



Contribution ID: 98

Type: **Poster**

White Paper On Metadata Catalogue Systems

DAPHNE4NFDI, part of Germany's National Research Data Infrastructure (NFDI), focuses on implementing FAIR principles for research data from Photon and Neutron (PaN) sources at large-scale facilities, universities, and research institutions. This includes the adoption of SampleDB as a flexible metadata solution, with comparisons to alternatives like ICAT and SciCat. Metadata catalogues are categorized into raw data repositories, institutional databases, and public-access systems, each with distinct roles. Key considerations include the integration of standards like NeXus, user-friendly searchability, and metadata enrichment. Case studies, including RefXAS, illustrate practical implementations and quality assessments. The paper also discusses Authentication and Authorization Infrastructure (AAI) strategies for secure, role-based data access, offering recommendations to enhance collaboration, data quality, and a unified, FAIR-compliant metadata ecosystem for the PaN research community.

The objective of this **white paper Catalogue** is to pinpoint a catalogue solution suitable for DAPHNE4NFDI partners. It aims to identify catalogue use-cases and the expected nature of searches along with outlining the metadata schema. The contents of this document provide a preliminary yet concise specification of (non-)requirements, a review of the current state and local solution landscape, incorporating lessons learned and a discussion leading to preliminary conclusions and decisions.

Primary author: Dr HAKIM, Bishoy (FAU)

Co-authors: GAUR, Abhijeet (ITCP, KIT); PEDERSEN, Björn (MLZ, TU München, Garching); FELDER, Christian (Forschungszentrum Jülich GmbH); DALL'ANTONIA, Fabio (European XFEL GmbH); Mr DALLMANN, Johannes (FAU); Mr HAYEN, Nicolas (Kiel University); KWEE-HINZMANN, Regina; KRAHL, Rolf (Helmholtz-Zentrum Berlin für Materialien und Energie); BUSCH, Sebastian (GEMS at MLZ, Helmholtz-Zentrum Hereon, Germany); Mr PARIPSA, Sebastian (University of Wuppertal); UNRUH, Tobias (FAU)

Presenter: Dr HAKIM, Bishoy (FAU)

Session Classification: Poster