

## International Conference on Digital Sovereignty (ICDS) – 2024: Conference Program

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

Day 1- Date/Time: 28<sup>th</sup> November 2024, 08:30 h – 16:00 h (Oslo Time/CET)

Time	Title/Description
<b>Session 1. Introduction</b> <b>Session Chair: Petter Kvalvik (Institute for Energy Technology (IFE), Norway)</b>	
08:30 h - 09:00 h	Registration and Mingling
09:00 h - 09:10 h	Welcome
09:10 h - 09:40 h	Marco Schuldt (Regierungsdirektor, Federal Ministry for Economic Affairs and Climate Action (BMWK)) <b>Europe on the Path to the Cloud Infrastructure of the Future</b>
09:40 h - 10:10 h	Ulrich Ahle (CEO Gaia-X) <b>European Data Spaces and data-driven innovation</b>
10:10 h - 10:40 h	Chandra Challagonda (CEO FIWARE) <b>Digital Sovereignty Provenanced Data, Interoperability, and Open Standards</b>
10:40 h - 11:10 h	Coffee and Mingling
11:10 h - 11:30 h	John Bothner (Norwegian National Security Authority - NSM) <b>National digital sovereignty</b>
11:30 h - 11:50 h	Klas Pettersen (CEO The Norwegian Artificial Intelligence Research Consortium) <b>AI and Digital Sovereignty in Norway</b>
11:50 h - 12:45 h	Lunch
12:45 h - 13:05 h	Petter Kvalvik (IFE) <b>The Norwegian Center for Digital Sovereignty</b>
13:05 h - 13:25 h	Helle Øverby (Innovation Norway) <b>The enablers for innovation for a Norwegian industry cluster on digital sovereignty</b>
13:25 h - 13:45 h	Hermund Arntzen Dale (Smart Innovation Norway) <b>Launch of the Nordic Center for Data Innovation and Gaia-X Hub Norway</b>
13:45 h - 14:05 h	Petter Kvalvik (IFE) <b>The Norwegian FIWARE iHub innovation ecosystem</b>

14:05 h - 14:30 h	Coffee and Mingling
14:30 h - 14:50 h	Louise Helliksen (CEO, EYD) <b>Operationalization of digital Self-Sovereignty</b>
14:50 h - 15:10 h	Elise Knutssøn Lindeberg (CEO Skygard) <b>A Norwegian Self-sovereign cloud</b>
15:10 h - 15:50 h	Christian Haukaas (CEO Venturenet) <b>Panel: “How can we create a strong Norwegian ecosystem of tech companies providing solutions and services safeguarding trust and human centricity?”</b>
15:50 h - 16:00 h	Closing of Day One and Information About Day Two
16:00 h -17:00 h	Networking

**Program for Online Presentations**

**Day 1- Date/Time:** 28<sup>th</sup> November 2024, 16:00 h – 18:45 h (Oslo Time/CET).

<b>Session Chair:</b> Sabarathinam Chockalingam, Institute for Energy Technology (IFE), Norway.	
16:00 h – 16:15 h	Sudhakar Kumar, Sunil K. Singh, Rakesh Kumar, Chandra Kumari Subba, Kwok Tai Chui and Brij B. Gupta. <b>Neoteric Threat Intelligence Ensuring digital Sovereignty and Trust through ML-Infused Proactive Defense Analytics for NEXT-G and Beyond Ecosystems,</b>
16:15 h – 16:30 h	Anunita K P, Devisri S R and Chamundeswari Arumugam. <b>Federated Learning: Countering Label Flipping Attacks in Retinal OCT</b>
16:30 h – 16:45 h	Dharavath Ramesh, Thakur Santosh, Munesh Chandra Trivedi and Chi Hieu Le. <b>Ensuring Digital Sovereignty in Cross-chain EHR Sharing: A Relay-as-a-Service Approach for Secure Healthcare Interoperability</b>
16:45 h – 17:00 h	Sanjay Misra, Kousik Barik, and Petter Kvalvik. <b>Digital Sovereignty in the Era of Industry 5.0: Challenges and Opportunities</b>
17:00 h – 17:15 h	Anju Kalupahanage, Dilmith Bulathsinhala, Shammi Herath, Thilina Herath, Shashika Lokuliyana and Deemantha Siriwardana. <b>Resilient IoT Infrastructures: Machine Learning Approaches to Autonomous Anomaly Detection and Threat Neutralization</b>

