



LDAC2024 - 12th Linked Data in Architecture and Construction Workshop 10 - 14 June 2024

The LDAC workshop series provides a focused overview on technical and applied research on the use 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 practical insights from industry. The workshop series has taken place yearly since 2012 in many locations and venues, and in 2024 it will be a stand-alone event in the Research Centre for the Engineering of Smart Product Service Systems (ZESS) at the Ruhr University Bochum, Germany. The workshop gathers domain experts from the **architecture, engineering, and construction (AEC) domain as well as computer scientists** and software developers that are close to the use of (semantic) web technologies. The workshop is **open to industry participation**.

<https://linkedbuildingdata.net/ldac2024/>

CALL FOR PAPERS

This year's LDAC workshop takes place in Bochum, Germany. As in the past years, the workshop covers work from three perspectives: **research, technical discussions and industry cases**. In short, LDAC welcomes stakeholders from research and practice and serves as a common communication platform to advance and innovate the use of linked data in architecture and construction.

LDAC aims at providing a forum for technical discussion on the topic of **handling data in architecture and construction**. A large part of the workshop is concerned with the use of **(semantic) web technologies**. Research is welcomed on the use of ontologies and

vocabularies for representing **building data, 3D geometry, product data, geospatial data, infrastructure data, HVAC data, sensor data, and so forth.**

Additionally, the workshop welcomes work on how to combine these highly semantic datasets with other data sets, which in the case of architecture and construction consist mainly of geometry and sensor data streams. Using **different data storage techniques (semantic data stores, time series databases, key-value stores)**, the purpose of the LDAC workshop is to investigate how data can be combined into a complete and holistic set of available building data. Practical techniques of combining datasets in the current web-based and data-driven world are explored: **Internet of Things, Machine Learning, Digital Twins, Building Information Modelling.**

Finally, input and expertise from industry stakeholders and company representatives is welcomed in the brand new **industry fair**. This fair can be used for presenting ideas, use cases, solutions or experience reports related to **practical applications of linked data at any stage of the construction lifecycle** (design, construction, operations, facility management, renovation). Both success stories and discussions of obstacles to adopt the presented technologies are welcome. They can then be presented in an open industry fair where participants can get in touch one-on-one with participating companies.



TOPICS

The **workshop topics** include, but are not restricted to the following:

Linked Building Data:

- Linking building data: product, properties, 3D, sensor data modelling
- GIS - BIM integration using linked data approach
- Knowledge graphs for existing buildings
- Building-related ontologies: BRICK, IFC, BOT, OMG/FOG, OPM, DOT
- Infrastructure modelling: rail, road, infra

Graphs:

- Graph data modelling
- Publishing Building Data on the Web
- Graph analytics and semantic data lakes
- Visualization of construction data

Ontologies and Inference:

- Ontology Engineering
- Mapping and alignment of data or ontologies
- Semantic enrichment for AEC Industry
- Semantic web services: RDF, JSON-LD
- Semantic query systems
- Reasoning, rule systems, machine learning

Systems:

- Operational system integration
- Semantic Digital Twins
- Linked building data management over time and stakeholders
- Security and access control with RDF data

IMPORTANT DATES

Registration opens: **January 19, 2024**

Abstract submission deadline (optional - no review): **January 19, 2024**

Paper submission deadline: February 02, 2024

Poster Track submission deadline: **February 18, 2024**

Industry Track submission deadline: **February 18, 2024**

Notification of acceptance: **March 15, 2024**

Final paper submission: April 19, 2024

LDAC Summer School: 10-12 June 2024

LDAC Workshop: 13-14 June 2024

SUBMISSION

Scientific papers are welcome for submission in the **LDAC2024 EasyChair platform**. Submit a paper of max. 14 pages (PDF) before the submission deadline (February 02, 2024). Please follow the [CEUR WS Proceedings template](#) (Word, LaTeX) in one-column format, and make a submission directly via [EasyChair](#) in PDF. This can also be prepared using the template file in Overleaf, as mentioned in <http://ceur-ws.org/Vol-XXX/>.

Submit: <https://easychair.org/conferences/?conf=ldac2024>

The **paper review process** will be **single-blind** (no need to anonymize the papers). Every submission will be reviewed by at least two independent referees from the **Programme Committee**. Accepted submissions will be published as part of a separate volume of the [CEUR-WS proceedings](#). This does not include the industry contributions, which follow a different industry track procedure, and the poster contributions, which can be submitted in a separate poster track. All CEUR-WS proceedings are **Scopus-indexed**. If accepted, the paper must be presented at the workshop by one of the authors (registration required).

