Ministry of Science and Higher Education
Republic of Poland

JAGIELLONIAN UNIVERSITY
IN KRAKÓW

EUROPEAN SPACE AGENCY

15 - 19 June 2026 | Auditorium Maximum of the Jagiellonian University, Kraków, Poland

FRINGE 2026

Day 1 – Monday, 15/June/2026

Advances in Theory and Methodology I

Chair: **Ramon Hanssen**, Delft University of Technology (TU Delft)
Chair: **Giovanni Nico**, Consiglio Nazionale delle Ricerche

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2:30pm - 4:10pm

2:30pm - 2:50pm
Oral_20

Instantaneous State InSAR: A New Framework for Near-Real-Time Displacement Estimation and Evaluation

Ramon Hanssen, Yuqing Wang
Delft University of Technology (TU Delft), the Netherlands

2:50pm - 3:10pm
Oral_20

Phenomenological Comparison of NISAR and Sentinel-1 L-band and C-band InSAR Time Series

Howard Zebker[1], Paul Rosen[2]
1: Stanford University, United States of America; 2: NASA Jet Propulsion Laboratory United States of America

3:10pm - 3:30pm
Oral_20

Extending TOPS Burst Overlap Coverage using custom SAR focusing

Yngvar Larsen[1], Andy Hooper[2], Tom Grydeland[1], Jelte van Oostveen[1], Muhammet Nergizci[2], Milan Lazecky[2], Tim Wright[2]
1: NORCE, Norway; 2: University of Leeds, United Kingdom

3:30pm - 3:50pm
Oral_20

Effective PolInSAR coherence optimization for deformation monitoring using compact polarimetry

Dylan Hickson, Nikeet Pandit, Jin Baek
MDA Space, 13800 Commerce Parkway, Richmond, British Columbia, Canada V6V 2J3

3:50pm - 4:10pm
Oral_20

InSAR analysis using both co- and cross-polarized data at Death Valley, California from 2017-2025

Olivia Paschall, Rowena Lohman
Cornell University, United States of America

4:10pm - 4:40pm **Coffee Break**

Advances in Theory and Methodology II

Chair: Yngvar Larsen, NORCE

Chair: Howard Zebker, Stanford University

4:40pm - 6:20pm

4:40pm - 5:00pm
Oral_20

Exploiting Zero Baseline Interferometric Coherence for Biomass Retrieval

Wenyu Yang[1], Hossein Aghababaei[2], Erkki Tomppo[3], Sergio Vitale[1], Giampaolo Ferraioli[1], Jaan Praks[4]
1: University of Naples Parthenope, Italy; 2: University of Twente, The Netherlands; 3: University of Helsinki, Finland; 4: Aalto University, Finland

5:00pm - 5:20pm
Oral_20

Coherent azimuth ambiguity removal for ROSE-L two-look ScanSAR along-track deformation measurements

Simon Trumpf, Douglas Kotsubo, Dominik Richter, Pau Prats-Iraola
German Aerospace Center (DLR), Germany

5:20pm - 5:40pm
Oral_20

2Much! Reducing phase ambiguities by combining DL-despeckled half-band SAR interferograms

Florent Michenot[1], Béatrice Pinel-Puysségur[1], Victor Gaya[2], Loïc Denis[3], Florence Tupin[4]
1: CEA, DAM, DIF, F-91297 Arpajon, France; 2: Dept. of Electrical and Computer Engineering, National University of Singapore, Singapore; 3: UJM-Saint-Etienne, CNRS, Institut d'Optique Graduate School, Laboratoire Hubert Curien UMR 5516, F-42023 Saint-Etienne, France; 4: LTCI, Télécom Paris, Institut Polytechnique de Paris, Palaiseau, France

5:40pm - 6:00pm
Oral_20

Spatial Regularization with Plug-and-Play ADMM applied to an Interferometric Phase Linking Framework

Elena Grosso[1,2], Frédéric Brigui[1], Guillaume Ginolhac[3], Arnaud Breloy[2]
1: DEMR, Office national d'études et de recherches aérospatiales (ONERA); 2: CEDRIC, Conservatoire National des Arts et Métiers; 3: LISTIC, Université Savoie Mont Blanc (USMB)

6:00pm - 6:20pm
Oral_20

Opportunities in merging multi-Mission InSAR measurements

Alessandro Parizzi, Anton Filatov, Roberto Montalti, Alfio Fumagalli, Alessio Rucci
TRE-Altamira, Italy

6:20pm - 6:40pm
Round Table - Advances in Theory and Methodology
Location: **Aula Duza 1 and 2 in plenary**

6:40pm - 8:00pm
Welcome Cocktail - Ice breaker
Location: **Exhibition Room**

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FRINGE 2026

Day 2 - Tuesday, 16/June/2026

Duza 1

Future ESA SAR Missions

Chair: Cristian Rossi, ESA
Chair: Julia Kubanek, ESA

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9:00am - 10:20am	**9:00am - 9:20am** *Oral_20* **ROSE-L** **Malcolm Davidson**, Julia Kubanek ESA, Netherlands, The **9:20am - 9:40am** *Oral_20* **Sentinel-1 NG** **Julia Kubanek** ESA, Netherlands, The **9:40am - 10:00am** *Oral_20* **Harmony** **Paco Lopez Dekker** TU Delft, Netherlands, The **10:00am - 10:20am** *Oral_20* **Hydroterra+** **Cristian Rossi** ESA, Netherlands, The
10:20am - 10:40am	**Round Table - Future ESA SAR Missions** Location: **Aula Duza 1**
10:40am - 11:10am	**Coffee Break**

11:10am - 12:50pm

11:10am - 11:30am

Oral_20

Inverting closure phase problems with multiple-reference SAR interferometry

Francesco De Zan

delta phi remote sensing, Germany

11:30am - 11:50am

Oral_20

Tracking subsidence in agricultural regions with InSAR: the issue of intermittent coherence and systematic closure phase

Lorette Drique[1,2], Manon Dalaison[1], Béatrice Pinel-Puysségur[2], Nobuaki Fuji[1,3], Sylvain Ferrant[4], Michael Foumelis[5]

1: Université Paris Cité, Institut de physique du globe de Paris, France; 2: CEA, DAM, DIF, F-91297 Arpajon, France; 3: Institut universitaire de France, Paris, France; 4: CESBIO, Université de Toulouse, CNES/CNRS/INRAE/IRD/UT3, Toulouse, France; 5: School of Geology, Aristotle University Thessaloniki, Thessaloniki, Greece

11:50am - 12:10pm

Oral_20

EXPLORATION OF FULLY POLARIMETRIC BIOMASS DATA FOR SOIL MOISTURE RETRIEVAL

Irena Hajnsek[1,2], Henri Schauer[1,2], Nikita Basargin[2,3,4]

1: Institute of Environmental Engineering, ETH Zurich; 2: Microwaves and Radar Institute, German Aerospace Center; 3: School of Life Sciences, Technical University of Munich (TUM), Freising, Germany; 4: Munich School for Data Science (MUDS), Munich, Germany

12:10pm - 12:30pm

Oral_20

Optimal Parameterization of a Polarimetric D-InSAR Model for Soil Moisture Retrieval over Vegetated Agricultural Fields

Henri Schauer[1,2], Nikita Basargin[1,3,4], Simon Zwieback[5], Irena Hajnsek[1,2]

1: Microwaves and Radar Institute, German Aerospace Center (DLR), Weßling, Germany; 2: Institute of Environmental Engineering, ETH Zurich, Zurich, Switzerland; 3: School of Life Sciences, Technical University of Munich (TUM), Freising, Germany; 4: Munich School for Data Science (MUDS), Munich, Germany; 5: University of Alaska, Fairbanks, USA

12:30pm - 12:50pm

Oral_20

Explaining closure-phase temporal signals over vegetation: The role of soil moisture and vegetation variability

Giovanni Nico[1], João Catalão[2], Rocco Miglionico[3]

1: Istituto per le Applicazioni del Calcolo (IAC), Consiglio Nazionale delle Ricerche (CNR), 70126 Bari, Italy; 2: Instituto Dom Luiz (IDL), Faculdade de Ciências, Universidade de Lisboa, 1749-016 Lisboa, Portugal; 3: DIAN S.r.l., 75100 Matera, Italy

Atmosphere & Ionosphere

Location: Aula Duza 1

Chair: Michael Eineder, German Aerospace Center DLR

Chair: David Bekaert, Flemish Institute for Technological Research

2:00pm - 4:00pm

2:00pm - 2:20pm
Oral_20

OPERA's SAR agnostic, global tropospheric correction dataset from ECMWF high resolution model

David Bekaert[1,2], Marin Govorcin[3], Jeremy Maurer[4], Simran Sangha[3], Scott Staniewicz[5,2]

1: Flemish Institute for Technological Research, Mol, Belgium; 2: Formerly at Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA; 3: Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA; 4: Missouri University of Science and Technology, Rolla, MO, USA; 5: Capella Space

2:20pm - 2:40pm
Oral_20

Low-cost GNSS for InSAR Atmospheric Correction: Assessing Zenith Tropospheric Delay Accuracy

Amgad Abazeed[1,2], Kamil Maciuk[1]

1: Department of Integrated Geodesy and Cartography, AGH University of Krakow, al. A. Mickiewicza 30, 30-059 Krakow, Poland; 2: Construction and Building Engineering Department, Arab Academy for Science, Technology and Maritime Transport, Aswan, Egypt

2:40pm - 3:00pm
Oral_20

Dispersive Ionospheric Phase Estimation in L-band InSAR Using Fourier Neural Operators

Kazuki Yanagiya, Yutaro Shigemitsu, Takeshi Motohka, Takeo Tadono

Japan Aerospace Exploration Agency, Japan

3:00pm - 3:20pm
Oral_20

A Consensus Analysis on Range Split-Spectrum Approaches for Ionospheric Phase Estimation in DInSAR Applications

Claudio De Luca[1], Marianna Franzese[1,2], Giorgio Gomba[3], Riccardo Lanari[1]

1: CNR–IREA, Institute for Electromagnetic Sensing of the Environment, Naples, Italy; 2: Department of Electrical Engineering and Information Technology (DIETI), University of Naples Federico II, Naples, Italy; 3: German Aerospace Center (DLR), Oberpfaffenhofen, Germany

3:20pm - 3:40pm
Oral_20

CERRA-Based Atmospheric Correction for Multi-Temporal DInSAR Analyses: Performance Assessment and Comparison with ERA-5 Reanalysis Data

