Session
Entry ID: 203

Title: **Research Data Management in Cultural Heritage goes Digital - New Technologies along the object biography**

Description (250-300 words required)
Infrastructures for Research Data Management (RDM) and applying the FAIR (Findable, Accessible, Interoperable, Re-usable) and Open Science Principles are key features in modern (digital) Cultural Heritage. Nowadays, computer applications, as well as statistical and computational approaches, constitute a big part of the toolbox of every CH researcher, as they open tremendous possibilities for all research. Several initiatives, such as the German National Research Data Infrastructure (NFDI) – especially NFDI4Objects – or the European Open Science Cloud (EOSC), use this topic to strengthen new technologies along the individual object biography. This includes (a) comprehending representations of physical objects as research data, (b) relating them to individual contexts, (c) transforming them adequately into the digital space, and (d) curating them according to domain-specific requirements. This leads to a paradigm derived from the FAIRification workflow: (i) capturing, (ii) semantic (meta) data modelling and qualifying, (iii) applying (scientific) analysis, (iv) sharing the data by visualisation and FAIRified publication, (v) interlinking and integrating data into knowledge graphs.

To support the activities within the before mentioned paradigm, this session invites contributions dealing with various aspects of RDM, FAIR and Open Science, but not limited to:

- applying new documentation methods for data capturing in the CH domain
- applying (semantic) data modelling (e.g. CIDOC CRM) for data qualification (e.g. RDF, LPG, etc.)
- applying new scientific analysis in Cultural Heritage, not limited to natural sciences, geosciences, geodesy, conservation sciences
- FAIRification Tools and Research Software (incl., e.g. small R/Python scripts, "CAA Little Minions") and statistical/computational approaches
- concepts to share research (meta) data in free and open available comprehensible FAIRified representations
- methods and concepts for integrating and interlinking research data into domain-focused and overarching knowledge graphs
- working together with Citizen Science and their knowledge bases/repositories (e.g. Wikiverse, Open Street Map, Portable Antiquities Scheme, …)
- dealing with legacy data, data sustainability and long-term archiving
- presenting experiences as DOs (Good Practices) and DON'Ts (Worst Practices)
- applying AI methods and tools for CH

Motivation:
In the last couple of years, the importance of digital research data management (RDM) has increased in all research fields, including the cultural heritage domain, especially archaeology. This domain is an interdisciplinary connection of both people and data, which can only be solved by interlinking the research data. To create a framework and a network for this purpose, interdisciplinary and transdisciplinary (incl. Citizen Science) infrastructures and common standards must be developed and established. This can only be done together using several perspectives on the same research data point and creating so-called "community standards" such as common exchange formats (LIDO), reference models (CIDOC CRM) and ontologies. Another huge topic is integrating Citizen Scientists and volunteers into this process, maybe via the Wikiverse (Wikidata, Wikipedia, Wikimedia Commons, …) or Open Street Map. This can also be done by sharing the DOs (Good/Best Practices) and DON'Ts (Worst Practices) so that others may have a good example or just not make mistakes again.

Target Audience:
The target audience for this session will be primarily the following groups, but not limited to:
- digital archaeologists, computational archaeologists (archaeological computer scientists), digital humanists
- researchers in the Cultural Heritage domain
- researchers from the natural sciences, geosciences, geodesy (incl. geoinformatics), conservation sciences, …

- Research Data Management (RDM) staff
- Citizen Science

Keywords (3-5 keywords required):
Research Data Management; FAIR Principles; Digital Approaches; Data Modelling; Object Biography