

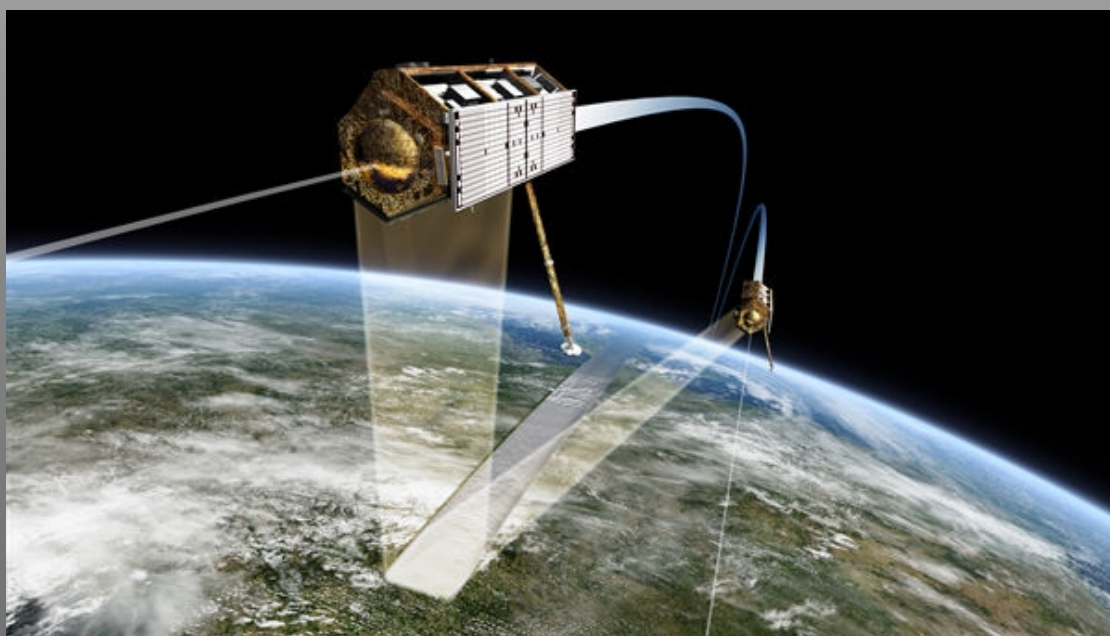
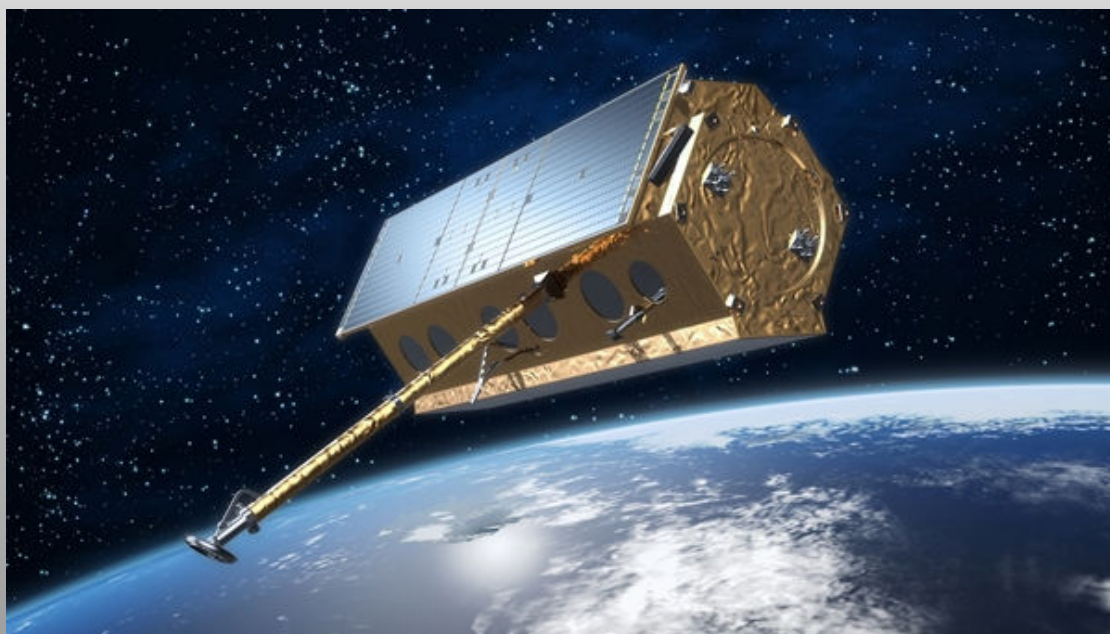


TerraSAR-X / TanDEM-X Science Team Meeting

18-20 October 2023

German Aerospace Center (DLR)

Final Program



Session overview

Wednesday, October 18, 2023		Building 124	Building 135 (RMC)
08.30 – 09.30	Registration		
09.30 – 11.15	Plenary: TerraSAR-X, TanDEM-X and future national SAR Mission		
11.15 – 11.30	Recommendation/Discussion		
11.30 – 12.00	Coffee break / Tea Break		
12.00 – 12.45	Session 1.1: International SAR Missions I		
12.45 – 14.00	Lunch break		
14.00 – 15.00	Session 1.2: International SAR Missions II		
15.00 – 15.15	Recommendation/Discussion		
15.15 – 15.45	Coffee break / Tea Break		
15.45 – 16.45	Session 2.1: Georisk I		
16.45 – 17.45	Session 2.2: Georisk II		
17.45 – 18.00	Recommendation/Discussion		
18.00 – 21.30	Icebreaker Event		