Ivana Zinno, Francesco Casu, Pasquale Noli, Riccardo Lanari

CNR-IREA, Italy

4:00pm - 4:30pm

Round Table - Atmosphere & Ionosphere and Phase closure

Location: **Aula Duza 1**

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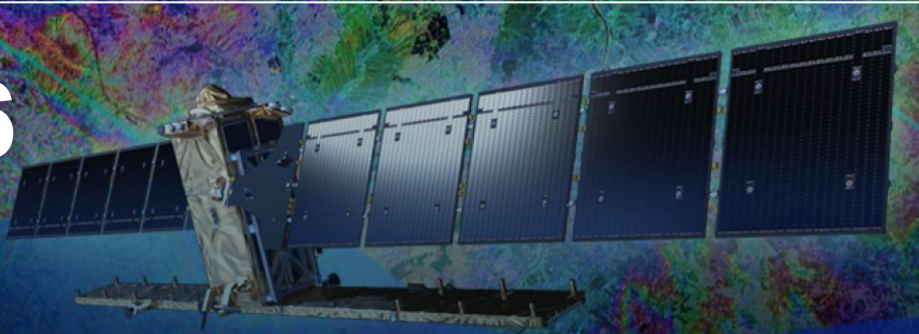

Day 2 - Tuesday, 16/June/2026

Duza 2

11:10am - 12:50pm

11:10am - 11:30am
Oral_20

Investigation of Residual Shift Effects in Azimuth Geolocation Results of Sentinel-1 TOPS Data by Leveraging SAR Calibration Sites in Argentina

Christoph Gisinger[1], Helko Breit[1], Giorgio Gomba[1], Chiara Passerini[2], Andrea Recchia[2], Ulrich Balss[1], Guillaume Hajduch[3], Antonio Valentino[4], Muriel Pinheiro[5]
1: German Aerospace Center, Germany; 2: ARESYS, Italy; 3: CLS, France; 4: CS Group for ESA, Italy; 5: ESA ESRIN, Italy

11:30am - 11:50am
Oral_20

NISAR Urgent Response Products for Natural Hazards and Disasters

Eric Fielding, Cathleen Jones, Cecilia Cheng, Paul Rosen, Team Nisar
Jet Propulsion Laboratory, Caltech, United States of America

11:50am - 12:10pm
Oral_20

A Dynamic Digital Elevation Model based on InSAR, GNSS, airborne laser scanning, leveling, and absolute gravimetry

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

12:10pm - 12:30pm
Oral_20

Copernicus SAR Analysis-Ready Data: Products, Algorithms, and Processors Bridging Accessibility and Quality

Federico Minati[1], Francesco De Zan[2], Paco Lopez Dekker[3], Juan M. Lopez-Sanchez[4], Victor Cazcarra Bes[4], Alessio Morea[1], Francesco Trillo[1], Francesco Vecchioli[1], Yan Yuan[1], Muriel Pinheiro[5], Antonio Valentino[6], Mario Costantini[1], Clément Albinet[5]
1: B-Open, Italy; 2: Delta Phi Remote Sensing, Germany; 3: Delft University of Technology, The Netherlands; 4: Universidad de Alicante, Spain; 5: ESA ESRIN, Italy; 6: STARION, Italy

12:30pm - 12:50pm
Oral_20

CEOS Analysis-Ready Data Specifications for InSAR products

Franz Meyer[10], Ake Rosenqvist[1,2], Clement Albinet[3], David Bekaert[4,5], Bruce Chapman[4], François Charbonneau[6], Danilo Dadamia[7], Matt Garthwaite[8], Josef Kellndorfer[9], Joseph Kennedy[10], Takeo Tadono[2], Medhavy Thankappan[14], John Truckenbrodt[16], Anna Wendleder[16], Griffin Williams[17], Fang Yuan[14], Tomas Zajc[12], Howard Zebker[18], Zheng-Shu Zhou[8], Marco Lavalle[4], Tom Logan[10], Raghav Mehra[11], Nuno Miranda[3], Katrin Molch[3], Jayasri PV[11], Paolo Pasquali[12], Marko Repse[13], Andreia Siqueria[14], David Small[15], Usha Sundari[11]
1: soloEO; 2: JAXA; 3: ESA; 4: JPL; 5: VITO; 6: NRCan; 7: CONAE; 8: CSIRO; 9: Earth Big Data; 10: ASF; 11: ISRO; 12: sarmap; 13: Sinergise; 14: Geoscience Australia; 15: Univ. of Zurich; 16: DLR; 17: Catalyst; 18: Stanford Univ.

Processing environments and operational services

Location: Aula Duza 2

Chair: Quentin Glaude, European Center for Geodynamics and Seismology

Chair: Jose Manuel Delgado Blasco, ESA

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2:00pm - 4:00pm

2:00pm - 2:20pm
Oral_20

A Cloud-Based Solution for Sentinel-1 InSAR Processing with openEO in the Copernicus Data Space Ecosystem

Mattia Callegari[1], Michele Claus[1], Jeroen Dries[2], Alexander Jacob[1], Emile Sonneveld[2]
1: Eurac Research, Italy; 2: Vito Remote Sensing, Belgium

2:20pm - 2:40pm
Oral_20

phidown and sarpyx: from CDSE to geocoded interferograms, a burst-centric Sentinel-1 InSAR processing packages

Roberto Del Prete, Jose Manuel Delgado Blasco
Φ-lab, European Space Agency (ESA), ESRIN, Via Galileo Galilei, Frascati 00044, Italy.

2:40pm - 3:00pm
Oral_20

FLATSIM: a Service for Large-Scale Ground Motion Monitoring with Sentinel-1 Data

Bryan Raimbault[1], Philippe Durand[1], Claude Boniface[1], Sébastien Gaugain[1], Clément Schaettel[2], Eric Maesen[2], Marie-Pierre Doin[3], Erwan Pathier[3], Franck Thollard[3], Bertrand Lovery[3], Oliver Henriot[3], Cecile Lasserre[4], Simon Daout[5], Raphaël Grandin[6], Emilie Deschamps-Ostanciaux[6], Elisabeth Pointal[6]
1: Centre National d'Études Spatiales (CNES), 31400 Toulouse, France; 2: Sopra Steria Group, Colomiers, France; 3: Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, IRD, Univ. Gustave Eiffel, ISTerre, 38000, Grenoble, France; 4: Université Claude Bernard Lyon 1, ENS de Lyon, Université Jean Monnet, CNRS, LGL-TPE, UMR5276; 5: Univ. de Lorraine, CNRS, CRPG, F-54000, Nancy, France; 6: Université Paris Cité, Institut de physique du globe de Paris, CNRS UMR 7154, 75238 Paris 05, France

3:00pm - 3:20pm
Oral_20

Anomaly Detection in InSAR Time Series

Mark Bemelmans, Pieter Bas Leezenberg
SkyGeo Nederland, Netherlands, The

3:20pm - 3:40pm
Oral_20

AMSTer: an open-source toolbox for automated multi-sensor InSAR mass processing and multidimensional deformation time series

Quentin Glaude[1], Nicolas d'Oreye[1,2], Dominique Derauw[3], Sergey Samsonov[4], Delphine Smittarello[1], Maxime Jaspard[1], Gilles Celli[1]
1: European Center for Geodynamics and Seismology, 19 rue Josy Welter, L-7256 Walferdange, Luxembourg; 2: National Museum of Natural History, 19 rue Josy Welter, L-7256 Walferdange, Luxembourg; 3: Centre Spatial de Liege, Liège University, Avenue du Pre Aily, B-4031 Angleur, Belgium; 4: Canada Centre for Mapping and Earth Observation, Natural Resources Canada, 560 Rochester Street, Ottawa, ON K1A 0E4, Canada

3:40pm - 4:00pm
Oral_20

CopPhil-GMS: Ground Motion Monitoring Service for the Philippines using time series InSAR techniques with Sentinel-1 SAR acquisitions

Ling Chang[1], Bingquan Li[1], Mihaela Violeta Gheorghe[2], George Boldeanu[2], Marco Bianchi[3], Pablo Blanco[3]
1: University of Twente, The Netherlands; 2: GMV, Romania; 3: TRE ALTAMIRA

4:30pm - 7:00pm

Round Table - InSAR data products & Processing environments and operational services
Location: **Aula Duza 2**

POSTER SESSION I - Location: Exhibition Room

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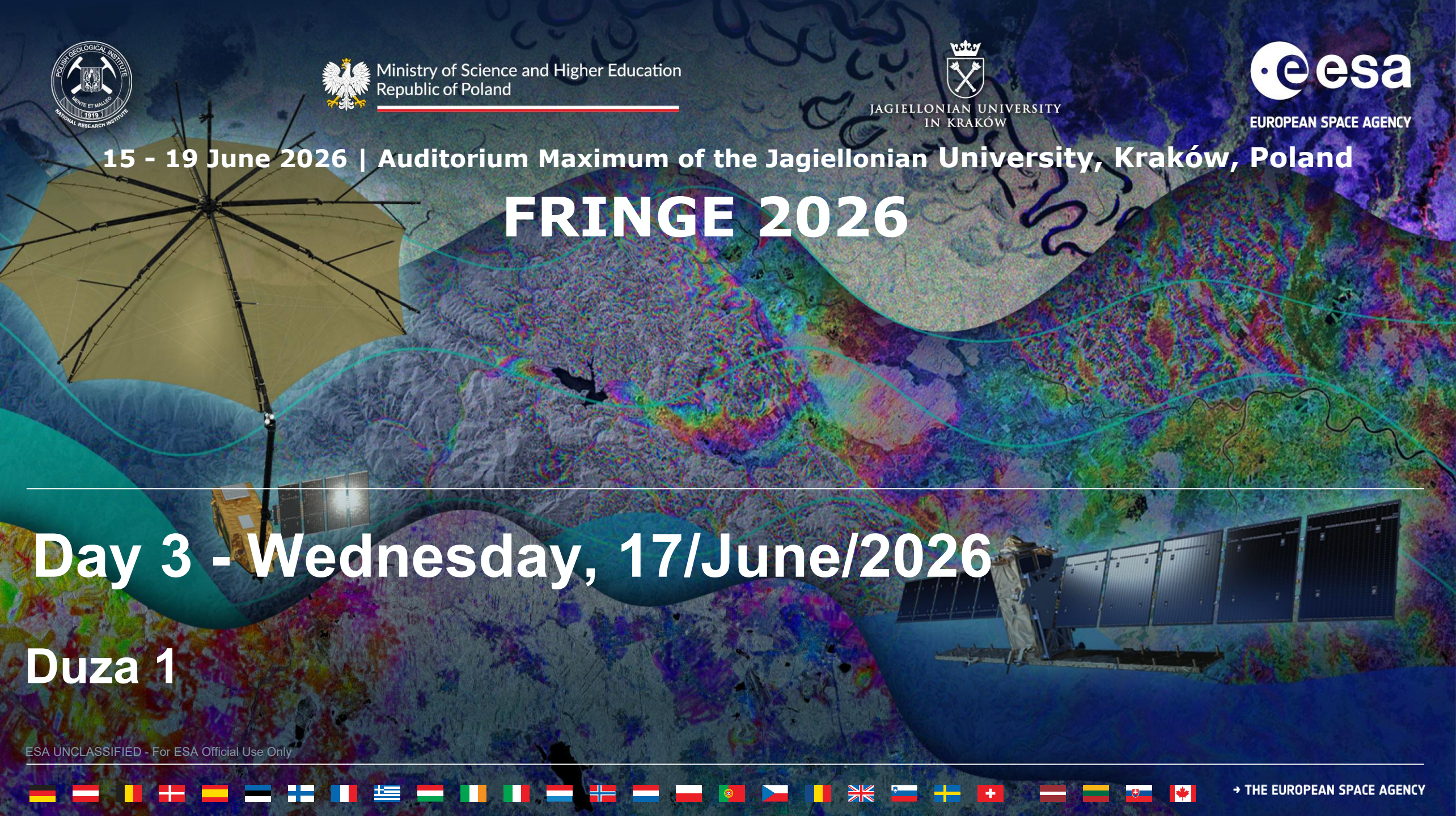


