



Preface

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We are excited to welcome you to Dresden for the 28th AGILE international conference! This year's conference theme is 'Geographic Information Science responding to Global Challenges' to emphasise the critical role of geospatial data and analysis in informing decision-making for current global issues affecting humanity.

We are pleased to host researchers, developers, educators, students, and professionals from all areas of Geographic Information Science and Technology. AGILE 2025 offers a platform to learn about the latest research in Geographic Information Science, showcase products, and network with colleagues from Europe and the rest of the world.

1 About the host

TU Dresden was founded in 1828 and has been designated a University of Excellence by the German government since 2012. It is the largest university in the federal state of Saxony and one of the largest German universities of technology. It is home to 29,000 students, about 5,800 (20%) of whom are international students from 128 countries. The university offers 119 degree programmes, 26 of which are taught in English and 26 of which are double degree programmes. As of 2025, the university has 8,500 employees, 3,500 of whom are funded by third parties. TU Dresden comprises five schools and 17 faculties.

The Faculty of Environmental Sciences unites the three disciplines of forest, geo-, and hydro sciences, which is unique in Germany. Activities focus on monitoring and modeling the Earth System at global, regional, and local scales, and the use of this knowledge in the context of the sustainable development of the human environment. Research and teaching cover a wide range of topics and are firmly embedded in both regional and international networks. The faculty's commitment to advancing education and research in geographic information sci-

ence is reflected through the following programmes: BSc Geodesy and Geoinformation, BSc Environmental Informatics, MSc Cartography, and MSc Geoinformation Technologies.

Within the Faculty of Environmental Sciences, some research groups focus on geographic information science themes, for example:

- The Chair of Cartographic Communication: core research interests include map generalization, geovisualization, and volunteered geographic information. Among others, the research group is currently actively involved in the MSc Cartography, an Erasmus Mundus Master of Science Programme that provides a broad education in Cartography and Geoinformatics. The programme awards a joint degree from four universities: Technical University of Munich, TU Wien, TU Dresden and the University of Twente.
- The Chair of Geoinformatics: core research interests include spatial data infrastructures, spatial decision support systems, and geoprocessing on the Web. Among others, the research group is currently actively contributing to the advancement of scientific (geo)data infrastructure in Germany, through speaker roles in NFDI4Earth (National Research Data Infrastructure for the Earth System Sciences) and Base4NFDI (Basic Services for Research Data Infrastructure in Germany).

2 Programme composition

The call for papers welcomed submissions across five categories, each with its own submission process: workshops/tutorials, full papers, short papers, posters, and published articles. The number of submissions in each category was: 9 workshop/tutorial proposals, 30 full papers,

49 short papers, 20 posters, and 16 published articles. This resulted in a total of 115 submissions.

The workshop proposals were assessed for their relevance to the themes of the call for papers by the AGILE 2025 Scientific Programme Committee co-chairs. Four workshops and four tutorials were selected for inclusion in the programme. The full papers, short papers, and posters were reviewed by over 80 members of the AGILE 2025 Scientific Programme Committee. Each full paper was reviewed by three referees, and short papers by two to three reviewers. The posters were reviewed by two referees. Published-article submissions were reviewed by the AGILE 2025 Scientific Programme Committee co-chairs.

Based on reviews of the full papers, one of the following decisions was taken: conditionally accept the full paper, accept as a short paper, accept as a poster, or reject. Based on the reviews of the short papers, one of the following decisions was taken: conditionally accept the short paper, accept as a poster, or reject. Posters were either accepted or rejected. Likewise, submissions to the published article track were either accepted or rejected. As a result of this process, the final numbers of accepted submissions were: 13 full papers, 38 short papers (these include 3 full papers accepted as short papers), 19 posters (these include 3 full papers accepted as posters and 4 short papers accepted as posters), and 12 published articles. The accepted submissions cover the breadth of topics in Geographic Information Science.

The conference features three keynote sessions, 13 parallel oral presentation sessions, one poster session, one best paper session (for full and short papers each), four pre-conference workshops and four tutorials. Full papers and short papers are published in the AGILE GIScience Series by Copernicus Publishers. Poster abstracts are archived in the [AGILE 2025 Zenodo Community](#). We are very pleased to have Prof. Dr. Dirk Brockmann (Center Synergy of Systems, TU Dresden), Hilary Hanahoe (Research Data Alliance), and Prof. Dr. Ralf Seppelt (Luxembourg Centre for Socio-Environmental Systems, University of Luxembourg) as our keynote speakers this year to spark thought-provoking and forward-looking discussions.

As with previous conferences in the AGILE series, full paper submissions were required to adhere to the AGILE Reproducible Paper Guidelines. In addition to the peer review process, an independent expert committee conducted a reproducibility review as part of the [Reproducible AGILE initiative](#). Papers for which significant parts of the computational workflow could be reproduced are awarded the “AGILE Reproducible” badge. This badge links to a report documenting the steps taken to reproduce the paper’s results. This year, best practices in reproducible research are highlighted through selected reports, recognising the collaborative efforts of both authors and reviewers in successfully ensuring the reproducibility of the studies.

3 Acknowledgements

We extend our gratitude to the authors for their submissions, the reviewers for their feedback that provided a solid basis for selection, and our colleagues from the local organising committee for their excellent teamwork in preparing AGILE 2025. Finally, we would like to thank our sponsors, ESRI and NFDI4Earth, for the generous support that truly enhances the conference experience.

Enjoy AGILE 2025!

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