Thursday, October 19, 2023		Building 124	Building 135 (RMC)
09.00 – 10.00	Session 3.1: Ocean I		09.00 – 09.45 Session 4.1: Archaeology 09.45 – 10.00 Recommendation//Discussion
10.00 – 11.00	Session 3.2: Ocean II		10.00 – 10.45 Session 5.1: Agriculture
11.00 – 11.15	Recommendation/Discussion		10.45 – 11.00 Recommendations/Discussion
11.15 – 11.45	Coffee break / Tea Break		
11.45 – 12.45	Session 6.1: Hydrology		
12.45 – 13.00	Recommendation/Discussion		
13.00 – 14.10	Lunch break		
14.10 – 15.40	Session 7.1: Snow and Ice		14.10 – 15.40 Session 8.1: Urban Area
15.40 – 15.55	Recommendations/Discussion		15.40 – 15.55 Recommendations/Discussion
15.55 – 16.25	Coffee break / Tea Break		
16.25 – 17.55	Session 7.2: Snow, Ice and Sea Ice		16.25 – 17.40 Session 9.1: DEM Methods
17.55 – 18.10	Recommendation/Discussion		17.40 – 17.55 Recommendation/Discussion
18.10 – 20.30	Poster Session (TechLab)		

Friday, October 20, 2023		Building 124	Building 135 (RMC)
09.00 – 10.00	Session 10.1: Forest I		
10.00 – 10.30	Coffee break / Tea Break		
10.30 – 11.30	Session 10.2: Forest II		
11.30 – 11.45	Recommendation/Discussion		
11.45 – 12.15	Summary Recommendations and Wrap Up		

Wednesday, October 18, 2023

Plenary: TerraSAR-X, TanDEM-X and future national SAR Missions

Building 124

Chairperson: Irena Hajnsek (DLR/ETH) and Achim Roth (DLR)

- 09.30 – 09.35 Welcome
Alberto Moreira, German Aerospace Center (DLR)
- 09.35 – 09.45 Agenda and Logistics
Irena Hajnsek/Achim Roth, German Aerospace Center (DLR)
- 09.45 – 10.00 TerraSAR-X and TanDEM-X Mission Status
Manfred Zink, German Aerospace Center (DLR)
- 10.00 – 10.15 The Edited TanDEM-X DEM and the DEM Change Maps: The New Product in 30m Posting
Marie Lachaise, Barbara Schweißhelm, Carolina González, Paola Rizzoli, Manfred Zink, German Aerospace Center (DLR)
- 10.15 – 10.30 TanDEM-X DEM 2020: What is new?
Birgit Wessel, Martin Huber, Barbara Schweisshelm, Markus Bachmann, Marie Lachaise, Stefan Buckreuss, German Aerospace Center (DLR)
- 10.30 – 10.45 Approaching new users: Value added products derived from TerraSAR-X and TanDEM-X
Achim Roth, Thomas Esch, Paola Rizzoli, Kostas Papathanassiou, German Aerospace Center (DLR); Bernhard Lehner (McGill University Montreal, Canada)
- 10.45 – 11.00 TanDEM-X 4D Phase - Science and DEM Coverages
Markus Bachmann, Allan Bojarski, Johannes Böer, Stefan Buckreuss, Thomas Busche, Christo Grigorov, Irena Hajnsek, Ralph Kahle, Thomas Kraus, Patrick Klenk, Kay Müller, Ulrich Steinbrecher, Maximilian Schandri, Manfred Zink, German Aerospace Center (DLR)
- 11.00– 11.15 A Next German X-Band SAR Mission
Elizabeth Nuncio Quiroz, Robert Schweinsberg, Samuel Stettner, German Space Agency
- 11.15 – 11.30 Recommendations/Discussion
- 11.30 – 12.00 *Coffee / Tee break*

Session 1.1: Future International SAR Missions I

Building 124

Chairperson: Paul Rosen (JPL) and Björn Rommen (ESA)

- 12.00 – 12.15 Scientific Exploitation of PAZ and Current Status,
María José González Bonilla, Nuria Casal, Cristina Hiedra, Juan Manuel Cuerda, National Institute for Aerospace Technology Spain (INTA)
- 12.15 – 12.30 Joint CSA-DLR-INTA Scientific Announcement of Opportunity for combining C and X Band data
Daniel De Lisle (CSA), Achim Roth and Irena Hajnsek (DLR), María José González Bonilla (INTA)
- 12.30 – 12.45 The ESA ROSE-L Mission
Malcolm Davidson, Björn Rommen, European Space Agency (ESA)
- 12.45 – 14.00 *Lunch break*

Session 1.2: Future International SAR Missions II

Building 124

Chairperson: Maria José González Bonilla (INTA) und Ramon Torres (ESA)

- 14.00 – 14.15 Status of NISAR: NASA ISRO Synthetic Aperture Radar Mission
Gerald W. Bawden, National Aeronautics and Space Administration USA (NASA)
- 14.15 – 14.30 Status Update of ALOS-2/4 Calibration and Validation
Takeshi Motohka, Japan Aerospace Exploration Agency (JAXA)
- 14.30 – 14.45 Sentinel-1 development status and evolution
Ramon Torres, European Space Agency (ESA)
- 14.45 – 15.00 The Earth Explorer Missions: BIOMASS and Harmony
Björn Rommen, European Space Agency (ESA)
- 15.00 – 15.15 Recommendations/Discussions
- 15.15 – 15.45 *Coffee / Tee break*

