TRACK: Progressing Climate and Disaster Resilience

International Conference on Resilient Systems

ICRS 2026 Delft, the Netherlands, 23-25 March, 2026

INTRODUCTION TO THE TRACK

Natural hazards profoundly affect societies, economies, and the environment. Despite worldwide initiatives aimed at managing disaster risks and consequences, the complexity of our society and the intensification of such events in recent years highlight the urgent need to understand complex risk dynamics and develop effective resilient strategies. This track provides a platform to explore the latest technological advancements and innovations in progressing resilience to natural hazards (flood, landslides, wildfire, earthquakes, etc.) across various sectors and regions. We welcome contributions that focus or integrate a wide range of subjects including engineering, natural science, and social science to address climate and disaster resilience, such as: analysing disaster risk, climate hazard monitoring and modelling, disaster risk management. We particularly encourage submissions of research, case studies, and practical applications that showcase valuable insights into the complexities of multi-risk dynamics, optimize decision-making, and enhance disaster-resilient efforts.

TRACK TOPICS

Research in this track can explore the theme from many topics, including:

- Infrastructure Resilience in Cities and Deltas: natural and multi-hazards impact to infrastructure; infrastructure risk assessments; systemic resilience analysis; simulation and modelling of urban infrastructure; complexity and interdependency of risks; resilient deltas.

- Digital Technology for Resilience: monitoring and early-warning systems; remote sensing systems; artificial intelligence and machine learning-based methods; sensor-based technologies.

- Innovative and Resilient Design: structure behaviour modelling during and after disaster situations; building adaptation; nature-based solutions; disaster-resilient designs; advanced building materials and technologies; DRR adaptation measures; system approach for resilient infrastructure.

- Emergency Management and Preparedness: natural hazard preparedness of critical sectors, including multi-hazards; emergency response planning; crisis management; Civil Protection mechanism response capacity; disaster risk management governance.

Depending on the quality of the abstract, reviewers will establish the contribution type among presentations and posters.

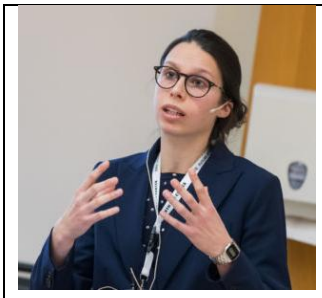
TYPE OF CONTRIBUTIONS:

1. **Call for Extended Abstracts** (1.000 words) - see website for the template.

   Including the possibility of submitting a Case Study - in this same template

2. **Call for Posters & Demonstrations** - see website for the template

TRACK CHAIR AND CO-CHAIR



Maria Pregnolato*
m.pregnolato@tudelft.nl
TU Delft

Dr Maria Pregnolato has organised and/or chaired various conference special sessions or mini symposia (ICRS 2023, ICONHIC 2022, ISNGI 2021, ICASP 13 in 2019). She has been also a member of the Scientific Committee for ICRS 2024, FRIAR 2020 and 2021, and URCC 2020. She is on the 4TU.RE Scientific Board.

Relevant papers include:

Pregnolato, M., West, C., Evans, B., Lam, A., Chen, A.S., Ahmadian, R. and Djordjevic, S. (2024). Using multi-stakeholder causal mapping to explore priorities for infrastructure resilience to flooding. Int. J. Disaster Risk Reduction, 101 (104189): 1-27. https://doi.org/10.1016/j.ijdrr.2023.104189

Evans, B., Lam, A., West, C., Ahmadian, R., Djordjevic, S., Chen, A.S. and Pregnolato, M. (2023). A combined stability function to quantify flood risks to pedestrians and vehicle occupants. Science of the Total Environment, 168237. https://doi.org/10.1016/j.scitotenv.2023.168237

Giorgia Giardina
g.giardina@tudelft.nl
TU Delft

Dr Giorgia Giardina has extensive experience in conferences special sessions and workshop organisation. She is a member of the Earthquake Engineering Field Investigation Team (EEFIT) committee and the International Scientific Committee on the

	Analysis and Restoration of Structures of Architectural Heritage (ISCARSAH) committee. She is an associated 4TU.RE scientists. Relevant papers include: Milillo, P., Giardina, G., Perissin, D., Milillo, G., Coletta, A. and Terranova, C. (2019). Pre-Collapse space geodetic observations of critical infrastructure: the Morandi Bridge, Genoa, Italy, Remote Sensing, 11 (12). https://www.mdpi.com/2072-4292/11/12/1403 Foroughnia, F., Macchiarulo, V., Berg, L., DeJong, M., Milillo, P., Hudnut, K.W., Gavin, K. and Giardina, G. (2024). Quantitative Assessment of Earthquake-Induced Building Damage at Regional Scale Using LiDAR Data. Int. J. Disaster Risk Reduct., 106, 10440
	**Cees van Westen** c.j.vanwesten@utwente.nl University of Twente Cees van Westen is Professor of Multi-Hazard Risk Dynamics at the University of Twente. He has over 30 years of experience and organised conferences for EU projects (e.g. CHANGES, PARATUS), and conferences (e.g. EGU).
	**Irene Manzella** i.manzella@utwente.nl University of Twente Dr Irene Manzella is Associate Professor in Geotechnical Engineering for Natural Hazard Risk Management and Head and Coordinator of the Centre for Disaster Resilience (CDR) at the University of Twente. She served as main co-chair of the organizing committee of NEEDS conference in 2023 hosted by the CDR, she was in organizing and scientific committee of the 2020 Volcanic and Magmatic Study Group (VMSG) annual meeting in Plymouth and she is in the organizing and scientific committee of the IAEG 2026 in DELFT, where she is also chair of the Solidarity Fund committee. She has chaired and organized the CDR Symposium "Resilience in Science and Science in Resilience" in 2022 and in 2023 and the M2R2 International Symposium in 2022 at ITC and the ProGeo Conference 2020 of the South West Group of the Geological Society of London. She has been convening and organising sessions at multiple conferences, including EGU, COV, World Landslide Forum, and IAVCEI, focusing on topics such as large slope instabilities and volcanic instabilities. She is also part of the scientific committees of ISL 2024 and IAVCEI 2025.

Funda Atun
f.atun@utwente.nl
University of Twente

Dr Funda Atun works in the Department of Urban and Regional Planning, Faculty of Geoinformation and Earth Observation, at the University of Twente, the Netherlands. She is an urban planner with research interests in societal resilience, disaster risk reduction and nature-based solutions. She has vast experience in EU-funded projects as a coordinator, WP Coordinator, case study coordinator, assistant coordinator and researcher in various projects. She has served on international scientific advisory boards at various conferences on disaster risk, climate change, and resilient cities. In 2015, She was one of the Habitat III Invited Experts for the Regional Report on Housing and Urban Development for the UNECE region. In 2016 she co-organized a "Disaster Recovery in Urban Areas" side event at the Habitat III conference in Ecuador. She is an active member of the Integrated Disaster Risk Management (IDRIM) Society. She chairs the IDRiM Women in Disaster Risk Science and Practice Committee.