

## it – Information Technology

# Call for Papers: Special Issue on Federated Data Spaces and Data Economy

### GUEST EDITORS

- **Boris Otto**, TU Dortmund, Germany
- **Thomas Liebig**, TU Dortmund, Germany

This special issue is motivated by the urgent need to address the complex technical, regulatory, and economic challenges that arise as Europe moves towards a more integrated and sovereign digital infrastructure. By bringing together diverse perspectives and in-depth research, this issue will contribute to shaping the future of digital sovereignty in Europe and beyond.

We invite contributions of novel results, ongoing work, and position papers focusing on various aspects of Data-driven Resilience Research from a scientific or practical perspective.

We invite short (4 pages) and long papers (8 pages).

### IMPORTANT DATES

- **Paper Submission Deadline: July 31, 2025** (11:59 pm, Hawaii time)
- Notification of Acceptance: September 20, 2025 (11:59 pm, Hawaii time)
- Camera-Ready Paper: October 15, 2025 (11:59 pm, Hawaii time)

### TOPICS OF INTEREST

#### **Interoperability and Data Portability**

Delve into the challenges and solutions associated with achieving interoperability and data portability across varied data ecosystems. Submissions should explore how service integration, standardization efforts, and the implications of these frameworks influence existing IT infrastructures.

#### **Regulatory and Compliance Issues**

Examine the effects of regulatory measures, such as the European General Data Protection Regulation (GDPR), on the structure and functionality of federated data spaces. Contributions are encouraged to analyze regulatory sandboxes and their role in enabling innovation within the confines of stringent data governance norms.

#### **Security and Privacy in Federated Data Spaces**

Tackle the security risks and privacy issues pertinent to federated data spaces. Papers should focus on secure data exchange mechanisms, identity management, trust establishment, and the broader implications these have on user privacy and data rights management.

**Socio-Economic Implications:**

Assess the socio-economic consequences of federated data spaces, including their impact on business models, market competition, and the economic landscape of sectors such as logistics, healthcare and manufacturing. Discussions might also cover the strategic importance of data as an economic asset within these data spaces.

**Technological Innovations and Challenges:**

Spotlight the latest technological developments and the challenges encountered in constructing durable federated data infrastructures. This theme invites discussions on architectural design, the integration of cloud and edge computing services, and the creation of open APIs for applications spanning multiple domains.

**POTENTIAL QUESTIONS**

- (1) How are generative artificial intelligence (AI) and large language models (LLMs) impacted by data spaces?
- (2) What impact have data spaces in the development of AI?
- (3) Advances in the design of trust models and trust mechanisms.
- (4) Data space technologies in edge computing and internet of things (IoT) technologies.
- (5) Real-world cases and examples for domains that leverage data spaces.
- (6) New concepts and actors like intermediaries or data trusts.
- (7) The role of open technologies in the data economy.
- (8) The impact of current political turbulences and sovereignty concerns.

**SUBMISSION**

- To submit, go to <https://www.editorialmanager.com/itit/default2.aspx>
- All submissions are subject to peer review and adhere to the standard editorial policy of *it – Information Technology*. Further information on the journal's peer review policy can be found in the [Instructions for Authors](#)
- Please adhere to our [Instructions for Authors](#) when preparing your manuscript
- More information on how to submit can be found here: [it - Information Technology](#)

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In case of any queries, please contact our editorial office: Birgit Zoglmeier ([ITIT.Editorial@degruyter.com](mailto:ITIT.Editorial@degruyter.com)).