17:15 h – 17:30 h	Sadananda Behera, Neelamadhab Padhy, Rasmita Panigrahi, and Sanjay Kumar Kuanar. <b>Crop Disease Prediction Using Deep Learning in a Federated Learning Environment: Ensuring Data Privacy and Agricultural Sustainability</b>
17:30 h – 17:45 h	Chamundeswari Arumugam, Kamalika Karuppuchamy C, Amarnath B K, and Jeyasuriya B. <b>Internal Audit Effectiveness for Data Compliance Using Privacy Federated Learning Model in Hospital Environment</b>
17:45 h – 18.00 h	Desigan Shanmugam, and Chamundeswari Arumugam. <b>Effective Communication Compression Framework Using Federated Learning Privacy Model for Smart Grid</b>
18:00 h – 18:15 h	Rohit Shorya and Priti Jagwani. <b>Enhancing Digital Autonomy in Peer-to-Peer Energy Trading: A Blockchain and Predictive Analytics Approach</b>
18:15 h – 18:30 h	Ibomoiyé Domor Mienye. <b>ChatGPT in Education: Ethical Challenges and Approaches to Enhancing Transparency and Privacy</b>
18:30 h – 18:45 h	#103 Absalom E. Ezugwu, Sontaga Forane, and Kevin Igwe. <b>Digital Sovereignty through Africa-Centric Emotional Intelligence: A Proof of Concept for AI-Enhanced Mental Health Support</b>

**Day 2- Date/Time:** 29<sup>th</sup> November 2024, 08:00 h – 15:30 h (Oslo Time/CET)

Time	Title/Description
<b>Session 1. Introduction</b>	
<b>Session Chair:</b> Sanjay Misra (Institute for Energy Technology (IFE), Norway)	
08:00 h – 08:05 h	<b>Opening:</b> Sanjay Misra (IFE)
08:05 h – 08:10 h	<b>Welcome:</b> Petter Kvalvik (IFE)
08:10 h – 08:45 h	<b>Keynote: Towards a Cybersecurity-oriented Research Agenda for Digital Sovereignty</b> Sokratis Katsikas (Norwegian University of Science and Technology)
<b>08:45 h – 09:00 h</b>	<b>Coffee Break</b>
<b>Session 2. Digital Ecosystems and Governance and Industry and Innovation Impact</b>	
<b>Session Chair:</b> Sokratis Katsikas (Norwegian University of Science and Technology, Norway)	
09:00 h – 09:15 h	Isaac Henderson Johnson Jeyakumar, and Michael Kubac.