Session 2.1: Georisk I

Chairperson: Mahdi Motagh (GFZ) and Andreas Reigber (DLR)

- 15.45 – 16.00 The Utility of TerraSAR-X, TanDEM-X, and PAZ for Studying Global Volcanic Activity: Successes, Challenges, and Future Prospects
Federico Galetto (Cornell University, USA); Michael Poland (US Geological Survey, USA); Susanna Ebmeier (University of Leeds, United Kingdom (Great Britain)); Juliet Biggs, Edna Dualeh and Mark Bemelmans (University of Bristol, United Kingdom (Great Britain)); Matthew Pritchard (Cornell University, USA); Francisco Delgado (Universidad de Chile, Chile); Paul Lundgren (NASA Jet Propulsion Laboratory, USA); Fabien Albino (ISTerre, France); Ian Hamling (GNS Science, New Zealand); Yosuke Aoki (University of Japan, Japan); Raphaël Grandin (IPGP, France); Tara Shreve (University of Alaska Fairbanks, USA); Christelle Wauthier and Judit Gonzalez Santana (Pennsylvania State University, USA)
- 16.00 – 16.15 Combining Thermal, Tri-Stereo Optical and Bi-Static InSAR Satellite Imagery for Lava Volume Estimates - the 2021 Cumbre Vieja Eruption, La Palma
Simon Plank (German Aerospace Center (DLR), Germany); Alina Shevchenko (GFZ German Research Centre for Geosciences & Institute of Volcanology and Seismology FEB RAS, Germany); Pablo Angelo and Veronika Gstaiger (DLR, Germany); Pablo J. González (IPNA-CSIC, Spain); Simone Cesca (GFZ, Germany); Sandro Martinis (German Aerospace Center (DLR), Germany); Thomas R. Walter (GFZ, Germany)
- 16.15 – 16.30 Post-Failure Slope Instability of the 2020 Aniangzhai Landslide in China: Results from Multi-Temporal InSAR and Corner Reflector InSAR
Zhuge Xia and Mahdi Motagh (GFZ German Research Centre for Geosciences, Germany); Tao LI (Wuhan University, China); Mimi Peng and Sigrid Roessner (GFZ German Research Centre for Geosciences, Germany); Wandu Wang (GFZ German Research Center for Geosciences, Germany & Germany and Leibniz University Hannover, Germany)
- 16.30 – 16.45 The Life Cycle of the 21 July 2020, Shaziba Landslide in China Investigated with C-Band and X-Band Satellite SAR Systems
Wandu Wang (GFZ German Research Center for Geosciences, Germany & Germany and Leibniz University Hannover, Germany); Mahdi Motagh (GeoForschungsZentrum (GFZ), Germany); Sara Mirzaee (California Institute of Technology, USA); Tao LI (Wuhan University, China); Chao Zhou and Hui Tang (GFZ German Research Centre for Geosciences, Germany); Sigrid Roessner (GFZ German Research Centre for Geosciences, Section 1. 4 - Remote Sensing, Germany); Zhuge Xia (GeoForschungsZentrum Potsdam, Germany)

Session 2.2: Georisk II

Chairperson: Franz Meyer (UAF) and Christian Minet (DLR)

- 16.45 – 17.00 Exploring Active Faults Through TanDEM-X DEM Data Between the Main Branches of the East African Rift in the Mara River Basin, East Africa
Simon Kuebler (Ludwig-Maximilians-University of Munich, Germany); Beth Kahle (Ludwig-Maximilians-University of Munich, Germany & University of Cape Town, South Africa); Alina Lucia Ludat and Mjahid Zebari (Ludwig-Maximilians-University of Munich, Germany); Stefanie Magdalena Rieger (LMU Geology, University of Munich, Germany); Mugabo Wilson actionDusingizimana, Sara Carena and Anke M. Friedrich (Ludwig-Maximilians-University of Munich, Germany)
- 17.00 – 17.15 Detection of Railway Track Anomalies Using Interferometric Time-Series of Satellite Radar Data
Philipp Bernhard (ETH Zürich, Switzerland); David Haener (Swiss Federal Railways SBB, Switzerland); Othmar Frey (ETH Zurich & Gamma Remote Sensing, Switzerland)
- 17.15 – 17.30 TanDEM-X as a Source of Information in Geomorphological Studies of the Nullarbor Plain, Australia
Rok Ciglič, Mateja Ferk and Matej Lipar (Research Centre of the Slovenian Academy of Sciences and Arts, Slovenia)
- 17.30 – 17.45 Recommendation / Discussion
- 18.00 – 21.30 Icebreaker Event

Thursday, October 19, 2023

Session 3.1 Ocean I

Building 124

Chairperson: Roland Romeiser (University of Miami) and Egbert Schwarz (DLR)

- 09.00 – 09.15 Ship Wake Detectability in TerraSAR X Imagery - Summary and Appli-Cations for Wake Detection
Björn Tings; Andrey Pleskachevsky; Stefan Wiehle and Sven Jacobsen (German Aerospace Center (DLR), Germany)
- 09.15 – 09.30 Automatic Refugee Inflatable Vessel Detection with Polarimetric SAR
Peter Lanz (Department of Computing Science, Carl von Ossietzky University of Oldenburg; Institute for Applied Photogrammetry and Geoinformatics, Jade University Oldenburg); Armando Marino (Department of Biological and Environmental Sciences, University of Stirling); Morgan Simpson (Department of Biological and Environmental Sciences, University of Stirling); Thomas Brinkhoff (Institute for Applied Photogrammetry and Geoinformatics, Jade University Oldenburg); Frank Köster (Institute for AI Safety and Security, German Aerospace Center (DLR)); Matthias Möller (Faculty for Humanities and Cultural Sciences, Otto-Friedrich-University of Bamberg)
- 09.30 – 09.45 On the Use of SAR Data for the Monitoring of Morphodynamical Changes on the German North Sea Coast
Martin Gade (Institute of Oceanography Uni-Hamburg, Germany)
- 09.45 – 10.00 A Sigma0 Percentile Threshold Approach for Monitoring Shoreline Change
Daithí Maguire (University of Galway, Ireland)