Day 3 - Wednesday, 17/June/2026

Duza 1

Volcanoes & volcanic hazards 1

Location: Aula Duza 1

Chair: Paul Lundgren, Jet Propulsion Laboratory

Chair: Philippe Bally, ESA

9:00am - 10:40am

9:00am - 9:20am
Oral_20

Measuring ground deformation and topographic changes from multi-angular and multi-sensor SAR amplitude imagery

Arthur Hauck[1], Raphaël Grandin[1], Thibaud Ehret[2], Fidel Costa[1], Gabriele Facciolo[3]
1: Université Paris Cité, Institut de physique du globe de Paris, CNRS, F-75005 Paris, France; 2: AMIAD, Pôle Recherche, France; 3: Université Paris-Saclay, CNRS, ENS Paris-Saclay, Centre Borelli, Paris, France

9:20am - 9:40am
Oral_20

Resolving 3D Deformation of Piton de la Fournaise Enabled from Dense Multi-Geometry ALOS-2 Acquisitions

Delphine Smittarello[1], Nicolas d'Oreye[1,2], Jean-Luc Froger[3], Dominique Derauw[4], Aline Peltier[5,6], Fabien Albino[7], Julia Kubanek[8], Quentin Glaude[1]
1: European Center for Geodynamics and Seismology, Walferdange, Luxembourg; 2: National Museum of Natural History, Walferdange, Luxembourg; 3: Université Jean Monnet - Laboratoire de Géologie de Lyon : Terre, Planètes, Environnement - UMR CNRS 5276 LGL-TPE, Saint Etienne, France; 4: Centre Spatial de Liège, Angleur, Belgium; 5: Université Paris Cité, Institut de Physique Du Globe de Paris, CNRS, UMR 7154, Paris, France; 6: Observatoire Volcanologique du Piton de La Fournaise, Institut de Physique du Globe de Paris (IPGP), La Plaine Des Cafres, France; 7: Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, IRD, Univ. Gustave Eiffel, ISTerre, Grenoble 38000, France; 8: Earth and Mission Science Division (EOP-SMS), ESA-ESTEC, Keplerlaan 1,2201 AZ Noordwijk, The Netherlands

9:40am - 10:00am
Oral_20

Volcano-Tectonic Signal Separation Reveals Pre-eruptive Deformation at Mount Agung Six Months Before the November 2017 Eruption

Denny J.H. Chee[1,2], Christina Widiwijayanti[1], Adriano Gualandi[3], Benoit Taisne[1,2], Sang-Ho Yun[1,2,4]
1: Earth Observatory of Singapore, Nanyang Technological University, Singapore; 2: Asian School of the Environment, Nanyang Technological University, Singapore; 3: Department of Earth Sciences, University of Cambridge, United Kingdom; 4: School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore

10:00am - 10:20am
Oral_20

The 2025-2026 Eruption of Krasheninnikov Volcano, Kamchatka: Constraints from Satellite InSAR, Thermal, and Topography Observations

Paul Lundgren[1], M. Grace Bato[1], Arthur Hauck[2], Olga A. Girina[3], Társilo Girona[4]
1: Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, United States of America; 2: Institut de Physique du Globe de Paris, Université Paris Cité, Paris, France; 3: Institute of Volcanology and Seismology, FEB RAS, Petropavlovsk-Kamchatsky, Russia; 4: Geociències Barcelona, Consejo Superior de Investigaciones Cientìficas, Barcelona, Spain

10:20am - 10:40am
Oral_20

Forecasting InSAR-Based Volcanic Deformation Using Deep Learning Trained on Complex Dynamical Models

Camila Novoa Lizama, Andrew Hooper, Matthew Gaddes, Shailza Sharma, Pedro Espin, Milan Lazecky
University of Leeds, United Kingdom

10:40am - 11:10am **Coffee Break**

Volcanoes & volcanic hazards 2

Location: Aula Duza 1

Chair: Juliet Biggs, University of Bristol

Chair: Franz Meyer, University of Alaska Fairbanks

11:10am - 12:50pm

11:10am - 11:30am

Oral_20

Synergistic Use of Multi-Mission SAR Interferometry for Imaging Rapid Deformation: The 2024–2025 Fentale-Dofen Magma Intrusion

Weiyu Zheng[1], Juliet Biggs[1], Lin Way[1], Edna Dualeh[1], Simon Orrego[1], Milan Lazecky[2], Raphael Grandin[3], Marco Bagnardi[4]

1: University of Bristol, United Kingdom; 2: University of Leeds, United Kingdom; 3: Institut de Physique du Globe de Paris, France; 4: U.S. Geological Survey, United States

11:30am - 11:50am

Oral_20

Understanding ground deformation close to growing lava domes: InSAR observations and numerical modelling

Eliot Eaton, Jurgen Neuberg, Susanna Ebmeier, Pedro Espin Bedon

University of Leeds, United Kingdom

11:50am - 12:10pm

Oral_20

VolcSARvatory: Scalable InSAR Time-Series Processing for Operational Volcano Monitoring

Franz Meyer[1,2], Mario Angarita[2], Joseph Kennedy[2], Ronni Grapenthin[1,3]

1: University of Alaska Fairbanks, United States of America; 2: Alaska Satellite Facility, University of Alaska Fairbanks, United States of America; 3: Alaska Volcano Observatory, University of Alaska Fairbanks, United States of America

12:10pm - 12:30pm

Oral_20

Abnormally large magma flux does not lead to eruption in subduction zone calderas: The 2022-2023 episode of uplift of Aniakchak Crater (Aleutians) and implications for L-band monitoring of volcanoes

Francisco Delgado

Universidad de Chile, Chile

12:30pm - 12:50pm

Oral_20

The interactions between the 2018 Lombok earthquake sequence, Indonesia, and the unrest Rinjani-Samalas volcanic complex

Siyuan Zhao[1], Susanna Ebmeier[1], John Elliott[1], Phil Cummins[2], Milan Lazecky[1], Pedro Espin Bedon[1]

1: University of Leeds, United Kingdom; 2: Australian National University, Australia

Thematic mapping 1

Location: Aula Duza 1

Chair: Zbigniew Perski, Polish Geological Institute - National Research Institute

Chair: Barbara Widhalm, b.geos

2:00pm - 3:40pm

2:00pm - 2:20pm
Oral_20

Estimating Soil Moisture Anomalies via Temporal-SKP Decomposition: AKQUA-SMA

Giovanni Costa, Stefano Tebaldini, Andrea Virgilio Monti Guarnieri
Department of Electronics, Information and Bioengineering (DEIB), Politecnico di Milano, Italy

2:20pm - 2:40pm
Oral_20

Sentinel-1 InSAR seasonal deformation rates reflect soil moisture gradients in Arctic lowland permafrost regions

Barbara Widhalm[1], Annett Bartsch[1], Tazio Strozzi[2], Nina Jones[2], Artem Khomutov[3], Elena Babkina[3], Marina Leibman[3], Rustam Khairullin[1], Helena Bergstedt[1], Clemens von Baeckmann[1], Sree Ram Radha[1]
1: b.geos, Austria; 2: Gamma Remote Sensing, Switzerland; 3: Earth Cryosphere Institute, Tyumen Scientific Centre SB RAS, Russia

2:40pm - 3:00pm
Oral_20

Detecting Forest Leaf-Out from Sentinel-1 Interferometric Coherence: Evidence of Structural Reorganization in Early Spring

Magdalena Majchrzak[1], Paweł Bogawski[1], João Catalão[2]
1: Adam Mickiewicz University Poznan, Poland; 2: University of Lisbon, Portuga

3:00pm - 3:20pm
Oral_20

Seasonal Variations in Persistent Scatterer Density Associated with Different Land-Cover

Valentine Schnell[1,2], Madeline Evers[1], Antje Thiele[1,2]
1: Fraunhoher IOSB, Germany; 2: Karlsruhe Institute of Technology, Germany

3:20pm - 3:40pm
Oral_20

Unwrapping the phase of a single focused SAR image: application to Sea Surface Height (SSH) retrieval.

