

NFDI4ING Conference 2025

Monday 15th September

Registration & Lunch

Start: 11:30 Georg-Christoph-Lichtenberg-Haus, Dieburger Straße 241, Darmstadt

[Opening Session] FAIR Digital Objects, Data Products and Digital Twins

Start: 13:00 Host: Peter Pelz

Contributions (ca. 10min):

- *Hendrik Borgelt*: A Metadata-Driven Workflow for Semantic Processing of Catalytic Experiments
- *Dorothea Iglezakis*: Advancing Interoperability in Engineering Sciences with a Common Information Model
- *Marc Fuhrmans*: Making RDF accessible with Metadata Profiles
- *Oliver Koepler*: The Semantic Data Hub – an evolution of metadata, terminologies and services
- *Marius Politze*: From Storage to Storage Federation using FDOs
- *Andreas Noback*: Freeda – RMU's Semantic Digital Twin

[Panel Discussion] Policies for best practice – RFCs & subject-specific DFG recommendations

Start: 15:00 Host: Christian Langenbach

Contributions (10-15 min):

- Tobias Hamann
- *Christian Langenbach & Michael Selzer*: Uniform platform for developing and publishing (quasi-) standards (guidelines) for research software management
- *Benjamin Farnbacher & Christian Stemmer*: Towards a guideline for DFG review board 4.22 (Fluid Mechanics, Technical Thermodynamics, Thermal Power Engineering) – current status and experiences

[Round table] Federated infrastructure, Data Meshes and knowledge graphs

Start: 15:00 Host: Mario Moser

Contributions (ca. 10 min):

- *Marius Politze*: Linked Data Platform and FAIR Data Point - A Roadmap to Graph-y FAIR Digital Objects
- *Mario Moser*: Data Mesh for RDM in the Engineering Sciences
- *Erhun Giray Tuncay*: An Enhanced Terminology Service to Support Various Research Communities
- *Angelina Kraft*: NFDI4ING - Research Data Search Index
- *Jakob Beetz*: ConSolid – Federated data management in Architecture and Construction

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cont.

[Panel Discussion] Data literacy in the engineering curriculum

Start: 17:00 Host: Peter Pelz

Contributions (10-15 min):

- *Mario Moser*: A RDM Serious Game
- *Benjamin Farnbacher*: Integrating Research Data Management into Research and Teaching in the Engineering Curriculum: A Multi-Level Approach.
- *Peter Pelz*: What have we learned in Alex' Summer School
- *Heike Schmitt*: Fit for Future?! – A Fruitful Collaboration between 4ING and NFDI4ING

[Round table] Research data management for the built environment

Start: 17:00 Host: Jakob Beetz

Contributions (10-15 min):

- *Jakob Beetz*: Spatial Knowledge – Use Cases of Interlinked Heterogenous Building Data
- *Andreas Noback*: RDF Store and the NFDI4ING ingest service for building data
- *Ina Blümel*: Perspectives from NFDI4Culture
- *Kristina Fischer*: NFDI4Objects meets NFDI4ING: Building Bridges Between Archaeology and Engineering Through Research Data

End: 18:30

Dinner

Start: 20:00 Place: Weststadt Bar, Mainzer Straße 106, Darmstadt

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Tuesday 16th September

Welcome

Start: 8:45 Georg-Christoph-Lichtenberg-Haus, Dieburger Straße 241, Darmstadt

[Panel Discussion] FAIR4AI – AI4FAIR

Start: 9:00 Host: Gerald Jagusch

Contributions (10-15 min):

- *Norbert Kockmann*: An AI-Assisted Workflow for Semantically-Supported RDM in Catalytic and Process Engineering
- *Jochen Fiedler*: LLM-Assisted Extraction of Mathematical Model Metadata for FAIR Reuse
- *Jürgen Windeck*: Developing LLM-based Assistance for Data Management Planning
- *Vasily Seibert*: Single-Face-to-the-Customer für NFDI4ING: Gruppenchat-Ansatz mit LLM-Agenten zur Steigerung der Sichtbarkeit und KPIs
- *Arnd Koeppel, Monika Vogler & Michael Selzer*: Agentic AI and FAIR Data in the Kadi ecosystem

[Round table] FAIR industry applications

Start: 9:00 Host: Sascha Lamm

Contributions (10-15 min):

- *Sascha Lamm*: Semantic PEA Data sheets for FAIR documentation in modular plants
- *Sebastian Härtner*: Industry perspectives
- *Roger Winkler & Tim Hoffeller*: GAECO – A Plattform for Developing Decentralized, Domain-Driven Software Applications
- *Ghislain Atemezing & Jean-Francois Demoutiez*: SHACLing data in ERA Information Sharing System (ISS): Lessons Learnt and Challenges

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Tuesday 16th September, cont.

[Poster Session]

Start: 10:30

Contributions (in front of the Posters):

- Mario Moser: Teaser: A Special Interest Group for a FAIR Metric in the Engineering Sciences
- Mario Moser: NFDI4ING's Training and Education Platform
- Cordula Hege: Basic services for the NFDI
- Andreas Geißner: An adaptable workflow for uniformly structured text data for text and data mining
- Juergen Windeck: Easy-to-use RDF-compliant metadata templates for subject-specific metadata with the NFDI4ING Metadata Profile Service
- Felix Engel: What does that mean? Automation support in the quasi-standardisation of terminology
- Petra C. Steiner, Abdelmoneim Amer Desouki, Jonathan D. Geiger, Henrika M. Hüppe, Marc Fuhrmans: Specifying the differences with the DALIA Interchange Format (DIF) – Picklists and Controlled Vocabularies for a Knowledge Graph on Open Educational Resources
- Petra C. Steiner, Abdelmoneim Amer Desouki, Jonathan D. Geiger, Henrika M. Hüppe, Marc Fuhrmans: DALIA - Data Literacy Alliance: DALIA – Data Literacy Alliance
- Patrick Kuckertz: Hello, I'm Ellen!
- Hartmut Schlenz

[Concluding session] Prospects for NFDI4ING 2.0

Start: 11:30 Host: Peter Pelz

Contributions:

- Mark Dörr: LARAsuite
- Nimet Tas: Strengthening Data Literacy in the Life Sciences: The Role of NFDI in Advancing FAIR Research Practices

Lunch

Start: 12:30

End: 14:00

Round tour: Park Rosenhöhe, UNESCO World Heritage Site Mathildenhöhe Darmstadt

Start: 14:00 **End:** 16:00 at Georg-Christoph-Lichtenberg-Haus