

# o2r opening reproducible research

DFG



ifgi  
Institute for Geoinformatics  
University of Münster

Wersehaus Workshop, May 17, 2016



ELSEVIER



Copernicus Publications  
The Innovative Open Access Publisher



Aalto University



Universiteit Utrecht



UNIVERSITY OF CALIFORNIA  
SANTA BARBARA

# Context

- ▶ Thanks all for showing interest, and attending!
- ▶ This project can be a game changer.
- ▶ DFG call on "Open Access Transformation"
- ▶ "Open science" rethinking where it is,  
how it is done, and how it is moving towards a better and sustainable form,  
especially in the publishing (and archiving) realm.
- ▶ "Open science" should be a tautology, but "transformation"  
and "opening" point in the right direction.

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# Motivation

This project came partly out of personal annoyance. When I want to publish a paper complete with data and procedures that reproduce the results I can:

- ▶ add a number of files
- ▶ maybe put them in a zip file
- ▶ add a URL to some web site/file/data base

but:

- ▶ many people (e.g. reviewers) are looking for the data
- ▶ reviewers often/maybe ignore this information
- ▶ all results (including my personal ones) are lost

o2r wants to:

- ▶ get each result as a file
- ▶ make the files easy to find (e.g. by author, subject, keywords, ...)
- ▶ make the files easy to download
- ▶ make the files easy to use (e.g. by adding some

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- ▶ all journals have different requirements

o2r wants to:

- ▶ extract results
- ▶ make them available for others, all the time
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but:

- ▶ any standards how to do this are lacking
- ▶ reviewers often / mostly ignore this information
- ▶ all journals have their own standards

o2r wants to:

- ▶ extract results and procedures from a paper
- ▶ store them in a central database
- ▶ make them available for other researchers
- ▶ make them available for other researchers

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⇒ all good ideas but they are not personal

o2r wants to:

- ▶ get such results into a standard format
- ▶ make it possible to publish such results for authors, editors, reviewers
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o2r wants to:

- ▶ make it easy to publish data and procedures
- ▶ make it easy to find data and procedures
- ▶ make it easy to reuse data and procedures
- ▶ make it easy to cite data and procedures
- ▶ make it easy to share data and procedures
- ▶ make it easy to collaborate on data and procedures
- ▶ make it easy to learn from data and procedures
- ▶ make it easy to teach with data and procedures
- ▶ make it easy to create new data and procedures
- ▶ make it easy to improve existing data and procedures
- ▶ make it easy to discover new data and procedures
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# Perspective

- ▶ scope: 2-phase: 2 years + 3 years to be requested:
  - ▶ what to realize in 2016+7, in order to request phase 2?
  - ▶ convincing prototype, make believe that we can develop an OAT that exceeds application to our university, or a narrower science domain IN PHASE 2
- ▶ science is communication:
  - ▶ data are (only) numbers put in a context
  - ▶ how can we make more of meaning (what) and intention (why) into machine-readable form?
  - ▶ believe comes from trust and reputation: how can we make a new document, and perhaps the chain of trust?

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- ▶ science is communication:
  - ▶ this is (only) a medium-term project
  - ▶ how can we make more of research (what) and information (data) into machine-readable format
  - ▶ science comes from trust and reputation: how can we build trust? Document, and publish the chain of trust



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