Marcello de Michele, Guillaume Bacques
BRGM - French Geological Survey, France

3:40pm - 4:10pm **Coffee Break**

Thematic mapping 2

Location: Aula Duza 1

Chair: Hossein Aghababaei, University of Twente

Chair: Laurent Ferro Famil, ISAE-SUPAERO & CESBI

4:10pm - 5:50pm

4:10pm - 4:30pm
Oral_20

Cross-Continental Bayesian InSAR Forest Height Estimation

Federico Ghio[1,2], Daniel Carcereri[1], Paola Rizzoli[1], Lorenzo Bruzzone[2]
1: German Aerospace Center (DLR), Germany; 2: Università di Trento, Italy

4:30pm - 4:50pm
Oral_20

Mangrove canopy height retrieval from multi-baseline TanDEM-X InSAR observations using volume decorrelation

Je-Yun Lee[1], Sang-Hoon Hong[1], Shimon Wdowinski[2], Seung-Kuk Lee[3]
1: Department of Geological Sciences, Pusan National University, Busan, South Korea; 2: Institute of Environment, Department of Earth and Environment, Florida International University, Miami; 3: Division of Earth and Environmental System Sciences, Pukyong National University, Busan, South Korea

4:50pm - 5:10pm
Oral_20

Forest Height Mapping Using Spaceborne Multi-Static X-band SAR Tomography Across Boreal and Temperate Forests

Guobing Zeng[1], Huaping Xu[2], Le Zhang[3], Lei Zhao[4], Dinh Ho Tong Minh[5], Laurent Ferro-Famil[6,7], Sang-Ho Yun[1,8,9]
1: Earth Observatory of Singapore, Nanyang Technological University, Singapore; 2: School of Electronic and Information Engineering, Beihang University, Beijing 100191, China; 3: PIESAT Information Technology Co Ltd, Beijing, 100195, China; 4: Institute of Forest Resource Information Techniques, Chinese Academy of Forestry, Beijing 100091, China; 5: UMR TETIS, INRAE, University of Montpellier, 34000 Montpellier, France; 6: ISAE-Supaero, 10 Avenue Marc Pélegrin, Toulouse, 31400, France; 7: CESBIO, University of Toulouse, CNES/CNRS/INRAE/IRD/UT3, 18 Avenue Edouard Belin, Toulouse, 31400, France; 8: Asian School of the Environment, Nanyang Technological University, Singapore 639798, Singapore; 9: School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore 639798, Singapore

5:10pm - 5:30pm
Oral_20

Forest Height Retrieval under Zero Baseline InSAR: A Reduced-Order Coherence Framework

Hossein Aghababaei[1], Yaobin Ma[1], Giampaoli Ferraioli[2], Erkki Tomppo[3], Jaan Praks[4]
1: University of Twente, The Netherlands,; 2: Università degli Studi di Napoli Parthenope, Napoli, Italy.; 3: University of Helsinki, Finland; 4: Aalto University, Finland

5:30pm - 5:50pm
Oral_20

Analysing seasonal forest phenology and long-term growth using Incoherent Cross-Correlation of time-series SAR stacks

Simon Sing Hee Tong[1], Giorgio Gomba[2], Sang-Ho Yun[1,3,4]
1: Earth Observatory of Singapore, NTU, Singapore; 2: German Aerospace Center (DLR), Weßling, Germany; 3: Asian School of the Environment, NTU, Singapore; 4: School of Electrical and Electronic Engineering, NTU, Singapore

5:50pm - 6:20pm **Round Table - Volcanoes & Thematic mapping**
Location: **Aula Duza 1**

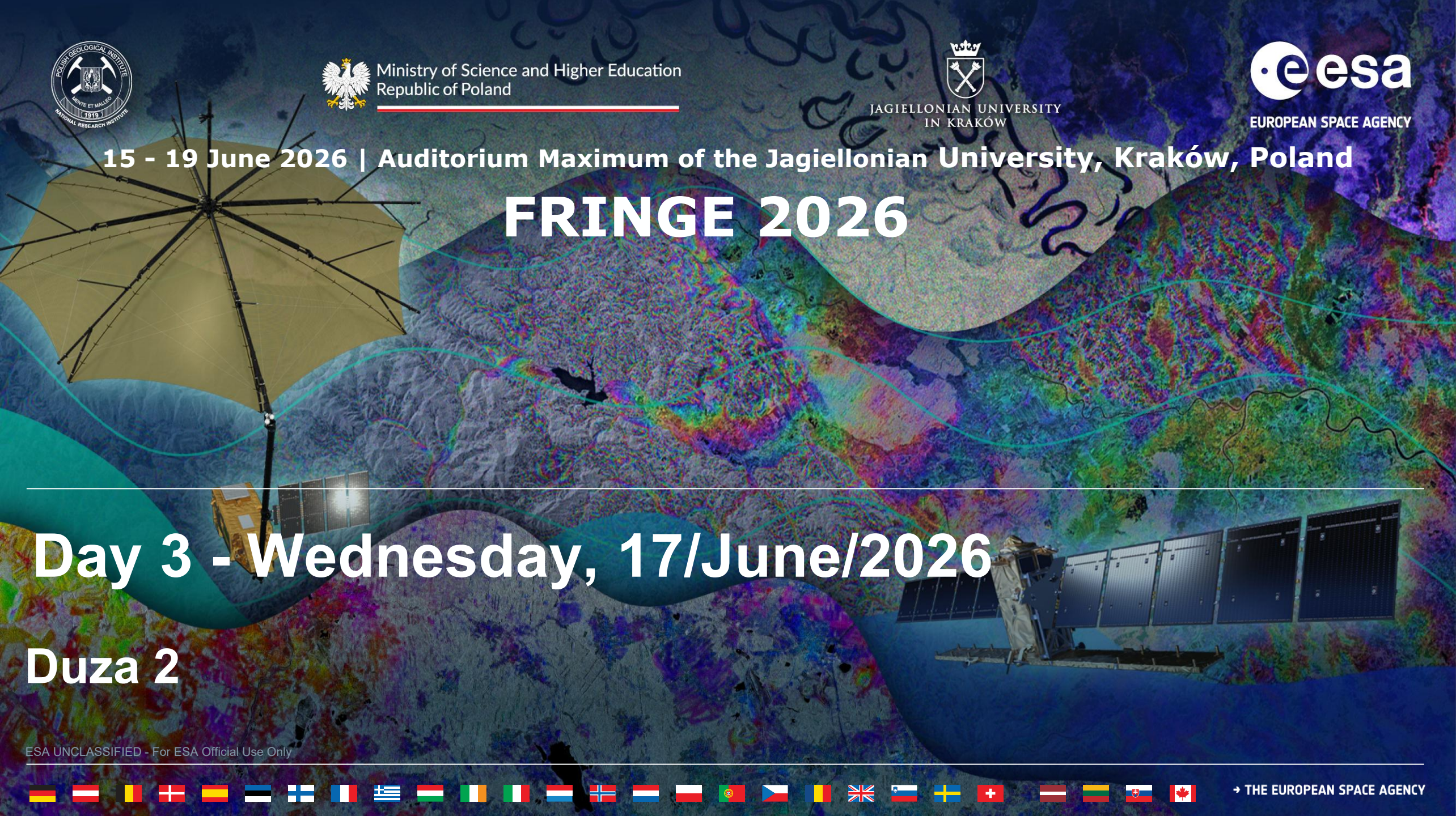
Ministry of Science and Higher Education
Republic of Poland

JAGIELLONIAN UNIVERSITY
IN KRAKÓW

EUROPEAN SPACE AGENCY

15 - 19 June 2026 | Auditorium Maximum of the Jagiellonian University, Kraków, Poland

FRINGE 2026



Day 3 - Wednesday, 17/June/2026

Duza 2

Future SAR missions and concepts 1

Location: Aula Duza 2

Chair: Paul Rosen, Jet Propulsion Laboratory California Institute of Technology

Chair: Irena Hajnsek, ETH Zurich / DLR

9:00am - 10:40am

9:00am - 9:20am
Oral_20

An along-track GEO-SAR MIMO twin formation

Matteo Monti, Andrea Virgilio Monti Guarnieri, Naomi Petrushevsky, Claudio Maria Prati
Politecnico di Milano, Italy

9:20am - 9:40am
Oral_20

Interferometric Performance of a Geostationary SAR

Andrea Monti-Guarnieri[1], Luca Brocca[2], Francois Bouttier[3], Steve Hobbs[4], Vassiliki Kotroni[5], Harald Kunstmann[6], Juha Lemmetyinen[7], Juan Manuel Lopez[8], Alberto Moreira[9], Antonio Parodi[10], Cristian Rossi[11], Peter Van Oevelen[12], Tim Wright[13]
1: Politecnico di Milano, Italy; 2: CNR; 3: Meteo France; 4: Cranfield University; 5: National Observatory of Athens; 6: KIT; 7: Finnish Metereological Institute; 8: University of Alicante; 9: DLR; 10: CIMA; 11: ESA; 12: GEWEX; 13: University of Leeds

9:40am - 10:00am
Oral_20

DInSAR Performance Analysis of the Italian X-Band NIMBUS SAR Mission

Michele Manunta[1], Gianluca Montuori[1,2], Paolo Berardino[1], Manuela Bonano[1], Francesco Casu[1], Gabriella Costa[3], Federica Cotugno[4], Marco Gulino[3], Andrea Minchella[4], Alfredo Renga[2], Riccardo Lanari[1]
1: CNR-IREA, Naples, Italy; 2: Department of Industrial Engineering, University of Naples Federico II, Naples, Italy; 3: European Space Agency, ESA - ESRIN, Frascati (Rome), Italy; 4: ATG Italy, Frascati (Rome), Italy

10:00am - 10:20am
Oral_20

Operational High-Cadence, Mid-Inclination X-Band InSAR from Capella's Constellation: Two Years of Displacement Monitoring Results

Scott Staniewicz, Craig Stringham, Ron Muellerschoen, Shaunak De, Gordon Farquharson
Capella Space, United States of America

10:20am - 10:40am
Oral_20

Advanced InSAR Algorithm for three-dimensional deformation monitoring with MDA CHORUS

Jin Baek, Dylan Hickson, Nikeet Pandit
MDA Space, 13800 Commerce Parkway, Richmond, British Columbia, Canada V6V 2J3

10:40am - 11:10am Coffee Break

Future SAR missions and concepts 2

Location: Aula Duza 2

Chair: Andrea Manconi, WSL/SLF

Chair: Andrea Monti-Guarnieri, Politecnico di Milano

Ministry of Science and Higher Education
Republic of Poland

JAGIELLONIAN UNIVERSITY IN KRAKÓW

esa EUROPEAN SPACE AGENCY

11:10am - 12:50pm

11:10am - 11:30am
Oral_20

SAR Interferometry with a Proliferated Daily Ground Track Microsatellite Constellation

Valentyn Tolpekin, Michael Wollersheim, Qiaoping Zhang, Angel Johnsy
ICEYE Oy, Finlan

11:30am - 11:50am
Oral_20

High-Frequency, High-Resolution Ground Displacement Measurement using the StriX Constellation

Yu Morishita
Synspective Inc., Japan

11:50am - 12:10pm
Oral_20

AGRIROSE-L AIRBORNE SAR EXPERIMENT FOR LAND COVER, VEGETATION PARAMETERS AND SOIL MOISTURE

Irena Hajnsek[1,2], Henri Schauer[1,2], Nikita Basargin[2,8,9], Roman Guliaev[2], Martin Keller[2], Marc Jäger[2], Tobias Hank[4], Ralf Ludwig[4], Stefanie Steinhauser[4], Uta Heiden[3], Kevin Kühl[3], Sabine Chabrillat[5], Luci Homolova[6], Julia Kubanek[7], Marco Celesti[7]
1: ETH Zurich, Institute of Environmental Engineering, Switzerland; 2: DLR, Microwaves and Radar Institute, Germany; 3: DLR, Method of Remote Sensing; 4: LMU, Department für Geographie, Ludwig-Maximilians-Universität München, Germany; 5: GFZ, Remote Sensing and Geoinformatics, German Research Center for Geosciences, Potsdam, Germany; 6: Czech Globe, Global Change Research Institute, Czech Republic; 7: ESA-ESTEC – Earth Observation Campaigns Section, Netherlands; 8: School of Life Sciences, Technical University of Munich (TUM), Freising, Germany; 9: Munich School for Data Science (MUDS), Munich, Germany

