

Proposal for pre-conference workshop – AGILE 2020

Chania, Tuesday 16 June 2020

<https://agile-online.org/conference-2020/>

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

Reproducible research in practice: the AGILE Reproducible Paper Guidelines in action

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

2.1 Topic(s)

reproducible research, open science, computational skills development, notebooks, computational reproducibility

2.2 Objective(s)

The workshop introduces practical tools, useful habits, and viable workflows to increase reproducibility of research. "Using the new AGILE reproducible paper guidelines as starting point, the participants get to know numerous alternative tools and solve small practical reproducibility tasks to improve their skills in computational research motivated by openness and reproducibility. Attending the workshop prepares participants for submitting more reproducible analysis workflows to conferences and journals.

2.3 Planned outcome(s)

- participants get to know the Reproducible Paper Guidelines
- participants understand opportunities and challenges of reproducible research
- participants learn about tools and habits to work reproducibly and publish reproducible research
- report on workshop website
- continue to grow the community of researchers proficient in reproducibility across AGILE member labs

3. Abstract

Reproducibility of research is not a black and white question. A spectrum of reproducibility exists, only some due to relevant limitations but mostly due to lack of knowledge, incentives, and skills. In this workshop, participants learn the tools and habits to improve reproducibility of their work, and how to create and publish knowledge in an open and transparent way. The workshop covers literate programming with Jupyter and R Markdown notebooks, and proactive management and sharing of computing environments (hardware, software dependencies, containerisation). Participants benefit most from the workshop if they are familiar with scripted workflows in either R or Python.

During the workshop the diversity of tools and practical tips'n'tricks are explored, including practical application of the most useful ones. The skills acquired at the workshop will allow participants to work closer to the "ideal" level of reproducibility as presented in the AGILE Reproducible Paper Guidelines (blue column, see <https://doi.org/10.17605/OSF.IO/CB7Z8>) and greatly improve efficiency and transparency in their daily work habits and enable new ways to collaborate with others. Participants will have the opportunity to share own experiences and learn from the mutual exchange.

Registration is open until May 11 2020.

The workshop assumes familiarity with the basics of reproducible research, which are introduced in depth in a workshop in the morning ([LINK HERE](#)).

Learn more about the RR@AGILE workshop series at <https://o2r.info/reproducible-agile>.

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

Half day workshop (afternoon) working with tools for improving reproducibility of computer-based research workflows.

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

Reproducible research is without doubt a highly relevant topic, and the workshop series at the AGILE conference has led to an AGILE initiative supported by the AGILE council, and the introduction of the AGILE Reproducible Paper Guidelines at the 2020 conference.

This continuation of the workshop series provides an opportunity for AGILE conference participants to acquire the practical skills to improve openness and reproducibility of their own work and will positively impact on the quality of submissions to future AGILE conferences.

6. What is the approximate number of expected participants?

10-15

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

Leading AGILE member and contact person:

Institute for Geoinformatics, University of Münster
Daniel Nüst, daniel.nuest@uni-muenster.de

Contributing AGILE members & organizing committee (persons involved):

- Faculty of Geo-Information Science and Earth Observation (ITC) of the University of Twente (Frank Ostermann)
- Interfaculty Department of Geoinformatics – Z_GIS, University of Salzburg (Barbara Hofer)
- Department of Information Systems, University of Jaume I (Carlos Granell)

8. Additional information about previous workshops, if held.

<https://o2r.info/reproducible-agile/>

9. Expected resources needed

- seminar room with tables and power connectors for participants to plug in laptops
- internet connection for all participants
- digital projector
- flip chart or whiteboard

10. Other information

More about the RR initiative at <https://o2r.info/reproducible-agile/initiative/>.