

**International Conference on Digital Sovereignty (ICDS) – 2025: Conference Program
(30.10.2025 and 31.10.2025)**

Date/Time: 30th October 2025, 08:00 AM – 16:00 PM (Oslo Time/CET).

Venue: Oslo Science Park, Gaustadalléen 21, 0349 Oslo, Norway.

Time	Title/Description
Session 1. Introduction Session Chair: Sanjay Misra (Institute for Energy Technology (IFE), Norway)	
08:00 h – 08:05 h	Opening: Sanjay Misra (IFE)
08:05 h – 08:10 h	Welcome: Petter Kvalvik (IFE)
08:10 h – 08:15 h	Inaugural Issue of the International Journal of Digital Sovereignty and Global Data Governance
08:15 h – 08:45 h	Invited Talk: On the Role of Higher Education Institutions in Digital Sovereignty Prof. Hakima Chaouchi (Institut Mines Telecom, France)
08:45 h – 09:00 h	Coffee Break
Session 2. Human-Centric Digital Sovereignty (Paper Presentations) Session Chair: Igor Calzada (Universidad del País Vasco/Euskal Herriko Unibertsitate, Spain)	
09:00 h – 09:15 h	Structuring Circular Economy Intelligence: Towards a Sovereign Knowledge Ecosystem for Circular Systemic Solutions Konstantina Pityanou, Dimitra Papatsaroucha, Efthalia Karkou, Maria Aryblia, George Arampatzis and Evangelos K. Markakis
09:15 h – 09:30 h	The Sovereign Loop: A Novel Model for Trust-Calibrated Human-Centred AI in Data-Scarce Environments Fjolla Berisha, Leidiane Da Silva, Peter Mooney, Zohreh Pourzolfagar and Markus Helfert
09:30 h – 09:45 h	Digital Twin Framework for Optimizing Behavior Change with Greedy Heuristic in Data Secure and Data Scarce Environment Ayan Chatterjee
09:45 h – 10:00 h	A Socio-Technical Perspective on Data Usage Control Anna Gieß, Julia Pampus, Angelina Koch and Anna Maria Schleimer

10:00 h – 10:15 h	Towards full Digital Sovereignty on-chain enabled by smart contract-based DID management, Miguel Gomez Carpena, Jorge Lanza Calderón and Luis Sánchez
10:15 h – 10:30 h	Human-AI Governance through Innovation Systems: Digital Sovereignty in the Basque Country's Healthcare System, Igor Calzada
10:30 h – 10:45 h	Coffee Break
Session 3. Industry and Innovation Impact (Paper Presentations) Session Chair: Vasileios Gkioulos (Norwegian University of Science and Technology, Norway)	
10:45 h – 11:00 h	Empowering Digital Sovereignty: A Reinforcement Learning-Based Self-Healing Response System for Cyber Attack Recovery and Resilience Aws Jaber and Giordano Colo'
11:00 h – 11:15 h	Too Small to Stand Alone: Capability Constraints and Cooperative Digital Sovereignty in APT Defense Raymond Hagen
11:15 h – 11:30 h	Towards Sovereign Service Platforms: Data Spaces for Sharing Dynamic Mobility Data Falk Langer, Anna Maria Schleimer, Maik Mannsfeld, Wilhelm Rosinski.
11:30 h – 11:45 h	Enabling Digital Sovereignty Resilience through Digital Public Goods: A Case Study of DHIS2 Scott Russpatrick
11:45 h – 12:00 h	Open and Sovereign RAG: Evaluating a Model-Agnostic Architecture for Domain-Specific Knowledge Andreas Schneider and Thomas Schuster
12:00 h – 13:00 h	Lunch Break
Session 4. Digital Ecosystem and Governance (Paper Presentations) Session Chair: Giorgio Pedrazzi (University of Brescia, Italy)	
13:00 h – 13:15 h	There's no place like home: Empower smart home users for sovereign data sharing Anna Maria Schleimer, Malina Klueß, Fangqiang Huang, Alexander Rogalla, Nils Jahnke and Simon Hensellek
13:15 h – 13:30 h	Deciphering Digital Sovereignty: A Conceptual and Taxonomic Inquiry Pankaj Pandey