12:10pm - 12:30pm
Oral_20

A Deep Learning Framework for Joint On-Board InSAR Phase Denoising and Compression

Luca Dell'Amore[1], Lorenzo Bruno Garavelli[1], Nicola Gollin[1], Michele Martone[1], Paola Rizzoli[1], Begüm Demir[2]
1: German Aerospace Center (DLR), Germany; 2: Technische Universität Berlin (TUB), Berlin

12:30pm - 12:50pm
Oral_20

Monostatic and bistatic SAR imaging and SAR interferometry with compact UAV-borne and car-borne SAR systems at L-band and S-band: results from our latest campaigns

Othmar Frey[1,2], Charles Werner[1], Rafael Caduff[1], Tazio Strozzi[1], Silvan Leinss[1], Tobias Batt[1]
1: Gamma Remote Sensing, Switzerland; 2: ETH Zurich, Switzerland

Ice and Snow 1

Location: Aula Duza 2

Chair: Thomas Nagler, ENVEO IT GmbH

Chair: Bernd Scheuchl, University of California, Irvine

2:00pm - 3:40pm

2:00pm - 2:20pm
Oral_20

Monitoring Ice Velocity and Discharge with SAR Satellite Missions: Present Capabilities and Future Prospects

Jan Wuite, Thomas Nagler, Markus Hetzenecker, Bryan Cantal, Helmut Rott
ENVEO It GmbH, Innsbruck, Austria

2:20pm - 2:40pm
Oral_20

Early results with NISAR, Sentinel-1c/d and ICEYE in Antarctica

Eric Rignot, Bernd Scheuchl, Sam Herreid
UC Irvine, United States of Americ

2:40pm - 3:00pm
Oral_20

A Decade of Antarctic Calving Front Measurements Using a Weakly Supervised Neural Network with Automated Pseudo-Labelling of Sentinel-1 Data

Jacob Connolly, Anna Hogg, Trystan Surawy-Stepney
University of Leeds, United Kingdom

3:00pm - 3:20pm
Oral_20

On the Characterization of Ice Cover Composition with Pol-InSAR and SAR Tomography: Preliminary Results of an Ice Road Case Study

Francois J. Charbonneau, Joost J. van der Sanden
Canada Centre for Remote Sensing, Natural Resources Canada, Canada

3:20pm - 3:40pm
Oral_20

IceView: Operational Sentinel-1 InSAR Monitoring of Landfast Sea Ice Extent and Dynamics

Dyre Dammann[1], Malte Vöge[1], Nick Hughes[2], Penelope Wagner[2], Benjamin Lange[1], Christian Haas[3]
1: Norwegian Geotechnical Institute, Norway; 2: Department for Ocean and Ice, Norwegian Meteorological Institute; 3: Alfred Wegener Institute

3:40pm - 4:10pm **Coffee Break**

Ice and Snow 2

Location: Aula Duza 2

Chair: Dana Floricioiu, German Aerospace Center (DLR)

Chair: Julia Kubanek, ESA

4:10pm - 5:50pm

4:10pm - 4:30pm
Oral_20

Operational InSAR Monitoring in the High Arctic: The InSAR Svalbard Ground Motion Service

Gökhan Aslan[1], Line Rouyet[2], Marie Bredal[1], Tom Rune Lauknes[2], Lotte Wendt[2], Daniel Stødte[2], Heidi Hindberg[2], Jelte von Oostveen[2], Yngvar Larsen[2], Emma Hauglin[1], John Dehls[1], Dag Anders Moldestad[3]
1: Geological Survey of Norway (NGU); 2: NORCE Norwegian Research Centre AS; 3: Norwegian Space Agency

4:30pm - 4:50pm
Oral_20

Assessment of Season-Dependent Sentinel-1 SAR Coherence Reliability in Freeze-Thaw Dominated Terrain: A Longyearbyen Case Study

Marisha Jmukhadze, Puneeth Bheesetty
Warsaw University of Technology, Poland

4:50pm - 5:10pm
Oral_20

Snow Depth Estimation from SAR Interferometry: Addressing Radar Penetration and Calibration Challenges for Accurate Seasonal Monitoring

Carolina Gonzalez, Alexandre Becker Campos, Paola Rizzoli
German Aerospace Center (DLR), Microwaves and Radar Institute, Germany

5:10pm - 5:30pm
Oral_20

In-Situ Data Meets InSAR: Validating the NISAR Level-3 Permafrost Requirement

Franz Meyer[1,2], Andrew Johnson[1], Simon Zwieback[1], Jie Chen[1], Go Iwahana[3], Jingyi Chen[4]
1: University of Alaska Fairbanks, United States of America; 2: Alaska Satellite Facility, University of Alaska Fairbanks, United States of America; 3: International Arctic Research Center, University of Alaska Fairbanks, United States of America; 4: Department of Aerospace Engineering & Engineering Mechanics, University of Texas at Austin, United States of America

5:30pm - 5:50pm
Oral_20

Utilization of a virtual SAR constellation for ice sheet monitoring

Bernd Scheuchl[1], Eric Rignot[1,2], Sam Herreid[1], Jean-Baptiste Barré[1], Sina Shanmsian[1]
1: University of California, Irvine, United States of America; 2: NASA JPL, Pasadena, United States of America

Round Table - Future Missions & Ice and Snow
Location: **Aula Duza 2**

Ministry of Science and Higher Education
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Day 3 - Wednesday, 17/June/2026

Aula Srednia

Displacements and deformations 1

Location: Aula Srednia

Chair: Michele Crosetto, CTTC

Chair: Maya Ilieva, sarmap

9:00am - 10:40am

9:00am - 9:20am
Oral_20

Passive and active reflectors for InSAR applications in urban areas

Davide Oscar Nitti[1], Raffaele Nutricato[1], Alessandro Parisi[1], Kalid Tijani[1], Fabio Bovenga[2], Cataldo Guaragnella[3], Giovanni Preziosa[3], Gianfranco Avitabile[3], Antonio Mongelli[4], Leonardo Amoruso[5]

1: Geophysical Applications Processing (GAP) srl, Bari (Italy); 2: Institute for Electromagnetic Sensing of the Environment - National Research Council of Italy (CNR-IREA), Bari (Italy); 3: Polytechnic University of Bari (PoliBA), Bari (Italy); 4: University of Bari “Aldo Moro” (UniBA), Bari (Italy); 5: Planetek Italia, Bari (Italy)

9:20am - 9:40am
Oral_20

ISABHEL: An integrated satellite-to-sensor Digital Twin service for bridge lifetime assessment and decision-ready alerts

Adriano Nobile[1], Emanuela Valerio[1], Vera Costantini[1], Bernardino Chiaia[2], Alberto Ciavattone[3], Marco Civera[2], Michele Gaeta[1], Eleonora Massarelli[2], Giovanni Menichini[3], Davide Trapani[4], Matteo Turrini[4,5], Emanuele Del Monte[3], Paolo Mazzanti[1]

1: NHAZCA S.r.l.; 2: Politecnico di Torino, Department of Structural, Geotechnical and Building Engineering (DISEG); 3: S2R S.r.l.; 4: Nplus S.r.l.; 5: University of Trento

9:40am - 10:00am
Oral_20

Mapping differential land subsidence risk using InSAR and urban settlement data: national scale assessment in Italy

Francesca Cigna[1], Roberta Paranunzio[1], Roberta Bonì[2], Pietro Teatini[3]

1: Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Italy; 2: Department of Science, Technology and Society (STS), University School for Advanced Studies (IUSS) Pavia, Italy; 3: Department of Civil, Environmental and Architectural Engineering (ICEA), University of Padua (UNIPD), Italy

10:00am - 10:20am
Oral_20

Opportunities, Challenges and Limitations of InSAR for Complex and Dynamic Civil Structure Monitoring: A Botlek Bridge Case-Study

Niels van Boldrik[1], Tom Ingleby[2], Rinus Schroevers[1]

1: Ministry of Infrastructure and Watermanagement, Rijkswaterstaat, the Netherlands; 2: SatSense Ltd., United Kingdom

10:20am - 10:40am
Oral_20

From Surface Motion to Differential Settlement: An Infrastructure-Aware Approach Using Copernicus Sentinel-1 InSAR over Rome Metropolitan Area

Michael Foumelis[1], Panagiotis Kalaitzis[1], Jose Manuel Delgado Blasco[2], Elena Papageorgiou[1], Francesca Cigna[3], Deodato Tapete[4]

1: Aristotle University of Thessaloniki, Greece; 2: European Space Agency, Italy; 3: National Research Council, Italy; 4: Italian Space Agency, Italy

10:40am - 11:10am **Coffee Break**

Displacements and deformations 2

Location: Aula Srednia

Chair: Urs Wegmüller, Gamma Remote Sensing AG

Chair: John Peter Merryman Boncori, Technical University of Denmark

11:10am - 12:50pm

11:10am - 11:30am

Oral_20

Regional-scale assessment of slope instabilities across western and eastern Greenland using Sentinel-1 persistent scatterer interferometry

Tazio Strozzi[1], Rafael Caduff[1], Philipp Bernhard[1], Eva Mätzler[2], Jonas Petersen[2]

1: Gamma Remote Sensing, Gümligen, Switzerland; 2: Ministry of Business, Mineral Resources, Energy, Justice and Gender Equality, Goverment of Greenland

11:30am - 11:50am

Oral_20

Immediate and multi-year consolidation at a retreating shoreline: evidence from high-resolution InSAR at the Dead Sea

Gidon Baer, Noya Gideoni, Eitan Halpert, Ran N. Nof

Geological Survey of Israel, Israel

11:50am - 12:10pm

Oral_20

The Future of Sinking Coastal Cities in Java

Holly Hourston[1], Alessandro Novellino[1], Ekbal Hussain[1], MF Syafudin[2], Luke Bateson[1], S Sagala[3], Dwi Sarah[4], Claire Fleming[1], NR Hanifa[4], E Gunawan[5], D Muslim[6]

1: British Geological Survey, United Kingdom; 2: Geospatial Information Agency of Indonesia, Jl. Raya Jakarta-Bogor Km 46, Cibinong 16911, Indonesia; 3: Resilience Development Initiative, Bandung, Indonesia; 4: Research Center for Geological Disaster, National Research and Innovation Agency, Bandung, Indonesia; 5: Global Geophysics Research Group, Faculty of Mining and Petroleum Engineering, Institut Teknologi Bandung, Bandung, Indonesia; 6: Faculty of Geological Engineering, Universitas Padjadjaran, Bandung, Indonesia

