

Preface

Auriol Degbelo, Serena Coetzee, Carsten Keßler, Monika Sester, Sabine Timpf

Angaben zur Veröffentlichung / Publication details:

Degbelo, Auriol, Serena Coetzee, Carsten Keßler, Monika Sester, and Sabine Timpf. 2025. "Preface." In *Geographic Information Science responding to Global Challenges: proceedings of the 28th AGILE Conference on Geographic Information Science, 10-13 June 2025, Dresden, Germany*, edited by Auriol Degbelo, Serena Coetzee, Carsten Keßler, Monika Sester, Sabine Timpf, and Lars Bernard, 1. Göttingen: Copernicus.
<https://doi.org/10.5194/agile-giss-6-1-2025>.



Preface

Auriol Degbelo ¹, Serena Coetzee ², Carsten Keßler ^{3,4}, Monika Sester ⁵, and Sabine Timpf ⁶

¹Chair of Geoinformatics, TU Dresden, Dresden, Germany

²UNU-FLORES, Dresden, Germany

³Bochum University of Applied Sciences, Bochum, Germany

⁴Aalborg University, Copenhagen, Denmark

⁵Leibniz University Hannover, Hannover, Germany

⁶University of Augsburg, Augsburg, Germany

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!

AGILE 2025 Scientific Programme Committee co-chairs
Auriol Degbelo Serena Coetzee Carsten Keßler Monika Sester Sabine Timpf

Local Organizing Committee

- Ulrike Adolf, TU Dresden, Germany
- Stephan Mäs, TU Dresden, Germany
- Christin Henzen, TU Dresden, Germany
- Jörg Seegert, TU Dresden, Germany
- Steffi Sharma, TU Dresden, Germany

List of Reviewers

- Ana Paula Afonso, NOVA University Lisbon, Portugal
- Abdul Aziz, University of Zaragoza, Spain
- Jesús Balado-Frías, University of Vigo, Spain
- Thomas Bartoschek, University of Münster, Germany
- Melih Basaraner, Yildiz Technical University, Turkey
- Giedre Beconyte, Vilnius University, Lithuania
- Itzhak Benenson, Tel Aviv University, Israel
- Lars Bernard, TU Dresden, Germany
- Michela Bertolotto, University College Dublin, Ireland
- Ralf Bill, University of Rostock, Germany
- Thomas Blaschke, University of Salzburg, Austria
- Lars Bodum, Aalborg University, Denmark
- Ida Maria Bonnevie, Aalborg University, Denmark
- Thomas Brinkhoff, Jade University Oldenburg, Denmark
- Sytze de Bruin, Wageningen University, The Netherlands
- Dirk Burghardt, TU Dresden, Germany
- Pedro Cabral, Nanjing University of Information Science and Technology, China
- Guoray Cai, The Pennsylvania State University, USA
- Sven Casteleyn, Universitat Jaume I, Spain
- Christophe Claramunt, Naval Academy Research Institute, France
- Serena Coetzee, UNU-FLORES, Germany
- Alexis Comber, University of Leeds, UK

- Joep Crompvoets, KU Leuven, Belgium
- Çetin Cömert, Karadeniz Technical University, Turkey
- Auriol Degbello, TU Dresden, Germany
- Lucía Díaz Vilaríño, University of Vigo, Spain
- Sara Irina Fabrikant, University of Zurich, Switzerland
- Jérôme Gensel, Université Grenoble Alpes, France
- Marina Georgati, Aalborg University, Denmark
- Carlos Granell, Universitat Jaume I, Spain
- Cédric Grueau, Setubal Polytechnic University, Portugal
- Henning Sten Hansen, Aalborg University, Denmark
- Lars Harrie, Lund University, Sweden
- Jan-Henrik Hauernt, University of Bonn, Germany
- Hartwig Hochmair, University of Florida, USA
- Bashkim Idrizi, University of Prishtina, Kosovo
- Carsten Keßler, Bochum University of Applied Sciences, Germany
- Dimitris Kotzinos, University of Cergy Pontoise, France
- Petr Kubicek, Masaryk University, Czech Republic
- Rob Lemmens, University of Twente, The Netherlands
- Francisco J. Lopez-Pellicer, University of Zaragoza, Spain
- Ali Mansourian, Lund University, Sweden
- Bruno Martins, University of Lisbon, Portugal
- Sergio Martín-Segura, University of Zaragoza, Spain
- Franz-Benjamin Mocnik, University of Salzburg, Austria
- João Moura-Pires, NOVA University Lisbon, Portugal
- Stephan Mäs, TU Dresden, Germany
- Javier Nogueras Iso, University of Zaragoza, Spain
- Eva Nuhn, University of Augsburg, Germany
- Toshihiro Osaragi, Tokyo Institute of Technology, Japan
- Frank Ostermann, University of Twente, The Netherlands
- Volker Paelke, Bremen University of Applied Sciences, Germany
- Poulicos Prastacos, FORTH, Greece
- Ross Purves, University of Zurich, Switzerland
- Azarakhsh Rafiee, Delft University of Technology, The Netherlands
- Martin Raubal, ETH Zurich, Switzerland
- Claus Rinner, Toronto Metropolitan University, Canada
- Armanda Rodrigues, NOVA University Lisbon, Portugal
- Simon Scheider, Utrecht University, The Netherlands
- Monika Sester, Leibniz University Hannover, Germany
- Hyesop Shin, University of Glasgow, UK
- Takeshi Shirabe, KTH Royal Institute of Technology, Sweden
- Dajana Snopkova, Masaryk University, Czech Republic
- Yongze Song, Curtin University, Australia
- Mario Suaza-Medina, University of Zaragoza, Spain
- Maguelonne Teisseire, INRAE, France

- Sabine Timpf, University of Augsburg, Germany
- Eleni Tomai, National Technical University of Athens, Greece
- Guillaume Touya, IGN, France
- Bastiaan van Loenen, Delft University of Technology, The Netherlands
- Jos Van Orshoven, KU Leuven, Belgium
- Nico Van de Weghe, Ghent University, Belgium
- Danny Vandenbroucke, KU Leuven, Belgium
- Edward Verbree, Delft University of Technology, The Netherlands
- Judith Verstegen, Utrecht University, The Netherlands
- Luis M. Vilches-Blázquez, Universidad Politécnica de Madrid, Spain
- Mingshu Wang, University of Glasgow, UK
- Robert Weibel, University of Zurich, Switzerland
- René Westerholt, TU Dortmund University, Germany
- Nina Wiedemann, ETH Zurich, Switzerland
- Stephan Winter, The University of Melbourne, Australia
- Bisheng Yang, Wuhan University, China
- Jing Yao, University of Glasgow, UK
- F. Javier Zarazaga-Soria, University of Zaragoza, Spain
- Pengxiang Zhao, Lund University, Sweden
- Qunshan Zhao, University of Glasgow, UK

Members of the Reproducibility Committee

- Lorena Abad, Paris Lodron University Salzburg, Austria
- Carlos Granell, Universitat Jaume I, Spain
- Ilya Ilyankou, University College London, UK
- Daniel Nüst, TU Dresden, Germany
- Eftychia Koukouraki, University of Münster, Germany
- Frank Ostermann, University of Twente, The Netherlands
- Luke McQuade, Paris Lodron University Salzburg, Austria
- Barbara Scherthanner-Hofer, Paris Lodron University Salzburg, Austria
- Sophie Teichmann, TU Dresden, Germany
- Balthasar Teuscher, TU Munich, Germany
- Nina Wiedemann, ETH Zürich, Switzerland