Accepted papers of previous LDAC workshops are available here:

- LDAC 2022: <https://ceur-ws.org/Vol-3213/>
- LDAC 2021: <https://ceur-ws.org/Vol-3081/>
- LDAC 2020: <http://ceur-ws.org/Vol-2636/>
- LDAC 2019: <http://ceur-ws.org/Vol-2389/>
- LDAC 2018: <http://ceur-ws.org/Vol-2159/>

PROGRAMME

The LDAC 2024 workshop will be organised as a **2-day workshop, preceded by a 3-day Summer School in the same location**. This will include keynote presentations, plenary research paper sessions, and an industry track on Thursday. The tentative program is:

Monday 10 June - Wednesday 12 June

Summer School of LDAC

Thursday 13 June

- 09.00-10.00: Opening and keynote presentation
- 10.30-12.30: Plenary session
- 13.30-15.30: Plenary session
- 16.00-18.00: Poster track + Industry Fair
- 18.00-19.00: SSoLDAC Hackathon Presentations
- 20.00-23.00: LDAC Dinner

Friday 14 June

- 09.00-10.00: Keynote presentation
- 10.30-12.30: Plenary session
- 13.30-15.30: Plenary session
- 16.00-17.00: Closing session

POSTER TRACK

For the LDAC2024 Workshop, we introduce a new **PhD poster track** to present and demonstrate **ongoing research and development** related to Linked Data in Architecture and Construction. Posters will be presented in a separate session where attendees can move between posters, encouraging in-depth discussions with other participants and experts in the field. We particularly **encourage early-career PhD researchers** to submit a poster with their research approaches and results. A poster presentation may also include a **live demonstration** of research prototypes alongside the poster.

To present a poster at LDAC2024, you have to submit an extended abstract of your work via the [EasyChair platform](#). Extended abstracts for the PhD poster track **must contain 1500 words** describing the content of the work to be presented in the poster. Submissions

are reviewed by the program committee regarding their topicality and quality. They will not be published in the workshop proceedings.

Submit: <https://easychair.org/conferences/?conf=ldac2024>

INDUSTRY TRACK

As part of the workshop, we invite **companies** to present interesting cases, innovation, research, and development related to Linked Data in Architecture and Construction in an industry fair. Do you have relevant software to present to workshop participants, or are you in an AEC organisation that deploys, requires or consumes linked data, then this is your place to be. The industry fair will take place over the two workshop days and allows you to **talk to industry representatives, researchers and summer school participants** during the breaks and sessions.

Participation in the industry fair is available through [the Sponsoring Packages of LDAC](#).



SUMMER SCHOOL

This year, there will again be an LDAC Summer School, directly preceding the workshop, and in the same location. The Summer School of LDAC will be organised on 10-12 June, in Bochum, Germany. This Summer School focuses entirely on the use of linked data and semantic web technologies for the built environment. In this summer school, experts and researchers in the use of these technologies for the AEC industry will share their knowledge and expertise to a **limited audience of 40 participants**.

The summer school targets **starting PhD students and starting industry professionals within the AEC industry**. Coding experience is highly recommended.



VENUE

The LDAC2024 Summer School and Workshop will take place in the innovation quarter [Mark 51°7](#) at Ruhr University Bochum (RUB). The LDAC2024 Summer School and Workshop venue is located in the center of the Ruhr metropolitan region in Germany. With almost 70 hectares in size and the motto “knowledge creates economy” the emerging innovation quarter focuses on bringing together research and industry - right adjacent to Bochum's city centre. While the LDAC Summer School is hosted in the [RUB Maker Space](#), a place where innovation is created in the form of prototypes and discussions, the LDAC Workshop takes place in the [Research Centre for the Engineering of Smart Product Service Systems \(ZESS\)](#), which aims at forming cooperations between research and practice. The [Chair of Computing in Engineering](#) at the Department of Civil and Environmental Engineering of RUB provides the local organization.



ZESS
FORSCHUNGSZENTRUM MARK 51°7

**RUHR
UNIVERSITÄT
BOCHUM**

RUB



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SUPPORT

You can support LDAC2024 through one of the options in [the sponsoring package](#) (silver, gold, diamond). If you are interested, then please get in touch via [ldac2024\[at\]linkedbuildingdata.net](mailto:ldac2024[at]linkedbuildingdata.net).



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