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Preface

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A warm welcome to the 27th AGILE (Association of Geographic Information Laboratories in Europe) international conference! The theme of this year's conference, "Geographic Information Science for a Sustainable Future," highlights the pivotal role of geographic information science in fostering a sustainable future. Geographic Information Science is essential for understanding and managing the intricate relationships between the environment, society, and the economy. By recognizing the power of spatial data and analysis, we aim to inform decision-making processes and promote sustainable practices across various sectors.

We are pleased to host researchers, developers, educators, students, and practitioners from all facets of Geo-information Science and Technology. This conference offers a platform to present ongoing research, showcase innovative products, network with colleagues from Europe and around the world, and stay abreast of the latest developments in the field.

1 University of Glasgow

Welcome to the AGILE conference in Glasgow, hosted for the first time in this vibrant city. We would like to provide a brief background on the University of Glasgow.

The University of Glasgow (Scottish Gaelic: *Oilthigh Ghlaschu*) is a public research university founded in 1451, making it the fourth-oldest university in the English-speaking world. As a member of the Russell Group of research-intensive UK universities, it consistently ranks among the top 100 universities globally. The university is home to over 43,000 students from 140 countries who benefit from a flexible and innovative learning environment guided by dedicated and passionate academics. Students also have the opportunity to study abroad at over 200 destinations worldwide.

Recognized for its world-leading research and positive societal impact by the Research Excellence Framework (REF) 2021, the University of Glasgow is committed to building an inclusive and welcoming community. Through our widening participation initiatives, we encourage and support students from under-represented backgrounds to access higher education. Our University of Sanctuary status highlights our commitment to providing a safe and welcoming environment for refugees and asylum seekers.

The University is also dedicated to achieving the United Nations' Sustainable Development Goals (SDGs) and has a comprehensive plan to reach carbon neutrality by 2030. Reflecting our commitment to sustainability, we were the first university in the UK to pledge divestment from fossil fuels within a decade and the first in Scotland to declare a Climate Emergency.

The University of Glasgow conducts extensive research and education in geo-information across various disciplines. Within the College of Social Science and the College of Science and Engineering, several groups focus on geographic information science themes, for example:

- Urban Big Data Centre (UBDC): Supported by the Economic and Social Research Council and the University of Glasgow, UBDC is a dynamic national research hub and data service. It champions the use of smart data to inform policymaking and enhance

urban quality of life. UBDC provides open, safeguarded, and controlled data to researchers and offers expertise, training, data collection, and data tools.

- Geospatial Data Science: Housed within the College of Science of Engineering, this research group operates at the intersection of data science and geospatial data. The group explores, analyzes, models, and infers from geospatial data to design, develop, and provide more intelligent and useful location-based services.

The University of Glasgow also offers various postgraduate programs on geographic information science across different colleges and schools. Examples include MSc in Urban Analytics, MSc in Urban Transport, MSc in Geoinformation Technology & Cartography, MSc in Geospatial & Mapping Sciences, MSc in Geomatics & Management, and MSc in Land & Hydrographic Surveying. These programs reflect the university's commitment to advancing education and research in geographic information science.

2 Programme composition

The call for papers was organized into five categories, each with its own procedures: workshops/tutorials, full papers, short papers, posters, and published articles. The number of submissions in each category was as follows: 17 workshop/tutorial proposals, 23 full papers, 61 short papers, 34 posters, and 23 published articles. This resulted in a total of 158 submissions, representing approximately a 30% increase compared to AGILE 2023.

The workshop proposals were assessed by the AGILE 2024 Workshop Programme Committee, which includes members from the AGILE Council and the Local Organizing Committee. After merging workshops with related content and separating those with a tutorial character, 10 workshops were selected for the program, and 2 tutorials were integrated into the conference sessions on the second day.

Full papers, short papers, and posters were reviewed by over 70 members of the AGILE 2024 Scientific Programme Committee. The Scientific Programme Committee Co-Chairs compiled all reviews for full and short papers, resulting in one of three decisions: conditional acceptance, acceptance as a poster, or rejection. Similarly, reviews for posters led to decisions of acceptance or rejection. The Co-Chairs also reviewed all submissions under the published article track, deciding on acceptance or rejection. Authors of conditionally accepted papers submitted revised versions, which were further reviewed and edited by the Co-Chairs and the Publisher. As a result of this process, the final numbers of accepted submissions were 14 full papers, 43 short papers, 32 posters, and 22 published articles.

The conference consists of three keynote sessions, 15 parallel oral presentation sessions, one poster session, one best paper session, 2 tutorials and 10 pre-conference workshops. Full papers and short papers will be published in the AGILE GIScience Series by Copernicus Publishers, and posters will be showcased on the AGILE 2024 website.

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 (https://reproducible-agile.github.io/). Papers for which significant parts of the computational workflow could be reproduced were awarded the "AGILE Reproducible" badge. This badge links to a report documenting the steps taken to reproduce the paper's results.

3 Acknowledgements

We extend our heartfelt gratitude to the authors for their submissions, the reviewers for their constructive comments and fair evaluations, which provided a solid basis for selection, and our colleagues from the local organizing committee for their excellent teamwork in preparing AGILE 2024. Additionally, we would like to thank our sponsors, ESRI, School of Social and Political Sciences and the Urban Big Data Centre at University of Glasgow, for their generous support that has truly enhanced the conference experience.

Enjoy AGILE 2024!

AGILE 2024 Scientific Programme Committee Co-chairs, Alison Heppenstall, Mingshu Wang, Urška Demšar, Rob Lemmens, and Jing Yao