	<b>A Trust Implementation Model for Cross-domain Decentralized Identity Ecosystems: Architecture, Use Case, and Implementation</b>
09:15 h – 09:30 h	Edoghogho Olaye, Williams Aigbe, Omorodion Irowa, Yusuf Mshelia, Daniel Obuh, David Onwuka, and Imonikosaye Omafovbe. <b>Personalized Governance Strategy for Patient Data in a Digital One Health Surveillance System</b>
09:30 h – 09:45 h	Dara Tith, and Jean-Noël Colin. <b>A Trust Policy Meta-Model for Trustworthy and Interoperability of Digital Identity Systems</b>
09:45 h – 10:00 h	Ayan Chatterjee, Sundar Gopalakrishnan, and Ayan Mondal. <b>Sovereignty-Aware Intrusion Detection on Streaming Data: Leveraging Automatic Machine Learning Pipeline and Semantic Reasoning</b>
10:00 h – 10:15 h	Aikaterina Latsiou, Arne Roar Nygård, Sokratis Katsikas, and Costas Lambrinoudakis. <b>Never Trust – Always Verify: Assessing the Cybersecurity Trustworthiness of Suppliers in the Digital Supply Chain</b>
10:15 h – 10:30 h	Elham Rostami, Muhammad Hanif, Fredrik Karlsson, and Shang Gao. <b>Defining Actionable Advice in Information Security Policies</b>
<b>10:30 h – 10:45 h</b>	<b>Coffee Break</b>
<b>Session 3. Human-Centric Digital Sovereignty and National Digital Sovereignty and Societal Impact</b> <b>Session Chair:</b> Shang Gao (Örebro University School of Business, Sweden)	
10:45 h – 11:00 h	Rituka Jaiswal, and Hans Georg Schaathun. <b>On Human Sovereignty in a Digital Age</b>
11:00 h – 11:15 h	Julia Pampus, and Maritta Heisel. <b>Pattern-based Requirements Elicitation for Sovereign Data Sharing</b>
11:15 h – 11:30 h	Clara Maathuis, and Kasper Cools. <b>The Role of AI in Military Cyber Security: Data Insights and Evaluation Methods</b>
11:30 h – 11:45 h	Pankaj Pandey. <b>Digital Sovereignty and AI: Developing India's National AI Stack for Strategic Autonomy</b>
11:45 h – 12:00 h	Yashwant Singh Yadav.

	<b>Agile Organizing of National Cyber Defence Capabilities: Decoupling External Dependencies and Catalysing Digital Sovereignty</b>
<b>12:00 h – 13:00 h</b>	<b>Lunch Break</b>
<b>Session 4. National Digital Sovereignty and Societal Impact (Continuation)</b> Session Chair: Sherin Moussa, UFE.	
13:00 h – 13:15 h	Kasturi Routray, Padmalochan Bera, and Sambeet Mishra. <b>Efficient and Secure Fine-Grained Authorization for Fog-Enabled Cyber-Physical Systems: Towards Trust and Autonomy in Digital Sovereignty</b>
13:15 h – 13:30 h	Martha Klare, Razvan Hrestic, Aida Stelter, Ulrike Lechner, and Stefan Schult. <b>Digital Sovereignty and Digital Transformation Practice Recommendation for the Software Life Cycle Process</b>
13:30 h – 13:45 h	Ayan Chatterjee. <b>Enhancing Digital Sovereignty in Automated Stroke Prediction and Recommendation System with Explanations and Semantic Reasoning</b>
<b>13:45 h – 14:15h</b>	<b>Networking/Mingling – Coffee.</b>
<b>Session 5. Human-Centric Digital Sovereignty and National Digital Sovereignty and Societal Impact (Continuation)</b>	
14:15 h – 14:30 h	Callistus Ikwuazom, Francisca Ogwueleka, Sanjay Misra, and Sabarathinam Chockalingam. <b>Securing Mobile Edge Computing: A Survey on Cyber-physical Threat Mitigation for Digital Sovereignty</b>
14:30 h – 14:45 h	Razi Iqbal, and Shereen Ismail. <b>Unbiased AI for a Sovereign Digital Future: A Bias Detection Framework</b>
14:45 h – 15:00h	Mona Sadik, Ahmed Elsayed, Sherin Moussa, and Z. T. Fayed. <b>Sovereign Sound in Federated Learning: Secured Arabic Pronunciation Assessment for Children in Noisy Environments</b>
<b>15.00 h – 15.30 h</b>	<b>Closing: Announcements and Feedback.</b>

**Day 3- Date/Time:** 30<sup>th</sup> November 2024, ICDS 2024, Oslo City walk 09:00 h – 12:00 h (Oslo time/CET)

**Venue:** Oslo Visitor Center, Oslo Central Station, Oslo, Starting at 09:00 h.