Session 3.2 Ocean II

Chairperson: Martin Gade (UH) and Nicole Richter (RWTH, GFZ)

- 10.00 – 10.15 TerraSAR-X Radargrammetry for Hurricane Damage Assessment
Roland Romeiser (University of Miami, USA); Michael J Caruso (University of Miami/CSTARS, USA); Hans Graber (Center for Southeastern Tropical Advanced Remote Sensing, University of Miami, USA)
- 10.15 – 10.30 Mapping Penguin Colonies Using TerraSAR-X and PAZ InSAR Coherence
Nicole Richter (RWTH Aachen University & GFZ Potsdam, Germany); Tom Hart (Oxford Brookes University, United Kingdom (Great Britain)); Oliver Cartus (GAMMA Remote Sensing, Switzerland)
- 10.30 – 10.45 Near Real-Time Support for Polar Science Campaigns with TerraSAR-X
Sergey Voinov (German Aerospace Center (DLR), Germany); Egbert Schwarz, Detmar Krause and Stefan Kowalewski (German Aerospace Center, Germany); Anja Frost (German Aerospace Center (DLR), Germany); Dmitrii Murashkin and Karl Kortum (German Aerospace Center, Germany); Stefan Wiehle (German Aerospace Center (DLR), Germany)
- 10.45 – 11.00 Temporal Morphing of X-Band SAR Sea Ice Classification
Martin Bathmann (German Aerospace Center (DLR), Germany); Karl Kortum (German Aerospace Center, Germany); Anja Frost and Stefan Wiehle (German Aerospace Center (DLR), Germany); Gunnar Spreen (University of Bremen, Germany)
- 11.00 – 11.15 Recommendation / Discussion
- 11.15 – 11.45 Coffee / Tea break

Thursday, October 19, 2023

Session 4.1: Archaeology

Building 135

Chairperson: Timo Balz (Wuhan University) and Eman M. Ghoneim (UNCW)

- 09.00 – 09.15 Supporting Archeological Prospection and Cultural Heritage Protection with TerraSAR-X
Timo Balz (Wuhan University, China); Gino Caspari (University of Sydney, Australia); Cem Sönmez Boyoğlu, Ifeanyi Chike and Mostafa Ewais (Wuhan University, China)
- 09.15 – 09.30 Geo-Archaeological Research in Northern Kordofan (Sudan)
Tim Karberg and Jana Eger-Karberg (Westfälische Wilhelms-Universität Münster, Germany)
- 09.30 – 09.45 The Discovery of an Extinct Nile Branch: A Possible Active Waterway in Ancient Egypt
Eman M. Ghoneim (University of North Carolina Wilmington, USA); Raghda El-Behaedi (University of Chicago, USA); Timothy Ralph (University of Queensland, Australia); Suzanne Suzanne Onstine (The University of Memphis, USA); Gad EL-Qady (NIRAG, Egypt); Mahfooz Hafez, Magdy Atya and Mohamed I.M. Ahmed (NRIAG, Egypt); Amr Fahil (Tanta University, Egypt); Ashraf Khozym (NRIAG, Egypt); Mohamed Sobhy (Tanta University, Egypt)
- 09.45 – 10.00 Recommendation / Discussion

Session 5.1 Agriculture

Chairperson: Juan Manuel Lopez-Sanchez (UA) and Irena Hajnsek (DLR)

- 10.00 – 10.15 Evaluation of X-Band Repeat-Pass Interferometric Coherence for Crop Monitoring: A New Opportunity with TerraSAR-X, TanDEM-X and PAZ
Juan Manuel Lopez-Sanchez and Arturo Villarroja-Carpio (University of Alicante, Spain)

- 10.15 – 10.30 Dam Monitoring Utilizing DInSAR Time Series Analysis with High Resolution TSX/PAZ Imagery and Digital Surface Model
Clay Woods (University of Miami & CSTARS, USA); Hans Graber (Center for Southeastern Tropical Advanced Remote Sensing, University of Miami, USA); Jennifer Fritz (CSTARS, USA); Michael J Caruso (University of Miami/CSTARS, USA); Gregory Podobensky (CSTARS, USA)
- 10.30 – 10.45 Sentinel-2 Data Regression over Agricultural Crops by Means of C- and X-Band Radar Data
Mario Busquier Martínez (University of Alicante, Spain); David Eidmann (CORAmaps GmbH, Germany); Damian Bargiel (Hochschule Geisenheim University, Germany); Juan Manuel Lopez-Sanchez (University of Alicante, Spain); Maximilian Guntrum (CORAmaps GmbH, Germany)
- 10:45– 11:00 Recommendations/Discussions
- 11.15 – 11.45 *Coffee /Tea break*

Session 6.1: Hydrology

Building 124

Chairperson: Christiane Schmullius (FSU) and Achim Roth (DLR)

