Contribution ID: **189** Contribution code: **-189**   Type: **Poster**

DiTraRe –Towards Trusted Digital Research Workflows

The Leibniz ScienceCampus "Digital Transformation of Research" (DiTraRe), a collaborative initiative by FIZ Karlsruhe and Karlsruhe Institute of Technology (KIT), develops and pilots trusted digital research workflows to enhance reproducibility, transparency, and reusability in the natural sciences. Addressing the challenges posed by increasing data volumes and AI integration, DiTraRe focuses on four interdisciplinary research clusters:
- Protected Data Spaces: Develops methods for securely handling sensitive data in sports science, ensuring privacy protection while enabling research.
- Smart Data Acquisition: Optimizes digital data collection and analysis in chemistry through tools like the Chemotion Electronic Lab Notebook, aiming for efficient and standardized data capture.
- AI-Based Knowledge Realms: Investigates the application of AI in biomedical engineering, such as predicting intensive care unit stays, emphasizing explainability and reliability of AI methods.
- Publication Cultures: Explores new models for publishing large datasets, particularly in climate research, to improve accessibility and reuse of scientific data.

DiTraRe leverages the modular infrastructure of RADAR, FIZ Karlsruhe's established repository platform, to support secure data publication, workflow versioning, and long-term preservation. Funded by the Leibniz Association, the project exemplifies how interdisciplinary collaboration and robust infrastructure can foster trust in digital research across various scientific domains.

Our poster presents DiTraRe's architecture, pilot cases, and development roadmap, demonstrating practical approaches to institutionalizing trust in scientific workflows.

Tagline

DiTraRe develops modular, standards-based workflows for transparent and trusted digital research in the natural sciences, focusing on AI integration, provenance, and reproducibility.

Keywords

Research Workflows, FAIR Data, AI in Science, Reproducibility

Author: Dr BONATTO MINELLA, Christian (FIZ Karlsruhe)

Co-author: Dr BACH, Felix (FIZ Karlsruhe)

Session Classification: Poster & Demos Sessions

Track Classification: Building the Digital Backbone: Open Science Infrastructures