

Data exchange with RO-Crates and Knowledge Graphs

Workshop at [Open Science Festival 2023](#), Köln, Germany

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Date: Wednesday 5th July 2023 09:30-12:30 CEST

- **Room:** Room John Nash (CECAD Lecture Hall)
- Agenda (below)

Chairs:

- Stian Soiland-Reyes (RO-Crate, ELIXIR-UK, BY-COVID, FAIR-IMPACT, EOSC-Life, EuroScienceGateway)
- Leyla Jael Castro (Bioschemas, NFDI4DataScience, ZB MED Information Centre for Life Sciences)
- Dietrich Rebholz-Schuhmann (Scientific Director – ZB MED)

Abstract:

Digital Objects (e.g., data, software) and formal knowledge representations (e.g., structured metadata) form the two sides of the Linked Open Science coin: scientists want to exchange their data as Open Science material, possibly embedding it into RO-Crates, while they also want to share their findings and knowledge in a formalised representation, possibly deploying Knowledge Graph representations. What is the meeting point between data distributed via RO-Crates and that one part of a Knowledge Graph? Do RO-Crates and Knowledge Graphs serve different types of data or do they complement each other? What would be the dis/advantages of having Knowledge Graphs in RO-Crates or RO-Crates as nodes in Knowledge Graphs? In this workshop, we will first introduce RO-Crates and then have a round table open discussion to compare the potentials of the different approaches for capturing the data and the knowledge of the scientific world.

[RO-Crate](#) is a community effort to practically achieve FAIR packaging of research objects (digital objects like data, methods, software) with structured metadata. RO-Crate uses well-established Web standards and FAIR principles. For common metadata representations, RO-Crate builds on schema.org, a mature and general mark-up vocabulary used by search engines including Google Dataset Search. RO-Crate is adapted by many EU/EOSC projects as a pragmatic implementation of the FAIR Digital Objects vision.

Agenda

Time (CEST)	Wed 2023-07-06
09:30	Overview of FAIR data publishing and RO-Crate Speaker: Leyla Jael Castro, Stian Soiland-Reyes
09:50	A very brief introduction to making metadata with JSON-LD Speaker: Stian Soiland-Reyes
10:00	Tutorial: FAIRify a dataset using just enough metadata Speaker: Leyla Jael Castro
10:30	Tutorial: Packaging a dataset with its metadata as a RO-Crate Speaker: Stian Soiland-Reyes See training material

10:50	Making your own metadata profile Speaker: Stian Soiland-Reyes
11:00	Coffee Break
11:30	Demo: Using Linked Data tooling to query knowledge graphs and challenges Speaker: Stian Soiland-Reyes https://github.com/stain/ro-crate-sparql/blob/main/ro-crate-sparql.ipynb
11:50	Open discussion, feedback and requirements from early adopters Moderator: Dietrich Rebholz-Schuhmann
12:20	Wrap-up and next steps Lead: Stian Soiland-Reyes