- 11.45 – 12.00 Using High-Resolution TerraSAR-X Data to Complement Sentinel-1 SAR Data for Monitoring the Deformation Patterns of Gravity Dams in Germany
Jonas Ziemer (University of Jena, Germany); Jannik Jänichen and Natascha Stumpf (Friedrich-Schiller University Jena, Germany); Christiane Schmullius (Friedrich-Schiller-University Jena, Germany); Clémence Dubois (Friedrich-Schiller University Jena, Germany)
- 12.00 – 12.15 Automatic Machine-Learning Based Water Body Detection Algorithm as Part of the Hydrological Conditioning of the TanDEM-X DEM
Carolin Walper (German Aerospace Center, Germany); Leena Warmedinger and Martin Huber (German Aerospace Center (DLR), Germany); Mira Anand (Confluvio Consulting, Canada); Bernhard Lehner (McGill University Montreal, Canada); Larissa Gorzawski (Company for Remote Sensing and Environmental Research (SLU), Germany); Birgit Wessel (German Aerospace Center (DLR) & DFD-LAX, Germany); Achim Roth (DLR, Germany)
- 12.15 – 12.30 Advanced Hydrologic Conditioning of the TanDEM-X DEM to Produce Version 2 of the HydroSHEDS Database
Mira Anand (Confluvio Consulting, Canada); Bernhard Lehner (McGill University Montreal, Canada); Leena Warmedinger and Martin Huber (German Aerospace Center (DLR), Germany); Carolin Walper (German Aerospace Center, Germany); Michele Thieme (World Wildlife Fund, USA); Achim Roth (DLR, Germany)
- 12.30 – 12.45 The Choice of the DEM Effects the Outcome of Soil Erosion by Water Assessments
Jussi Baade (Friedrich-Schiller-University Jena, Germany)
- 12.45 – 13.00 Recommendations/Discussions
- 13.00 – 14.10 *Lunch time*

Session 7.1: Snow and Ice

Building 124

Chairperson: Dana Floricioiu (DLR) and Georg Fischer (DLR)

- 14.10 – 14.25 The Greenland Ice Mapping Project: Measuring Glacier Flow Variability with TerraSAR-X and TanDEM-X
Ian R Joughin (Polar Science Center, Applied Physic Lab, University of Washington, USA); Ian Howat (The Ohio State University, USA); Benjamin Smith (Polar Science Center, Applied Physic Lab, University of Washington, USA); Michalea King (Applied Physics and Lab University of Washington, USA)

- 14.25 – 14.40 Geodetic Glacier Mass Balance via TanDEM-X for Northern High Latitudes
Philipp Malz, Christian Sommer and Thorsten Seehaus (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany); Matthias Braun (Friedrich-Alexander-Universität Erlangen Nürnberg (FAU), Germany)
- 14.40 – 14.55 Glacier Mass Balance Change in Karakoram During the Recent Decade Revealed by the High-Resolution TanDEM-X DEM Series
Shiyi Li (ETH Zurich, Switzerland); Irena Hajsek (ETH Zurich, DLR Oberpfaffenhofen, Germany); Kathrin Maier (ETH Zurich, Switzerland)
- 14.55 – 15.10 A Hybrid TanDEM-X, ICESat-2 Digital Terrain Model for Cryosphere Applications
Pietro Milillo (Department of Civil and Environmental Engineering, University of Houston, Houston, TX, USA, German Aerospace Center (DLR), Germany); Ben Smith (Polar Science Center, Applied Physics Lab, University of Washington, Seattle, Washington, USA); Johan Nilsson (Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA); Paola Rizzoli, Jose Luis Bueso Bello, Pau Prats, Manfred Zink (German Aerospace Center (DLR), Germany)
- 15.10 – 15.25 InSAR-Based Mass Budget Estimation for the Northern Antarctic Peninsula Ice Sheet
Thorsten Seehaus, Christian Sommer and Philipp Malz (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany); Thomas Dethinne (Centre Spatial de Liège, Germany)
- 15.25 – 15.40 Atmosphere-Ocean Driven Glacial Changes on the West Coast of Antarctic Peninsula from a Local Glacial Perspective
Yuting Dong, Maolin Li and Ji Zhao (China University of Geosciences, China); Dana Floricioiu; Lukas Krieger (German Aerospace Center (DLR), Germany)
- 15.40 – 15.55 Recommendation / Discussion
- 15.55 – 16.25 *Coffee / Tea break*

Session 8.1: Urban Area

Building 135

Chairperson: Michael Schmitt (UBM) and Bernhard Rabus (SFU)

- 14.10 – 14.25 Land Subsidence in Wuhan Revealed Using a Multi-Sensor InSAR Time Series Fusion Approach
Haonan Jiang (Wuhan University & GFZ German Research Centre for Geoscience, Germany); Timo Balz (Wuhan University, China); Jianan Li (Institute for Remote Sensing Science and Application, China)
- 14.25 – 14.40 Large-Scale Subsidence Risk from Sentinel-1 Evaluated by High-Resolution TerraSAR-X Data
Mahmud Haghighi (Institute of Photogrammetry and Geoinformation, Leibniz University Hannover, Germany); Mahdi Motagh (GeoForschungsZentrum (GFZ), Germany)
- 14.40 – 14.55 Generating Urban Height Models with Single Image Height Estimation from Spotlight-Mode TerraSAR-X Data
Michael Schmitt and Michael Recla (University of the Bundeswehr Munich, Germany)
- 14.55 – 15.10 Interferometric High-Resolution SAR for Infrastructure Monitoring at Simon Fraser University Burnaby Campus
Usman Iqbal Ahmed, Bernhard Rabus (Simon Fraser University, Canada)
- 15.10 – 15.25 3-D Landmarks Derived from TerraSAR-X Data as Ground Control Information for Optical Imagery
Ulrich Balss; Stefan Auer; Thomas Krauß and Jiaojiao Tian (German Aerospace Center (DLR), Germany)

