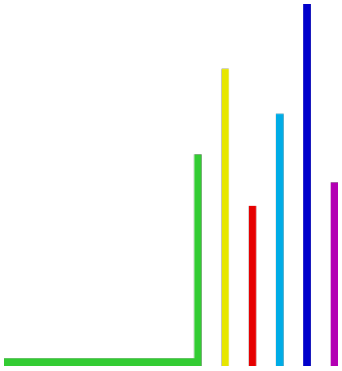

LDAC2021
9th Linked Data in Architecture and Construction Workshop

Proceedings of the 9th Linked Data in Architecture and Construction Workshop (LDAC 2021)

Luxembourg, October 11th – 13th 2021

María Poveda-Villalón, Pieter Pauwels
(eds)

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The LDAC workshop series provides a focused overview on technical and applied research regarding the usage of semantic web, linked data and web of data technologies for architecture and construction (design, engineering, construction, operation, etc.). The workshop aims at gathering researchers, industry stakeholders, and standardization bodies of the broader Linked Building Data (LBD) community. The aim of the workshop is to present current developments, coordinate efforts, gather stakeholders, and elaborate use cases.

We are pleased to collect in this volume the papers that were submitted and presented during the 9th Linked Data in Architecture and Construction Workshop. The workshop took place in Luxembourg, collocated with the 38th CIB W78 conference on Information and Communication Technologies. The joint event was organised by the Luxembourg Institute of Science and Technology (LIST), in collaboration with Cardiff University and the European Construction Technology Platform (ECTP).

The 9th LDAC workshop took place from 11 to 13 October 2021, followed by the CIB W78 conference from 13 to 15 October. During these days, the workshop attendees attended the presentations of thirteen peer reviewed paper submissions in the proceedings. Furthermore, the workshop included an industry session, with 5 contributions.

Finally, the workshop also included an inspiring keynote by Ed Curry (Insight Centre for Data Analytics, Maynooth University, BDVA): "*From Data Platforms to Dataspaces: Enabling Data Ecosystems for Intelligent Systems*". Digital transformation is driving a new wave of large-scale datafication in every aspect of our world. Today our society creates data ecosystems where data moves among actors within complex information supply chains that can form around an organization, community, sector, or smart environment. These ecosystems of data can be exploited to transform our world and present new challenges and opportunities in the design of intelligent systems. This talk presents my recent work on using the dataspace paradigm as a best-effort approach to data management within data ecosystems. The talk explores the theoretical foundations and principles of dataspaces and details a set of specialized best-effort techniques and models to enable loose administrative proximity and semantic integration of heterogeneous data sources. Finally, I share my perspectives on future

dataspace research challenges, including multimedia data, data governance and the role of dataspaces to enable large-scale data sharing within Europe to power data-driven AI.

Acknowledgments

We would like to thank the authors and presenters for their qualitative contributions, the Programme Committee who reviewed the papers presented in this volume, the keynote speaker **Ed Curry** for his availability and talk, and especially also **Dr. Calin Boje, Prof. Sylvain Kubicki** and the entire organisational team at LIST Luxembourg Institute of Science and Technology who made an extraordinary effort to organise this event as a hybrid event (physical and online), in conjunction with the CIB W78 conference. This created a highly interesting and inspiring week of linked data talks for the built environment.

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