13:30 h – 13:45 h	Monitoring Local Digital Currency Circulation for Fostering Community-Based Sovereign Money, Lina Čėponienė, Tomas Skersys, Mantas Jurgelaitis, Paulina Budrytė, Julia Barashkov, Nicolas Franka and Paul van Vulpen
13:45 h – 14:00 h	Data governance framework and system architecture: Digital battery passport Maria Bashir, Bikesh Shrestha, Shailendra Singh, Martin Thomas Horsch and Heinz Adolf Preisig
14:00 h – 14:15 h	Sovereignty as Code, Law as Contract: Transfer Impact Assessments and the Governance of Digital Borders Giorgio Pedrazzi
14:15 h – 14:30 h	Networking/Mingling – Coffee.
Session 5. National Digital Sovereignty and Societal Impact (Papers Presentations) Session Chair: Hakima Chaouchi (Institut Mines Telecom, France)	
14:30 h – 14:45 h	Sovereignty by Operation: A Provider-Independent Cloud Abstraction Layer (CAL) for Parallel, Jurisdiction-Aware Service Raymond Hagen
14:45 h – 15:00 h	A Greener Approach to Privacy-Aware Cross-Border Data Federation through Knowledge Reuse Dimitra Papatsaroucha, Konstantina Pityanou, Sarwar Sayeed, Pavlos Papadopoulos, Dimitrios Kasimatis, Maria Zotou, Michail-Alexandros Kourtis and Evangelos K. Markakis
15:00 h – 15:15 h	Rethinking China’s approach to Internet sovereignty: evidence of competing interests among Chinese companies towards 6G standardization Riccardo Nanni
15:15 h – 15:30 h	Building Digital Sovereignty in ASEAN: A Dynamic Capabilities Approach to Federated Data Infrastructure Jezzel Jao and Jazzie Jao
15:30 h – 15:45 h	A New-Institutional Perspective on Digital Sovereignty: A Comparative Analysis of AI Strategies in Norway and Sweden Halvdan Haugsbakken
15.45 h – 16.00 h	Closing: Announcements.

Date/Time: 31st October 2025, 07:01 AM – 12:00 PM (Oslo Time/CET).

Session 6: Online Presentations Session Chair: Sabarathinam Chockalingam, Institute for Energy Technology (IFE), Norway.

07:00 h – 07:12 h	Digitally Sovereign Urban Mobility: Twin-Enhanced EDGE MaaS for Autonomous, Decentralized Transport Systems Pushan Kumar Dutta, Rabel Guharoy and Lalit Garg
07:12 h – 07:24 h	Sovereign AI Agents for Fair and Transparent Loan Decision-Making: A Digital Sovereignty Framework for Credit Underwriting Ibomoie Domor Mienye and Ebenezer Esenogho
07:24 h – 07:36 h	Advancing Human-Centric Digital Sovereignty: A Comprehensive Review Roseline Oluwaseun Ogundokun, Rotimi-Williams Bello, Pius Owolawi, Etienne van Wyk and Chunling Du
07:36 h – 07:48 h	Trustworthy AI for Healthcare Sovereignty: A Review and Framework for ML Deployment in National Health Systems Ebenezer Esenogho and Ibomoie Domor Mienye
07:48 h – 08:00 h	Federated Neural Collaborative Filtering for Sovereignty-Preserving Product Recommendation Bani Prasad Nayak, Neelamadhab Padhy, Rasmita Panigrahi and Sanjay Kumar Kuanar
08:00 h – 08:12 h	Digital Sovereignty in Africa: A Systematic Review and a Governance Framework for Sovereign AI Deployment Nobert Jere, Kehinde Aruleba, Kehinde Hammed Komolafe, Ibomoie Domor Mienye and George Obaido
08: 12 h – 08.24 h	Enabling Real-Time Crowd Monitoring with Distributed AI and Kafka: A Path Towards Digital Sovereignty in Public Safety Infrastructure, Garima Singh, Ruchi Tailwal and Anil Kumar Singh
08:24 h – 08:36 h	Towards Sovereign Digital Ecosystems in Agriculture: A Federated Learning Approach for Crop Recommendation from Fused Soil Datasets, Dasarada Arangi, Neelamadhab Padhy, Pradeep Kumar Mohapatra and Sadananda Behera
08:36 h – 08 :48 h	Improving Cybersecurity with Explainable AI: A Path to Trustworthy Spam Detection, Ramesh Dharavath, Vibekananda Dutta and Ramarao Narvaneni