- 15.25 – 15.40 The Link Between Geo Environmental Factors and Mental Health: Exploring the Correlation of Elevation, Urbanicity, Green and Blue Spaces with National Patient Cohort Data
Paul Renner (Friedrich Schiller University Jena, Germany); Sören Hese (Friedrich Schiller University Jena); James Richard Banks (Free University Berlin, Germany); Marcel Jentsch (Charite Universitätsmedizin Berlin, Germany); Elli Polemiti (Charite Universitätsmedizin Berlin, Germany); Kerstin Schepanski (Free University Berlin, Germany); Gunter Schumann (Charite Universitätsmedizin Berlin, Germany)
- 15.40 – 15.55 Recommendation / Discussions
- 15.55 – 16.25 Coffee / Tea break

Session 7.2: Snow, Ice and Sea Ice

Building 124

Chairperson: Ian R Joughin (University of Washington) and Lanqing Huang (ETH Zurich)

- 16.25 – 16.40 Utilizing Joint TSX-PAZ Acquisitions for Imaging of Antarctic Glacier Grounding Lines
Lukas Krieger (German Aerospace Center (DLR), Germany); Dana Floricioiu (DLR, Germany)
- 16.40 – 16.55 Deep Learning Based Automatic Grounding Line Delineation in DInSAR Interferograms
Sindhu Ramanath Tarekere, Lukas Krieger (German Aerospace Center (DLR), Germany); Konrad Heidler (Technical University of Munich, Germany); Dana Floricioiu (DLR, Germany)
- 16.55 – 17.10 Unsupervised Segmentation of Snow Facies on the Greenland Ice Sheet Derived from the Last Decade of TanDEM-X Interferometric SAR Data
Alexandre Becker Campos (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) & German Aerospace Center (DLR), Germany); Paola Rizzoli, Carolina González and Jose-Luis Bueso-Bello (German Aerospace Center (DLR), Germany); Matthias Braun (Friedrich-Alexander-Universität Erlangen Nürnberg (FAU), Germany)
- 17.10 – 17.25 Detection of Snow Change Using Polarimetric TerraSAR-X Time-Series (Svalbard, Norway)
Jean-Pierre Dedieu (University Grenoble Alpes, France); Anna Wendleder (German Aerospace Center (DLR) & German Remote Sensing Data Center, Germany)
- 17.25 – 17.40 TerraSAR-X in Support of the Canadian Dual Ku-Band SAR Mission
Anna Wendleder (German Aerospace Center (DLR), Germany); Benoit Monpetit (Environment and Climate Change Canada, Germany)
- 17.40 – 17.55 Sea Ice Elevation Retrieval from TanDEM-X in the Weddell Sea and Ross Sea
Lanqing Huang (ETH Zürich, Switzerland); Irena Hajsek (ETH Zurich, DLR Oberpfaffenhofen, Germany)
- 17.55 – 18.10 Recommendation / Discussions
- 18.10 – 20.30 Poster Session (TechLab)

Session 9.1: DEM Methods

Building 135

Chairperson: Marie Lachaise (DLR) and Thomas Fritz (DLR)

- 16.25 – 16.40 Evolution of the WorldDEM Based on TanDEM-X Change Raw DEM Scenes
Ernest Fahrland, Stefan Engelhardt, Isabel Haase and Henning Schrader (Airbus Defence and Space, Germany)
- 16.40 – 16.55 TanDEM-X Change DEM & WorldDEM Neo: Creating a Global 5m Digital Terrain Model
Virginia Herrera Cruz, Philipp Jacob, Isabel Haase, René Mania and Henning Schrader (Airbus Defence and Space, Germany)

- 16.55 – 17.10 Stacks of TanDEM-X DEM Change Maps - Towards a 4D TanDEM-X DEM
Barbara Schweißhelm and Marie Lachaise (German Aerospace Center (DLR), Germany)
- 17.10 – 17.25 Mutual Calibration of TanDEM-X DEMs on Natural Targets Derived from Sentinel-1 Time Series
Carolina González and Paola Rizzoli (German Aerospace Center (DLR), Germany); Pietro Milillo (University of Houston, USA); Luca Dell'Amore and Jose-Luis Bueso-Bello (German Aerospace Center (DLR), Germany); Gabriele Schwaizer (ENVEO IT GmbH, Australia); Thomas Nagler (ENVEO IT GmbH, Austria)
- 17.25 – 17.40 Development of Standard Algorithm for Reliable InSAR DEM Generation
Winhard Tampubolon (Geospatial Information Agency, Indonesia)
- 17.40 – 17.55 Recommendation / Discussions
- 18.10 – 20.30 Poster Session (TechLab)

Forest

1. Abiotic Forest Disturbances Identification in Mountainous Forests with TanDEM-X
Zlatomir Dimitrov (Space Research and Technology Institute & Bulgarian Academy of Sciences, Bulgaria)
2. Combining Multi-Frequency PolSAR and Machine Learning for the Derivation of Biophysical Parameters in Temperate Forests
Michael Ruhhammer and Sarah Hauser (Hochschule München University of Applied Sciences, Germany); Andreas Schmitt (Hochschule München University of Applied Sciences, Germany & Institute for Applications of Machine Learning and Intelligent Systems (IAMLIS), Germany); Anna Wendleder (German Aerospace Center (DLR), Germany)

