2nd International Workshop on Multi-modal Spatio-temporal Big Data for Natural Disaster Monitoring, Assessment and Decision-Making (NDMAD 2026)

In conjunction with
ICA3PP 2026 (The 26th International Conference on Algorithms and Architectures for Parallel Processing)
Exeter, England, UK. 26-28 October 2026, site: https://hpcn.exeter.ac.uk/ica3pp2026/

Call For Papers

In recent years, the frequency and intensity of natural disasters--such as landslides, collapses, floods, ground subsidence, debris flows, and typhoons--have increased significantly due to climate change and human activities. These events pose serious threats to lives, infrastructure, and sustainable development. At the same time, the explosion of spatio-temporal big data, including remote sensing imagery, IoT sensor networks, and multi-source geospatial data, has opened new opportunities for disaster monitoring, assessment, and decision-making.

This workshop aims to advance the integration of cutting-edge technologies--such as multi-modal large models, knowledge graphs, and cloud-edge-end collaboration--with disaster science. The workshop will explore key topics including natural disaster identification, susceptibility and risk assessment, long-term disaster mapping, and multi-criteria decision-making. By bridging spatio-temporal big data with intelligent systems, NDMAD 2026 seeks to support more accurate, timely, and actionable responses to natural disasters. The workshop aligns with ICA3PP 2026 topics in parallel and distributed algorithms and applications, big data management and analysis, IoT and cyber-physical-social computing, and performance modeling and evaluation. This workshop is supported by UK Research and Innovation through the KIND [EP/Z534511/1] and the REFINE [EP/Y036786/1]projects.

Topics of interest include, but are not limited to:

- Natural Disaster Knowledge Graph Construction
- Advanced Multi-modal Large Models for Natural Disaster Identification
- Long-term Remote Sensing Mapping of Typical Natural Disasters
- Multi-modal Data Fusion under Missing or Noisy Conditions
- Susceptibility Assessment and Potential Risk Site Identification of Typical Disasters
- Mechanisms and Risk Assessment of Typical Natural Disasters
- Multi-criteria Disaster Decision-making
- Efficient Management of Spatio-temporal Disaster Big Data
- Cloud-Edge-End Collaboration for Spatio-temporal Disaster Big Data
- High-performance Computing Platforms and Parallel Processing for Spatio-temporal Disaster Big Data

Submission Guide:

Research/workshop papers should be written in English, present original unpublished work associated with the workshop theme, and must not substantially overlap with papers that have been published or that are simultaneously submitted to a journal or conference with proceedings. The standard length of a research/workshop paper is up to 6 pages, and submissions may be extended to a maximum of 10 pages subject to overlength charges, following the Springer LNCS format. All papers should be submitted in PDF format by email to the workshop contacts: Dr. Wei Han (w.han2@exeter.ac.uk), Dr. Yuewei Wang (yuewei.w@cug.edu.cn), or Dr. Xiaohui Huang (xhhuang@cug.edu.cn). Each submission will be reviewed by at least three reviewers. Accepted and presented workshop papers will be published by Springer and submitted to the EI database. At least one author of each accepted paper is required to register for and attend ICA3PP 2026 to present the work.

Workshop Co-Chairs:

Wei Han, University of Exeter, U.K.
Yuewei Wang, China University of Geosciences, China
Xiaohui Huang, China University of Geosciences, China
Zhu Tao, Wuhan Polytechnic University, China
Jia Chen, Wuhan University of Science and Technology
Cao Li, The Second Surveying and Mapping Institute of Hunan Province, China
Kaijun Yang, The Second Surveying and Mapping Institute of Hunan Province, China
Xiaodao Chen, China University of Geosciences, China
Yunliang Chen, China University of Geosciences, China

Important Dates:

Submission deadline: 30 July 2026; Authors notification: 30 August 2026; Final manuscript due: 30 September 2026; Registration due: 30 September 2026; Conference date: 26-28 October 2026.

More Contact:

For more questions about NDMAD 2026 Workshop, please contact: Dr. Wei Han w.han2@exeter.ac.uk or Dr. Yuewei Wang yuewei.w@cug.edu.cn or Dr. Xiaohui Huang xhhuang@cug.edu.cn.