12:10pm - 12:30pm

Oral_20

Upscaling InSAR-derived displacement parameters over agricultural land using multi-frequency SAR

Yustisi Lumban Gaol, Freek van Leijen, Ramon Hanssen

TU Delft, The Netherlands

12:30pm - 12:50pm

Oral_20

Monitoring the ground deformation of the Store Vildmose peatland, Denmark, using a combined Distributed Scatter InSAR time series and modelling approach

John Peter Merryman Boncori, Miquel Negre Dou

Technical University of Denmark

Displacements and deformations 3

Location: **Aula Srednia**

Chair: **Sami Samiei Esfahany**, University of Leeds

Chair: **Maria Przyłucka**, Polish Geological Insititute - National Research Institute

2:00pm - 3:40pm

2:00pm - 2:20pm

Oral_20

Sequential Learning of SAR Image Time Series for Monitoring Earth's Deformation

Dana El Hajjar[1,2], Yajing Yan[1], Guillaume Ginolhac[1], Mohammed Nabil El Korso[2]

1: LISTIC, Université Savoie Mont Blanc; 2: L2S, CentraleSupélec, Université Paris Saclay

2:20pm - 2:40pm

Oral_20

Near Real-Time Displacement Anomaly Detection and Risk Assessment for Instantaneous State InSAR

Yuqing Wang, Freek van Leijen, Ramon Hanssen

Delft University of Technology, The Netherlands

2:40pm - 3:00pm

Oral_20

PPS-InSAR: Progressive PS-InSAR with subset scatterer lifecycle for long timeseries deformation updating

Haocheng Li, Jie Dong, Mingsheng Liao

Wuhan University, China

3:00pm - 3:20pm

Oral_20

Multi-Track InSAR Datum Alignment and 3D Displacement Estimation Using a Subsidence-Aware Strapdown Approach for Jakarta

Alexandru Mihai Lapadat, Wietske Brouwer, Ramon Hanssen

TU Delft, Netherlands, The

3:20pm - 3:40pm

Oral_20

Derivation of a geophysical source model for gas storage cavern convergence related surface displacements from ten years of InSAR at the storage cavern site Epe (Germany)

Alison Seidel, Markus Even, Hansjörg Kutterer, Malte Westerhaus

Karlsruhe Institute of Technology, Geodetic Institute Karlsruhe, Germany

3:40pm - 4:10pm **Coffee Break**

Displacements and deformations 4

Location: Aula Srednia

Chair: Cécile Lasserre, CNRS / LGLTPE

Chair: Ling Chang, University of Twente

4:10pm - 5:50pm

4:10pm - 4:30pm
Oral_20

Synergies and results on X- & L-band SAR research and institutional support during emergencies in the framework of the ASI – JAXA cooperation for disaster management

Deodato Tapete[1], Luigi Dini[1], Maria Virelli[1], Luca D'Andrea[1], Alessandra Vernile[1], Tomoyuki Fujinaga[2], Shiho Taguchi[2], Kohki Itoh[2], Tomoyuki Nomaki[2], Yuki Okajima[2], Akira Terauchi[2], Shin-ichi Sobue[2]

1: Agenzia Spaziale Italiana (ASI), Italy; 2: Japan Aerospace Exploration Agency (JAXA), Japan

4:30pm - 4:50pm
Oral_20

Exploiting the Gradient–Direction Constraint for 3D Decomposition of InSAR LOS Deformation in Subsidence Areas

Sami Samiei Esfahany[1], Moin Salehi[2], Ahmad Korivand[2], Andrew Hooper[1], Tim Wright[1]

1: COMET, School of Earth and Environment, University of Leeds, Leeds, UK; 2: School of Surveying and Geospatial Engineering, University of Tehran, Tehran, Iran

4:50pm - 5:10pm
Oral_20

Widespread Slope Processes Across the Tibetan Plateau: Insights from Large-Scale InSAR Processing Using FLATSIM

Hugo Watine[1], Simon Daout[1], Jérôme Lavé[1], Marie-Pierre Doin[2], Philippe Durand[3], Flatsim Working group[4]

1: Univ. de Lorraine, CNRS, CRPG, F-54000, Nancy, France; 2: Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, IRD, Univ. Gustave Eiffel, ISTerre, 38000, Grenoble, France; 3: Centre National d'Etudes Spatiales, 31401 Toulouse, France; 4: France

5:10pm - 5:30pm
Oral_20

Adaptive Multi-Scale Estimation of Differential Subsidence from InSAR for Improved Hazard Assessment

Sami Samiei Esfahany, Andrew Hooper, Tim Wright

COMET, School of Earth and Environment, University of Leeds, Leeds, UK

5:30pm - 5:50pm
Oral_20

Coherence Analysis and Displacement Time Series in Cascadia Constrained by L-band NISAR

Molly Zebker, David Sandwell

University of California San Diego, United States of America

5:50pm - 6:20pm **Round Table - Displacements and deformations**

Location: **Aula Srednia**

Ministry of Science and Higher Education
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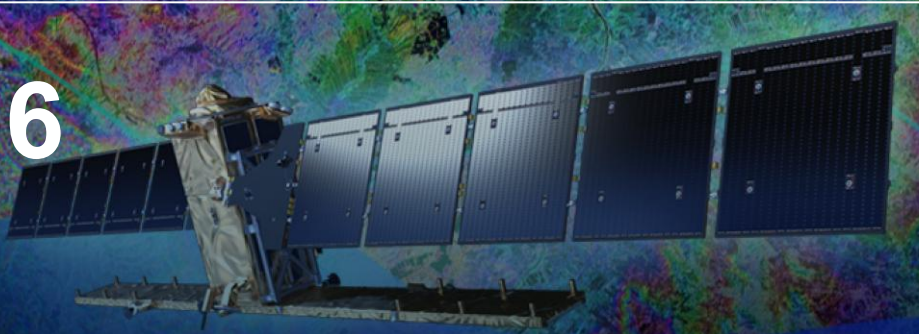

Day 4 - Thursday, 18/June/2026

Duza 1

Current InSAR Missions

Location: Aula Duza 1

Chair: Marco Lavalle, NASA JPL

Chair: Muriel Pinheiro, ESA

9:00am - 10:40am

9:00am - 9:20am

Oral_20

NISAR L-Band Product Status: From Raw Echoes to Analysis-Ready Science Data products

Heresh Fattahi, Hirad Ghaemi, Brian Hawkins, Bo Huang, Xiaodong Huang, Tyler Hudson, Seongsu Jeong, Jungkyo Jung, Samantha Niemoeller, Joanne Shimada, Gustavo H. X. Shiroma, Chandini Veeramachaneni, Cecilia Cheng, Jeffrey Pon, Marco Lavalle, Scott Shaffer, Paul Rosen

Jet Propulsion Laboratory, California Institute of Technology, United States of America

9:20am - 9:40am

Oral_20

PALSAR-2/3 Cross-Sensor Interferometry

Urs Wegmüller, Christophe Magnard, Tazio Strozzi, Andreas Wiesmann

Gamma Remote Sensing AG, Switzerland

9:40am - 10:00am

Oral_20

Recent Chinese SAR Missions for InSAR Applications

Yuxiao Qin

Northwestern Polytechnical University, China, People's Republic of

10:00am - 10:20am

Oral_20

NISAR TEMPORAL COHERENCE FOR LAND APPLICATIONS

Marco Lavalle, Gustavo Shiroma, Jungkyo Jung

NASA JPL, United States of America

10:20am - 10:50am

Oral_20

THE NASA-ISRO SAR MISSION OPERATIONAL PERFORMANCE FOR INTERFEROMETRIC SAR APPLICATIONS

Paul Rosen

Jet Propulsion Laboratory California Institute of Technology, United States of America

10:40am - 11:10am **Coffee Break**

11:10am - 12:50pm

11:10am - 11:30am
Oral_20

The BIOMASS mission: an overview
Muriel Pinheiro, Clement Albinet, Klaus Scipal, Bjorn Rommen
ESA, Italy

11:30am - 11:50am
Oral_20

Ionospheric effects on BIOMASS interferometry
Stefano Tebaldini, Francesco Salvaterra, Francesco Banda
ESA, Italy

11:50am - 12:10pm
Oral_20

The BIOMASS Interferometric Processor
Muriel Pinheiro, Francesco Banda, Federico Boniardi, Riccardo Piantanida, Stefano Tebaldini, Francesco Salvaterra
ESA, Italy

12:10pm - 12:30pm
Oral_20

Polarimetric Effects in P-band Interferometric Phase Triplets
Noelia Romero-Puig[1], Pau Prats[1], Irena Hajnsek[1,2], Konstantinos Papathanassiou[1]
1: Microwaves and Radar Institute, German Aerospace Center (DLR), Germany; 2: Institute of Environmental Engineering, ETH Zurich, Switzerland

12:30pm - 12:50pm
Oral_20

Adaptive cancellation of ground or overlying volume responses using multi-baseline InSAR acquisitions: first application to BIOMASS data
Laurent Ferro Famil[1,2], Marta Bottani[2,1], Yue Huang[3], Francesco Banda[4], Stefano Tebaldini[5]
1: ISAE-SUPAERO, University of Toulouse, France; 2: CESBIO, University of Toulouse, France; 3: Meteo-France, Toulouse, France; 4: Aresys, Milano, Italy; 5: Politecnico di Milano, Milano, Italy

BIOMASS 2

Location: Aula Duza 1

Chair: Dinh Ho Tong Minh, INRAE

Chair: Stefano Tebaldini, Politecnico di Milano

2:00pm - 4:00pm

2:00pm - 2:20pm
Oral_20

Interferometric Polarimetric SAR Decomposition for BIOMASS Mission Ground Phase Calibration

Dinh Ho Tong Minh
INRAE, France

2:20pm - 2:40pm
Oral_20

BIOMASS Digital Terrain Model Retrieval

Francesco Banda[1], Francesco Salvaterra[2], Laurent Ferro-Famil[3], Stefano Tebaldini[2]
1: aresys, Italy; 2: Politecnico di Milano, Italy; 3: ISAE-Supaero/CEBSIO, France

2:40pm - 3:00pm
Oral_20

BIOMASS Tomographic Processing

Francesco Banda[1], Francesco Salvaterra[2,1], Laurent Ferro-Famil[3], Matteo Pardini[4], Stefano Tebaldini[2]
1: aresys, Italy; 2: Politecnico di Milano, Italy; 3: ISAE-Supaero/CEBSIO, France; 4: DLR, Germany