Georisk

3. Monitoring Urban Area During the Process of Subway Construction Using TerraSAR-X InSAR
Ivana Hlavacova, Jan Kolomaznik and Juraj Struhár (GISAT, Czech Republic)
4. Morpho-Chronometric Dating of Monogenetic Scoria Cones Using the EFD Analysis of Level Contour Obtained from the 12-m TanDEM-X Digital Terrain Model
Maria Cristina Zarazua (Programa Ayudantes de Investigación SNI - Instituto de Geofísica, Universidad Nacional Autónoma de México); Servando De la Cruz Reyna (National Autonomous University of Mexico, Mexico) (CANCELED)
5. Comparison of TerraSAR-X and Sentinel-1 SAR Data for Automated Lava Flow Mapping: Example of the 2021 Fagradalsfjall Eruption in Iceland
Zahra Dabiri, Daniel Hölbling and Sofia Margarita Delgado-Balaguera (University of Salzburg, Austria); Gro Birkefeldt Møller Pedersen (University of Iceland, Iceland)
6. Using High-Resolution TerraSAR-X Persistent Scatterer Interferometry (PSI) to Quantify the Surface Deformation of Salt Diapirs, Zagros Mountains, Southern Iran
Stefanie Magdalena Rieger (LMU Geology, University of Munich, Germany); Prokop Závada (Czech Academy of Sciences, Czech Republic); Jiri Bruthans (Charles University, Czech Republic); Christina Plattner (Technical University of Munich & LMU Geology, University of Munich, Germany); Nerea Ibarrola Subiza (German Aerospace Center - DLR, Germany); Mjahid Zebari and Anke M. Friedrich (Ludwig-Maximilians-University of Munich, Germany); Beth Kahle (Ludwig-Maximilians-University of Munich, Germany & University of Cape Town, South Africa); Mugabo Wilson actionDusingizimana (Ludwig-Maximilians-University of Munich, Germany)

Urban

7. Optimizing Characterization of an Urbanized Creeping Landslide with Advanced Multitemporal InSAR: TerraSAR-X, RADARSAT-2, and Sentinel-1
Arturo Velasco (Simon Fraser University, Canada); Nicholas J. Roberts (Mineral Resources Tasmania, Australia & Simon Fraser University, Canada); Bernhard Rabus (Simon Fraser University, Canada)
8. Detection of Railway Track Anomalies Using Interferometric Time-Series of Satellite Radar Data
Philipp Bernhard (ETH Zürich, Switzerland); David Haener (Swiss Federal Railways SBB, Switzerland); Othmar Frey (ETH Zurich & Gamma Remote Sensing, Switzerland)

Hydrology

9. Hydrological Analysis of Water Scarcity in the Lagoa Grande in Vila Velha, ES
Sidinei M Carvalho (Universidade Federal do Espírito Santo & Laboratório de Monitoramento e Modelagem de Sistemas Ambientais (LAMOSA), Brazil)

10. Applicability of Texture Analysis and Dimensionality Reduction Techniques for Automatic Flood Mapping Using TerraSAR-X Imagery
Zahra Dabiri (University of Salzburg, Austria); Jonas Schultze-naumburg and Stamatina Tounta (Spatial Services GmbH, Austria); Elena Nafieva and Lisah Khadiala Ligono (University of Salzburg, Austria)
11. Urban correction for the hydrological conditioning of the TanDEM-X DEM for the HydroSHEDS v2 database
Larissa Gorzawski, Leena Warmedinger; Martin Huber (German Aerospace Center (DLR), Germany); Mira Anand (Confluvio Consulting, Canada); Bernhard Lehner (McGill University Montreal, Canada); Carolin Keller; Birgit Wessel, Achim Roth (German Aerospace Center (DLR), Germany)

Permafrost

12. InSAR Measurement of Seasonal Dynamics in Low-Land Permafrost Terrain North of Inuvik, Northwest Territories
Allison Plourde (Simon Fraser University, Canada)
13. Investigating Automatic Detection Methods for Retrogressive Thaw Slumps with TanDEM-X-Derived Digital Elevation Models
Kathrin Maier (ETH Zurich, Switzerland); Philipp Bernhard (ETH Zürich, Switzerland); Irena Hajsek (ETH Zurich, DLR Oberpfaffenhofen, Germany)
14. Retrieving Soil Freeze/Thaw States Using TerraSAR-X in Peatland Permafrost
Aida Taghavi Bayat (Technische Universität Braunschweig, Germany)

