

SDS 2024 Edition

The Second International Workshop on Semantics in Dataspaces continues the success of its previous edition [1, 2]. The workshop brings together people interested in dataspace or the role of semantics in them, from different communities such as dataspace drivers, legal and policy makers, as well as the researchers from the Semantic Web community. Since members of these different communities rarely have the opportunity to interact with each other, we design the workshop to be highly interactive and communicative. This full-day workshop consists of formal paper presentations with fruitful Q&A sessions, and an open discussion that allowed participants to identify promising topics for collaboration and follow-up activities.

The topics of interest in this workshop are threefold: First, a conceptual perspective highlights definitions of dataspace, their core elements, and lifecycles. Participants examine formal models, the impact and potential of unique identifiers, and conceptual reusable assets in general. Second, state-of-the-art implementations in both academia and adoption are reviewed. This includes comparisons of current dataspace efforts and analyses of their requirements, key drivers, and common sustainable elements and standards. Last but not least, this workshop advances the application of semantics for dataspace. Participants evaluate the potential of semantic-based methods and solutions for dataspace, and discuss the tailored benefits of ontologies, unique identifiers, algorithms, and concepts for a widespread dataspace adoption in the future.

With more than a dozen contributions, *The Second International Workshop on Semantics in Dataspaces* presents many challenges, but also opportunities that will enhance the potential of dataspace and lead to future global solutions. The workshop organizers are excited to strengthen the role of semantics for dataspace and are confident that this workshop provides a stimulating and engaging forum for researchers and practitioners working in this area.

In this workshop edition, 18 papers were submitted for peer review. Of these, 13 papers were accepted for this volume, 8 as regular papers and 5 as short papers:

- FAIRness in Dataspace: The Role of Semantics for Data Management [3]
- The Rights Delegation Proxy: An Approach for Delegations in the Solid Dataspace [4]
- Towards LLM-augmented Creation of Semantic Models for Dataspace [5]
- Inter-Pod Credential Exchange Protocol via Linked Data Notifications [6]
- Selective disclosure of Digital Calibration Certificate in a quality infrastructure data space [7]
- Adapting Ontology-based Data Access for Data Spaces [8]
- Linking of open and private data in dataspace: A case study of air quality monitoring and forecasting [9]
- On the Governance of Semantic Artefacts in Dataspace [10]
- Towards Enabling FAIR Dataspace Using Large Language Models [11]
- Interoperable and Continuous Usage Control Enforcement in Dataspace [12]
- DFDP: A Declarative Form Description Pipeline for Decentralizing Web Forms [13]
- Challenges and Opportunities for Enabling the Next Generation of Cross-Domain Dataspace [14]
- Semantic Data Link: Bridging Domain-Specific Needs with Universal and Interoperable Semantic Models [15]

The SDS organizers would like to thank all authors for submitting their papers, the members of the program committee for their thorough and detailed reviews, the presenters for their exciting talks, and the numerous participants for the great discussions during the workshop. In the open discussion session, the participants agreed to use the term *dataspace* in one word instead of *data space* in the future. This emphasizes the role of dataspace as a concept and research area, rather than just a space with data, similar to how *database* was coined earlier. During this discussion session, participants also agreed to form the *W3C Dataspace Community Group*¹ to strengthen the dataspace community. We look forward to seeing everyone again at a future SDS workshop.

Program Committee (Random Order)

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¹<https://www.w3.org/community/dataspace/>

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