

Workshop: Geospatial Education 5.0: *New Paradigms for Geospatial Training and Education*

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The COVID-19 pandemic forced educational institutes to pivot their F2F learning environments to online learning environments and has subsequently transformed societal expectations about education. Although there are many benefits associated with these changes in education (e.g. multi-dimensional interactions, flexibility and richer/deeper learning) there are still many challenges that can result in poor and often inadequate educational experiences (e.g., lack of real student-student and student-teacher interaction, and effective discussions).

Alongside this we have seen a rise in AI technologies and methodologies being used to answer questions via chat bots, create images, enhance our computing capabilities and drive many common household items such as the vacuum cleaner, much of which are using technologies and methods being developed in the geospatial field. These technologies and methods are already very much part of our daily lives.

How do we ensure we, as educators are at the forefront of these developments and incorporating these into our curriculums? How do we maintain the geospatial aspects of our curriculums? What resources, skills and communities are needed? Do Open Educational Resources provide a solution? How do we deconstruct and reconstruct our education?

During this session we will have 3 mini talks and activities to tackle the questions. Come ready to discuss and participate.

5 minute introduction

10-15 mins participant introductions

30 minutes: mini presentations

30 mins interactive discussions in small groups centred around the topics discussed.

30-40 mins presenting findings from discussions

20-30 mins wrapping up and next steps

Outcome: We will use the outcome from the session as input for a paper.

Mini presentation 1:

Geospatial Education: fit for the future?

During the last two AGILE sessions we hosted several workshops about teaching through a pandemic and beyond to transitioning from emergency online to a new normal. Today not only is our education changing and how we teach but so too are the skillsets of the modern geospatial professional. How do we, as educators stay relevant? We will present our findings from previous workshops and use the input from the pre-survey questions. These will also facilitate the activities centered around OER, deconstructing our education and how this relates to being fit for the future.

Mini presentation 2:

OERGI: Open Educational Resources in Geographic Information Science

Open Educational Resources (OERs) are playing an increasingly important role, both in formal higher education programs and for online and self-training. The OERGI workshop will provide a forum to discuss the development and use of OERs in the field of Geographic Information Science. Participants will learn about the opportunities (e.g., increased access to high-quality materials) and challenges (e.g., modularisation for flexible re-use) of OERs. The program will cover strategies for finding and adopting OERs, as well as best practices for creating, sharing, and maintaining OERs, in presentations by the organisers as well as lightning talks by workshop participants. The workshop goal is to provide an overview of the current state of OERs in our field and to move towards a shared understanding of OER value, best practices, and use in different educational settings. We plan to summarise the workshop results in a joint article by all interested participants.

The main objective of the OERGI workshop is to provide a discussion forum for participants interested or already involved in the development, publication, and use of Open Educational Resources in the field of Geographic Information Science. Based on the organisers' experiences from a series of projects dealing with such OERs¹, we want to introduce the development and use of OERs in our field, existing sources for OERs, and share and discuss our learnings with the participants. Combined with the input from the workshop participants, the overall objective of the workshop is to help move towards a shared understanding of the value of OERs, best practices for the development, publication, and maintenance of high-quality materials, as well as the different kinds of educational settings – from a traditional class-room setup to online and hybrid models – in which such materials can be used.

¹See e.g., <https://sdispider.eu/>, <https://www.hochschule-bochum.de/fbg/forschung-und-entwicklung/oer4sdi/>, <https://www.nfdi4earth.de/2participate/education-training> and <https://aquainfra.eu/>

Mini presentation 3:

Nurturing Critical Spatial Thinking: Reconstructing geospatial education for inter- and transdisciplinary practices in spatial design

The current complexity of urban systems leads to spatial design practices that are increasingly driven by inter- and transdisciplinarity (ITD). This challenges traditional design-based education, bringing to the surface issues such as data literacy, theoretical understanding, representation and communication. Geospatial education has the potential to foster ITD learning and critical spatial thinking. We will present a set of propositions on how geospatial education targeting spatial design can meet these contemporary challenges and potentials. We will discuss together with the participants those propositions and formulate principles and possible solutions that can be placed anywhere on the spectrum of data-driven, -supported, and -informed design.

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