Ice and Snow

15. Seasonal and Multi-Annual Dynamic Monitoring of Belcher Glacier, Nunavut Canada Using SAR Imagery
Wesley van Wyche (University of Waterloo, Canada); Anna Wendleder (German Aerospace Center (DLR) & German Remote Sensing Data Center, Germany); Tamara Marchant (University of Waterloo, Canada)
16. Glacier and snow avalanche studies in Uzbekistan based on TanDEM-X, TerraSAR-X and PAZ SAR data
Dana Floricioiu (German Aerospace Center (DLR) Germany); Eleonora Semakova (Uzbekistan Academy of Sciences, Tashkent, Uzbekistan); Anja Wendt (Bavarian Academy of Sciences and Humanities, Munich, Germany); Lukas Krieger (German Aerospace Center (DLR), Germany); Andrea Manconi, (WSL Institute for Snow and Avalanche Research SLF, Davos, Switzerland)
17. Ice deformation and crevasse formation at Brunt Ice Shelf, Antarctica
Dana Floricioiu (German Aerospace Center (DLR) Germany); Oliver Marsh (British Antarctic Survey, Cambridge, UK); Lukas Krieger (German Aerospace Center (DLR), Germany)
18. TanDEM-X Derived Surface Elevation Changes of Fedchenko Glacier, Pamir Mountains - an Update
Anja Wendt (Bavarian Academy of Sciences and Humanities, Germany); Christoph Mayer (Bavarian Academy for Sciences and Humanities, Germany); Dana Floricioiu (DLR, Germany)
19. Correction of TanDEM-X Penetration Bias for Mass Balance Estimation
Sahra Abdullahi (German Aerospace Center (DLR), Germany)
20. Towards Sea Ice Navigation Maps with TerraSAR-X Images
Dmitrii Murashkin (German Aerospace Center, Germany); Anja Frost (German Aerospace Center (DLR), Germany)
21. The Changes of Basal Conditions on Fleming Glacier, Antarctic Peninsula, Between 2008 and 2021
Ji Zhao, Huimin Liu, Feifei Li and Yuting Dong (China University of Geosciences, China); Dana Floricioiu (DLR, Germany); Lukas Krieger (German Aerospace Center (DLR), Germany); Haiyang Zhu (China University of Geosciences, China)

DEM Methods

22. A Global High-Resolution Coastline Derived from the TanDEM-X Dataset
Leena Warmedinger, Carolin Walper, Martin Huber (German Aerospace Center (DLR), Germany); Larissa Gorzawski (Company for Remote Sensing and Environmental Research (SLU), Germany); Birgit Wessel (German Aerospace Center (DLR) & DFD-LAX, Germany); Achim Roth (DLR, Germany)
23. Scrutinizing the 3 and the 0.4 Arcsec TanDEM-X DEMs from the End User's Point of View
Dimitra Vassilaki (University of West Attica, Greece); Thanasis Stamos (National Technical University of Athens, Greece)
24. Comparison of TanDEM-X 12 m Global DEM with Freely Available DEMs over Nepal Earthquake Area and the Effect of DEM Difference on DInSAR Displacement Map
Yalamanchili S Rao (Indian Institute of Technology Bombay, India & CSRE IIT Bombay, India); Divya Sekhar Vaka (Indian Institute of Technology Bombay, India)

Friday, October 20, 2023

Session 10.1 Forest I

Building 124

Chairperson: Noelia Romero Puig (DLR) and Kostas Papathanassiou (DLR)

- 09.00 – 09.15 Combination of TanDEM-X and GEDI Measurements for Large-Scale Forest Structure Mapping: Actual Status and Future Perspectives
Roman Guliaev, Islam Mansour, Lea Albrecht, Benedikt Hartweg, Noelia Romero-Puig, Matteo Pardini, Kostas Papathanassiou (German Aerospace Center)
- 09.15 – 09.30 Mapping Change in Forest Biomass Based on Change in InSAR DEM in a Miombo Forest, Tanzania
Svein Solberg (NIBIO, Norway); Erik Næsset (NMBU, Norway)
- 09.30 – 09.45 TanDEM-X Bistatic Data Utilization in Studying Different Forests in Bulgaria
Zlatomir Dimitrov (Space Research and Technology Institute & Bulgarian Academy of Sciences, Bulgaria)
- 09.45 – 10.00 Large-Scale Forest Height Inversion Using TanDEM-X InSAR Data: With Emphasis on Special Forest Scenarios in Mountainous Areas
Jianjun Zhu (Central South University, China); Juan Manuel Lopez-Sanchez (University of Alicante, Spain); Cristina Gomez (INIA, Spain); Haiqiang Fu (Central South University, China); Qinghua Xie (China University of Geosciences (Wuhan), China & Institute for Computing Research (IUI), University of Alicante, Spain); Wenjie He, Zhiwei Liu, Yanzhou Xie, Tao Zhang and Huacan Hu (Central South University, China)
- 10.00 – 10.30 Coffee / Tea break

Session 10.2 Forest II

Chairperson: Matteo Pardini (DLR) and Paola Rizzoli (DLR)

- 10.30 – 10.45 Estimating forest structure change by means of wavelet statistics using TanDEM-X
Lea Albrecht (German Aerospace Centre (DLR)), Andreas Huth (Helmholtz Centre for Environmental Research (UFZ)), Rico Fischer (Helmholtz Centre for Environmental Research (UFZ)), Konstantinos Papathanassiou (German Aerospace Centre (DLR)), Oleg Antropov (Technical Research Centre of Finland (VTT)), Lukas Lehnert (Ludwig-Maximilians-Universität (LMU))
- 10.45 – 11.00 A Deep Learning Approach for Forest Height Estimation Using TanDEM-X
Daniel Carcereri and Paola Rizzoli (German Aerospace Center (DLR), Germany); Dino Ienco (National Research Institute for Agriculture, Food and the Environment (INRAE), France); Lorenzo Bruzzone (University of Trento, Italy)
- 11.00 – 11.15 Forest Mapping with TanDEM-X and Deep Learning Approaches
Jose-Luis Bueso-Bello (German Aerospace Center (DLR), Germany)
- 11.15 – 11.30 Synergizing AI and Physical Models for TanDEM-X InSAR Forest Height Estimation: A Hybrid Approach over the Gabon
Islam Mansour, Kostas Papathanassiou, Ronny Hänsch, Irena Hajnsek (German Aerospace Center (DLR), Germany)
- 11.30 – 11.45 Recommendations / Discussions
- 11.45 – 12.15 Summary Recommendations and Wrap Up