08: 48 h – 09:00 h	Autonomy in Digital Sovereignty for Smart Cities: A Review, Sanjay Misra, Kousik Barik, Peter Kvalick, Per-Arne Jørgensen
09:00 h – 09:12 h	Enabling Digital Sovereignty in VQA through Domain-Aligned LLM Fine-Tuning, Akash Sharma, Anirudh Pratap Singh, Nidhi Mishra and Aakanshi Gupta
09:12 h – 09:24 h	Emotion-Aware and Privacy-Preserving Assistive AI for ASD: Towards Digital Sovereignty in Communication Tools, Aakanshi Gupta, Nidhi Mishra, Aayush Tyagi and Aksh Tejana
09: 24 h – 09: 36 h	Blockchain-Enabled Forensic Framework for Digital Sovereignty: Ensuring Integrity and Societal Trust in Investigations, Hari M, Jubilant J Kizhakkethottam and Arun Madhu
09:36 h – 09:45 h	Networking/Mingling – Coffee.
Session 7: Geopolitics and Trust (Paper Presentations) Session Chair: Dr. Sanjay Misra, IFE, Norway	
09:45 h – 10:00 h	Core capabilities of data trustees for sovereign data sharing Marius Hupperz
10:00 h – 10:15 h	Data Sovereignties in the GenAI Economics: From Data-opolies to Data Cooperatives, Trust, and Geopolitical Governance Igor Calzada
10:15 h – 10:30 h	Hardware-Rooted Trust Anchors for Sovereign AI Processing: Cryptographic Verification of Location, Identity, and Confidentiality in Cloud Environments Milos Borenovic, Connor Dunlop, Amean Asad, Manish Shah, Jonah Leshin and Jose Dunia
10:30 h – 10:45 h	On AI-based critical systems' embedded LLM trustworthiness: FORT, a real-time analytical filters for LLM output control Yannick Fourastier and Hakima Chaouchi
10:45 h – 11:00 h	Networking/Mingling – Coffee.
Session 8: Industry and Innovation Impact (Paper Presentations) Session Chair: Dr. Ibrahim Hameed, NMBU, Norway	

11:00 h – 11:15 h	KODIS: a blockChain-based sOcial meDia prlvacy Scheme Matteo Signorini, Dimitrios Schoinianakis, Konstantinos Papageorgiou, Georgios Spathoulas and Athanasios Kakarountas
11:15 h – 11:30 h	Digital Sovereignty and Disaster Governance: Reliability of ChatGPT in Generating Guideline-Aligned Response Plans Jazzie Jao, Edgar Vallar, Ibrahim Hameed, Marlon Era and Yiliu Liu
11:30 h – 11:45 h	Towards digital sovereignty - how reliable is LLAMA3.3-70b in classifying information security policy content as speech acts? Leila Aro-Sati, Fredrik Karlsson and Shang Gao
11:45 h – 12.00 h	Leveraging 8RA Cloud-edge continuum to enhance Digital sovereignty in Europe Gabriele Lospoto and Maurizio Griva
12:00 h	Closing (Announcements and Feedback)
12.00 h – 4.00 h	Lunch and Oslo City and Fjord (Walking/boat) Tour/ Networking