

10:00-10:20 | Constraining Unstable Slope Failure Predictions Using Satellite InSAR Time-Series Analysis

Presenting author: Dylan Christian Hickson

Dylan Christian Hickson Shinya Sato Rebecca Hudson Jin Baek Melissa Hernandez Mary Anne McParland Roger Morin, MDA, 57 Auriga Drive, Nepean, Ontario, Canada K2E 8B2 MDA, 57 Auriga Drive, Nepean, Ontario, Canada K2E 8B2 MDA, 57 Auriga Drive, Nepean, Ontario, Canada K2E 8B2 MDA, 57 Auriga Drive, Nepean, Ontario, Canada K2E 8B2 MDA, 57 Auriga Drive, Nepean, Ontario, Canada K2E 8B2 MDA, 57 Auriga Drive, Nepean, Ontario, Canada K2E 8B2 MDA, 13800 Commerce Parkway, Richmond, British Columbia, Canada V6V 2J3

Programme Agenda

Round Table Discussion (RT 3 Day 5)

10:40 - 11:00

Coffee Break

11:00 - 11:30