3:00pm - 3:20pm
Oral_20

Towards a BIOMASS ice velocity product

Anders Kusk, John Peter Merryman Boncori, Jørgen Dall, Julius Gräs Kokholm
Technical University of Denmark, Denmar

3:20pm - 3:40pm
Oral_20

Bedrock Structures Characterization Using BIOMASS Polarimetric and Interferometric P-band SAR Data: First Results Over Tibesti (Sahara) Area

Zbigniew Perski[1], Laurent Ferro-Famil[2], Stefano Tebaldini[3], Yanghai Yu[3,4]
1: Polish Geological Institute, National Research Institute, Geohazards Center, Skrzatów 1, Kraków, Poland; 2: ISAE-Supaero, 10 Avenue Marc Pélegrin, Toulouse, 31400, France; 3: Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano, 20133 Milano, Italy; 4: National Space Science Center, Chinese Academy of Sciences, Beijing 100910, China

4:00pm - 4:30pm
Round Table - BIOMASS and Recent Missions
Location: **Aula Duza 1**

4:30pm - 7:00pm
POSTER SESSION II
Location: Exhibition Room

Ministry of Science and Higher Education
Republic of Poland

JAGIELLONIAN UNIVERSITY
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EUROPEAN SPACE AGENCY

15 - 19 June 2026 | Auditorium Maximum of the Jagiellonian University, Kraków, Poland

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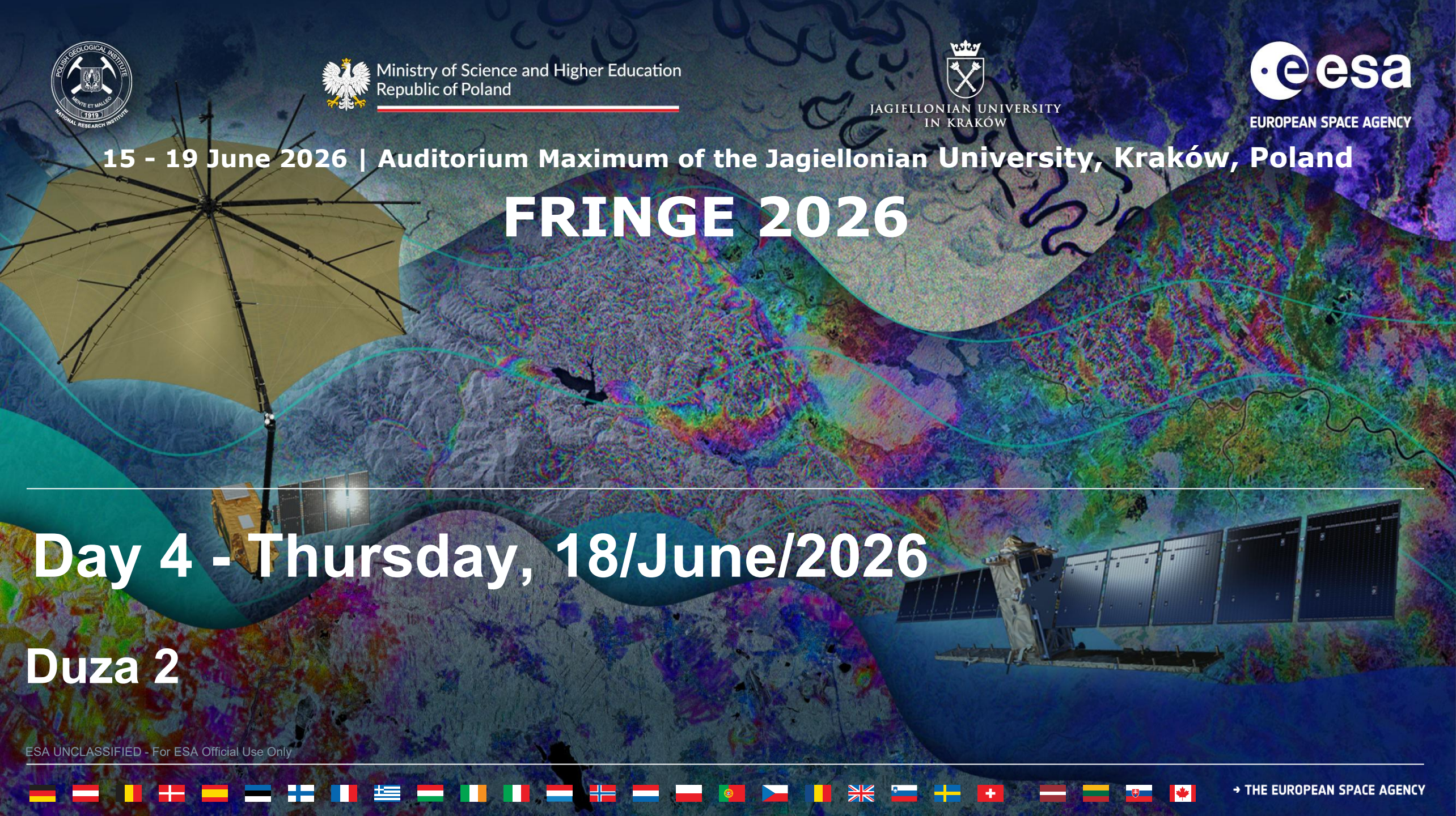

Day 4 - Thursday, 18/June/2026

Duza 2

Earthquakes & Tectonics 1

Location: Aula Duza 2

Chair: Tim Wright, University of Leeds

Chair: Henriette Sudhaus, Karlsruhe Institute of Technology

9:00am - 10:40am

9:00am - 9:20am

Oral_20

High-resolution geodetic velocities reveal role of weak faults in deformation of Tibetan Plateau

Tim Wright[1], Greg Houseman[2,1], Jin Fang[1], Yasser Maghsoudi[3], Andy Hooper[1], John Elliott[1], Lynn Evans[4], Milan Lazecky[1], Qi Ou[5], Barry Parsons[6], Chris Rollins[7], Lin Shen[8], Hua Wang[9], Dehua Wang[1]

1: COMET, School of Earth and Environment, University of Leeds, United Kingdom; 2: State Key Laboratory of Deep Earth Exploration and Imaging, China University of Geosciences, Beijing, China; 3: COMET, Department of Earth and Environmental Sciences, University of Exeter, Penryn, UK; 4: School of Earth, Atmosphere and Environment, Monash University, Clayton, VIC, Australia; 5: COMET, School of GeoSciences, University of Edinburgh, Drummond, Edinburgh, UK; 6: COMET, Department of Earth Sciences, University of Oxford, Oxford, UK; 7: GNS Science, Lower Hutt, New Zealand; 8: Lamont-Doherty Earth Observatory, Columbia University, New York, NY, USA; 9: College of Natural Resources and Environment, South China Agricultural University, Guangzhou, China

9:20am - 9:40am

Oral_20

Deformation, strains and velocities for the Alpine Himalayan belt from trans-continental Sentinel-1 InSAR & GNSS

John Elliott[1], Jin Fang[1], Milan Lazecky[1], Yasser Maghsoudi[2], Qi Ou[3], Jess Payne[1], Chris Rollins[4], Dehua Wang[1], Andy Hooper[1], Tim Wright[1]

1: University of Leeds, United Kingdom; 2: Exeter University, United Kingdom; 3: University of Edinburgh, United Kingdom; 4: GNS, New Zealand

9:40am - 10:00am

Oral_20

Investigating the fault motion at 2024-2025 Fentale-Dofen dike intrusions in Ethiopia, imaged by high-resolution InSAR observations

Simon Orrego[1], Juliet Biggs[1], Sam Wimpenny[1], Weiyu Zheng[1], Martin Vallée[2], Lin Way[1], Raphäel Grandin[2], Tim Davis[1], Elias Lewi[3]

1: COMET, School of Earth Sciences, University of Bristol, UK; 2: Institut de Physique du Globe de Paris, CNRS, Université de Paris Cité, Paris, France; 3: Institute of Geophysics, Space Science and Astronomy, Addis Ababa University, Addis Ababa, Ethiopia

10:00am - 10:20am

Oral_20

Sentinel-1 InSAR Reveals Complex Strain Accumulation at the Southwestern Caribbean-South America Transform Plate Boundary

Machel Higgens[1], Shimon Wdowinski[1], Omar Perez[2]

1: Florida International University, United States of America; 2: Department of Earth Sciences, Simón Bolívar University, Caracas, Venezuela

10:20am - 10:40am

Oral_20

Triggering of creep on secondary faults by large strike-slip earthquakes

Paul Dérand

Ecole Normale Supérieure -PSL, France

10:40am - 11:10am **Coffee Break**

Earthquakes & Tectonics 2

Location: **Aula Duza 2**

Chair: Gareth Funning, University of California, Riverside

Chair: Shimon Wdowinski, Florida International University

11:10am - 12:50pm

11:10am - 11:30am

Oral_20

Characterizing a Magnitude 5.3 Slow-Slip Event in the Permian Basin

Hannes Vasyura-Bathke[1], Pieter Bas Leezenberg[1], Tony Lupo[2], Andrew Keene[2]

1: SkyGeo, The Netherlands; 2: SM Energy, USA

11:50am - 12:10pm

Oral_20

The Kinematics, Dynamics, and Seismic Potential of the Tianshan from Sentinel-1 InSAR & GNSS

Fengnian Chang[1,2], Andrew Hooper[2], Shaochun Dong[1], Hongwei Yin[1], Jin Fang[2], John Elliott[2]

1: School of Earth Sciences and Engineering, Nanjing University, Nanjing, China; 2: COMET, School of Earth, Environment and Sustainability, University of Leeds, Leeds, UK

12:10pm - 12:30pm

Oral_20

When is a great earthquake not "the big one"? Insights from modelling of Sentinel-1 InSAR data from the July 2025 M8.8 Kamchatka megathrust earthquake

Gareth Funning, Axel Periollat

University of California, Riverside, United States of America

12:30pm - 12:50pm

Oral_20

Improved 3-D Co-seismic Deformation From Increased Burst Overlap Interferometry Coverage

Andy Hooper[1], Muhammet Nergizci[1], Yngvar Larsen[2], Milan Lazecky[1], Tim Wright[1]

1: University of Leeds, United Kingdom; 2: NORCE, Norway

Earthquakes & Tectonics 3

Location: Aula Duza 2

Chair: Sigurjón Jónsson, King Abdullah University of Science and Technology (KAUST)

Chair: Andy Hooper, University of Leeds

2:00pm - 4:00pm

2:00pm - 2:20pm
Oral_20

Interplate rheological contrast revealed by asymmetric deformation after the 2023 Kahramanmaraş earthquakes

