Proposal for workshops – AGILE 2025

Dresden, Tuesday 10 June 2025

https://agile-online.org/conference-2025

1. Workshop name/title (and acronym is applicable)

Geo xR - Addressing planetary and societal challenges by integrating geospatial data science with spatial media

2. Description of the workshop by listing topic(s), objective(s) and planned outcome(s)

2.1 Topic(s)

eXtended Realities (xR), spatial sciences, GIScience, geoanalytics, design, co-creation, co-production of knowledge, spatial computing, embodiment, human-computer interaction, AI, 3D modeling, Point Cloud-based XR, Gaussing Splatting for XR

2.2 Objective(s)

The workshop is part of a recently (2023) funded AGILE initiative to create a network of researchers interested in eXtended Realities (xR) and GIScience. This initiative, which we coined **Geo xR**, supports existing collaborations and facilitates new connections in the interdisciplinary area of spatial data science, GIScience, and GeoAI. The initial funding has already led to medium and long-term research and education opportunities, providing emerging scholars with a supportive environment to engage with like-minded researchers, and allowing established scholars to seek funding for collaborative projects, including large-scale EU proposals (one already submitted and more are in preparation).

2.3 Planned outcome(s)

We strongly advocate for the AGILE community to take on leadership and an agenda-setting role in the theoretical, practical, and impactful development of eXtended Realities research within an ethical and reflective geographic focus. This initiative will provide a springboard for coordinating respective geo xR research and activities, joint applications for funding, welcoming junior researchers into a thriving community, and increasing AGILE's visibility in this rapidly developing field.

We will continue working and curating the eXtended Realities manifesto for geo-information science as a concrete output, discussing open publication opportunities and avenues for impact.

3. Abstract

The proposed Geo xR workshop is part of a new AGILE initiative on eXtended Realities. Since the earliest developments of immersive virtual experiences (eXtended Realities), the geographic sciences have embraced the promises, opportunities, and challenges of this inherently spatial, multimodal medium; and with good reasons. Given the critically important role of the 2D map for millennia, with eXtended Realities now, there is simply no other better-fitting future medium for communication, education, decision- and policy-making that could be closer to the core interests of GIScience. The time is ripe for AGILE to take on leadership in the development, theoretical foundations, and agenda-setting role for a GIScience focus in xR and thus for Geo xR. eXtended Reality approaches have reached a level of maturity that allows for focusing on theories, opportunities, applications, and impact specifically for GIScientists and researchers in cognate fields. This workshop will thus bring like-minded AGILE members together to actively shape the research agenda of future developments and to give geoinformation science a prominent (and well-deserved) role in the advancements of eXtended Realities.

4. Short description of the intended length (half or full day) and the format of the workshop

The half-day workshop will begin with a keynote address, followed by a series of brief position paper presentations. Afterwards, participants will collaborate to shape the research agenda of future developments of Geo xR.

5. Brief statement of the relevance of the workshop for AGILE

We strongly advocate for AGILE to take on the GIScience leadership and agenda-setting role in the theoretical, practical, and impact the development of eXtended Realities research with a geospatial focus, hence, Geo xR. This workshop and the associated initiative will continue to provide a springboard for coordinating research and activities, joint applications for funding, welcoming junior researchers into a thriving community, and increasing AGILE's visibility in this important field.

6. What is the approximate number of expected participants?

15-25 (to the best of our knowledge, the inaugural workshop in 2024 was one of the more popular ones, see #8)

7. Names and e-mail addresses of the organizing member(s)

Leading AGILE member (or sponsor) and contact person: Alexander Klippel & Jiayan Zhao (Wageningen University and Research, The Netherlands), alexander.klippel@wur.nl; jiayan.zhao@wur.nl

Contributing AGILE members (including the persons involved) – at least one seconding AGILE member is needed:

Sara Irina Fabrikant, University of Zurich, Switzerland

Zdeněk Stachoň, Masaryk University, Czechia

Petr Kubíček, Masaryk University, Czechia

Pyry Kettunen, Finnish Geospatial Research Institute, Finland

Fotis Liarokapis, Cyprus University of Technology, Cyprus

Contributing non-AGILE members (including the persons involved) – if applicable:

Liang He, School of Environmental Science, Nanjing Xiaozhuang University, China

Ali Asadipour, Computer Science Research Centre, London, UK

Jan Oliver Wallgrun, Independent Researcher, Hamburg, Germany

Organizing Committee (if applicable):

same as Contributing AGILE Members plus Dr. He

Programme Committee (if applicable):

Angela Schwering, University of Muenster, Germany
Peter van Oosterom, TU Delft, The Netherlands
Edward Verbree, TU Delft, The Netherlands
Stefan van der Spek, TU Delft, The Netherlands
Paulo Raposo, University of Twente, The Netherlands
Chris Kray, University of Muenster, Germany
Verena Griess, ETH Zurich, Switzerland

8. Additional information about previous workshops, if held.

The inaugural workshop of this new initiative was held at the Glasgow AGILE in 2024. The workshop was successful, attracted many participants, and allowed the community to form and grow.

9. Expected resources needed

We need a large enough room to set up a demo space in addition to the standard workshop equipment.

10. Other information

n/

Submission by e-mail to: agile2025@tu-dresden.de