Jihong Liu[1], Sigurjón Jónsson[1], Xing Li[2], Wenqian Yao[3,4], Yann Klinger[3]
1: King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia; 2: Bureau of Economic Geology, The University of Texas at Austin, Austin, Texas, U.S.A.; 3: Université Paris Cité, Institut de Physique du Globe de Paris, CNRS, F-75005 Paris, France; 4: Institute of Surface-Earth System Science, School of Earth System Science, Tianjin University, Tianjin, China

2:20pm - 2:40pm
Oral_20

Long-Lived Postseismic Deformation and Rheology Following the 2001 Mw 7.8 Kokoxili (Tibet) Earthquake Constrained by Decadal Geodetic Observations from GNSS and Multi-Mission InSAR

Jin Fang, Tim Wright, Andy Hooper, John Elliott, Milan Lazecký
COMET, University of Leeds, United Kingdom

2:40pm - 3:00pm
Oral_20

Three-Dimensional Post-seismic Deformation Following the 2023 Kahramanmaraş Earthquakes Revealed by Integrated LOS InSAR, SBOI, and GNSS Observations

Muhammet Nergizci[1], Milan Lazecky[1], Semih Ergintav[2], Qiang Qiu[3], Ziyadin Cakir[4], Andrew Hooper[1], Tim J. Wright[1]
1: COMET, School of Earth and Environment, University of Leeds, Leeds, UK; 2: Kandilli Observatory and Earthquake Research Institute, Department of Geodesy, Bogazici University, İstanbul, TR; 3: South China Sea Institute of Oceanology Chinese Academy of Sciences: Guangzhou, Guangdong, CN; 4: Istanbul Technical University, Istanbul, TR

3:00pm - 3:20pm
Oral_20

New insights into the earthquake factory from InSAR

Sigurjón Jónsson[1], Jihong Liu[1], Bo Li[1], Xing Li[2], Yann Klinger[3], P. Martin Mai[1]
1: King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia; 2: Bureau of Economic Geology, The University of Texas at Austin, Austin, USA; 3: Université Paris Cité, Institut de Physique du Globe de Paris, CNRS, Paris, France

3:20pm - 3:40pm
Oral_20

Present-Day Kinematics of Western Greece and the Balkans Revealed by Sentinel-1 InSAR Data

Aîmine Meridi[1], Cécile Lasserre[1], Marianne Métois[1], Marie-Pierre Doin[2], Philippe Durand[3]
1: LGL-TPE – Univ Lyon, UCBL, ENSL, UJM, CNRS, LGL-TPE, F-69622, Villeurbanne, France – France; 2: ISTerre – University of Grenoble – 1381 Rue de la Piscine, 38610 Gières, France; 3: Centre National d'Études Spatiales [Toulouse] – CNES, Paris, France – France

3:40pm - 4:00pm
Oral_20

Investigating the source processes of underground-mining induced earthquakes based on geodetic and seismic observations

Henriette Sudhaus[1], Sarah Moser[1], Katharina Jörg[1], Wojciech Witkowski[2]
1: Karlsruhe Institute of Technology, Germany; 2: AGH University of Science and Technology, Department of Mining Areas Protection, Geoinformatics and Mining Surveying, Krakow, Poland

4:00pm - 4:30pm
Round Table - EQ and Tectonics
Location: **Aula Duza 2**

4:30pm - 7:00pm
POSTER SESSION II
Location: Exhibition Room

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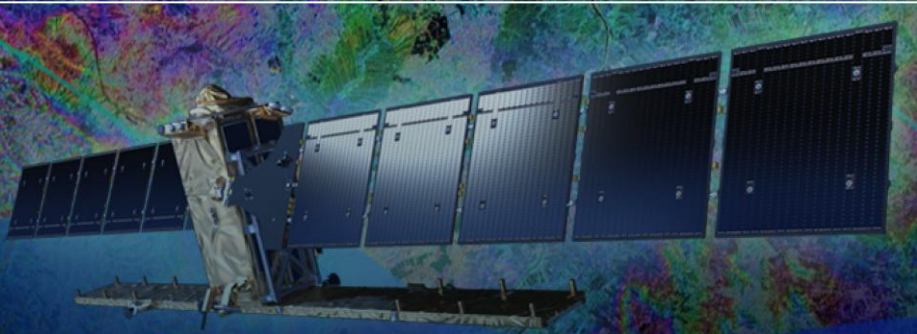

Day 5 - Friday, 19/June/2026

Duza 1&2

Bistatic and multi- static SAR - Harmony

Location: **Aula Duza 1 and 2 in plenary**

Chair: **Pau Prats-Iraola**, German Aerospace Center (DLR)
Chair: **Julia Kubanek**, ESA

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9:00am - 10:40am

9:00am - 9:20am
Oral_20

Scientific Applications of the Harmony Mission to Solid Earth and Land Ice

Juliet Biggs[1], Andreas Kaab[2], Andrew Hooper[3], Riccardo Lanari[4], Eric Rignot[5], Pau Prats-Iraola[6], Paco Lopez-Dekker[7], Bjorn Rommen[8]
1: COMET, University of Bristol, Bristol, United Kingdom; 2: Department of Geosciences, University of Oslo, Oslo, Norway; 3: COMET, University of Leeds, Leeds, United Kingdom; 4: IREA-CNR, Napoli, Italy; 5: Department of Earth System Science, University of California Irvine, USA; 6: Microwaves and Radar Institute, German Aerospace Center (DLR), Germany; 7: Department of Geoscience and Remote Sensing, Delft University of Technology, CN Delft, The Netherlands; 8: European Space Research and Technology Center, European Space Agency, 2201 Noordwijk, The Netherlands

9:20am - 9:40am
Oral_20

Products, Processing Algorithms and End-to-End Simulations for Land Applications in the Harmony Mission

Pau Prats-Iraola[1], Marc Rodiguez-Cassola[1], Andy Hooper[2], Juliet Biggs[3], Andreas Kääb[4], Eric Rignot[5], Ramon Brcic[1], Francesco De Zan[6], Thomas Nagler[7], Helmut Rott[7], Simon Trumpf[1], Andrea Pulella[1], Georg Fischer[1], Andreas Benedikter[1], Irena Hajnsek[1], Dominik Richter[1], Markus Bachmann[1], Kostas Papathanassiou[1], Olivier d'Hondt[8], Paco Lopez-Dekker[9], Björn Rommen[10]
1: German Aerospace Center (DLR), Germany; 2: University of Leeds; 3: University of Bristol; 4: University of Oslo; 5: University of California Irvine; 6: Delta Phi Remote Sensing GmbH; 7: ENVEO GmbH; 8: SAREO; 9: Delft University of Technology; 10: ESA

9:40am - 10:00am
Oral_20

On the Correction of the Penetration-Related Elevation Bias in Harmony Cross-Track InSAR Products of Ice Sheets and Glaciers

Andreas Benedikter[1], Georg Fischer[1], Helmut Rott[2], Thomas Nagler[2], Andreas Kääb[3], Eric Rignot[4], Marc Rodriguez-Cassola[1], Irena Hajnsek[1], Pau Prats-Iraola[1]
1: Microwaves and Radar Institute, German Aerospace Center (DLR), Germany; 2: ENVEO, Austria; 3: Department of Geosciences, University of Oslo, Norway; 4: University of California, Irvine, USA

10:00am - 10:20am
Oral_20

A Robust Data-based Phase Synchronisation Approach for the Harmony Mission

Marc Rodriguez-Cassola, Pau Prats-Iraola
DLR, Germany

10:40am - 11:00am — **Round Table - Bistatic and multi- static SAR - Harmony**
Location: **Aula Duza 1 and 2 in plenary**

11:00am - 11:30am — **Coffee Break**

11:30am - 1:30pm	**Session Summaries and Closing** Location: **Aula Duza 1 and 2 in plenary**
1:30pm - 1:40pm	**Closing**

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Day 5 - Friday, 19/June/2026

Aula Sdrenia

Landslides and related hazards

Location: Aula Srednia

Chair: Rachel Holley, Viridien Satellite Mapping

Chair: John Dehls, Geological Survey of Norway

9:00am - 10:40am

9:00am - 9:20am

Oral_20

Classification of the May 2023 Emilia-Romagna landslides across two consecutive rainfall events: integrating hourly rainfall, daily soil moisture, and landslide typology

Francesco Becattini[1,2], Alessandro Novellino[3], Francesco Poggi[1], Olga Nardini[1], Davide Festa[4], Wolfgang Wagner[4], Federico Raspini[1,2]

1: Department of Earth Sciences, University of Florence, Florence, Italy; 2: National Institute of Oceanography and Applied Geophysics, – OGS, Udine, Italy; 3: British Geological Survey, Nottingham, United Kingdom; 4: Technische Universität Wien, Department of Geodesy and Geoinformation, Vienna, Austria

9:20am - 9:40am

Oral_20

Beyond Surface Deformation: FEM–PINN Inversion of Landslides from InSAR

Ashok Dahal

University of Twente, The Netherlands

9:40am - 10:00am

Oral_20

L-BAND SAOCOM-1 MULTI-TEMPORAL DINSAR ANALYSES IN VEGETATED AND LANDSLIDE-PRONE AREAS OF THE ITALIAN TERRITORY: A NEW ASSESSMENT OF THE P-SBAS RESULTS

Manuela Bonano[1], Francesco Casu[1], Claudio De Luca[1], Michele Manunta[1], Yenni Lorena Belen Roa[1], Pasquale Striano[1], Giovanni Onorato[1], Ivana Zinno[1], Francesco Poggi[2], Matteo Del Soldato[2], Federico Raspini[2], Riccardo Lanari[1]

1: Istituto per il Rilevamento Elettromagnetico dell'Ambiente, Consiglio Nazionale delle Ricerche, IREA-CNR, Naples-Milan, Italy; 2: Dipartimento di Scienze della Terra, Università degli Studi di Firenze, Florence, Italy

10:00am - 10:20am

Oral_20

Automated detection of active mass movements in SAR wrapped interferograms using a geomorphology-constrained YOLO-based CNN

Federico Agliardi[1], Alessandro Mondini[2], Alessandro Simoni[3], Cristina Reyes-Carmona[1], Alessandro Mercurio[3], Fabio Bovenga[4]

1: University of Milano Bicocca, Department of Earth and Environmental Sciences, Milano, Italy; 2: National Research Council CNR – IMATI, Genova, Italy; 3: University of Bologna, Department of Biological, Geological, and Environmental Sciences, Bologna, Italy; 4: National Research Council CNR – IREA, Bari, Italy

10:40am - 11:00am

Round Table - Landslides and related hazards

Location: **Aula Srednia**

11:00am - 11:30am

Coffee Break