

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

Date/Time: 29th November 2024, 08:00 AM – 15:30 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 AM – 08:05 AM	Opening: Sanjay Misra (IFE)
08:06 AM – 08:10 AM	Welcome: Petter Kvalvik (IFE)
08:11 AM – 08:45 AM	Keynote: Towards a Cybersecurity-oriented Research Agenda for Digital Sovereignty Sokratis Katsikas (Norwegian University of Science and Technology)
08:46 AM – 09:00 AM	Coffee Break
Session 2. Digital Ecosystems and Governance and Industry and Innovation Impact Session Chair: Sokratis Katsikas (Norwegian University of Science and Technology, Norway)	
09:01 AM – 09:15 AM	Isaac Henderson Johnson Jeyakumar, and Michael Kubac. A Trust Implementation Model for Cross-domain Decentralized Identity Ecosystems: Architecture, Use Case, and Implementation
09:16 AM – 09:30 AM	Edoghogho Olaye, Williams Aigbe, Omorodion Irowa, Yusuf Mshelia, Daniel Obuh, David Onwuka, and Imonikosaye Omafovbe. Personalized Governance Strategy for Patient Data in a Digital One Health Surveillance System
09:31 AM – 09:45 AM	Dara Tith, and Jean-Noël Colin. A Trust Policy Meta-Model for Trustworthy and Interoperability of Digital Identity Systems
09:46 AM – 10:00 AM	Ayan Chatterjee, Sundar Gopalakrishnan, and Ayan Mondal. Sovereignty-Aware Intrusion Detection on Streaming Data: Leveraging Automatic Machine Learning Pipeline and Semantic Reasoning
10:01 AM – 10:15 AM	Aikaterina Latsiou, Arne Roar Nygård, Sokratis Katsikas, and Costas Lambrinouidakis. Never Trust – Always Verify: Assessing the Cybersecurity Trustworthiness of Suppliers in the Digital Supply Chain
10:16 AM – 10:30 AM	Elham Rostami, Muhammad Hanif, Fredrik Karlsson, and Shang Gao. Defining Actionable Advice in Information Security Policies

10:31 AM – 10:45 AM	Coffee Break
Session 3. Human-Centric Digital Sovereignty and National Digital Sovereignty and Societal Impact Session Chair: Shang Gao (Örebro University School of Business, Sweden)	
10:46 AM – 11:00 AM	Rituka Jaiswal, and Hans Georg Schaathun. On Human Sovereignty in a Digital Age
11:01 AM – 11:15 AM	Julia Pampus, and Maritta Heisel. Pattern-based Requirements Elicitation for Sovereign Data Sharing
11:16 AM – 11:30 AM	Clara Maathuis, and Kasper Cools. The Role of AI in Military Cyber Security: Data Insights and Evaluation Methods
11:31 AM – 11:45 AM	Pankaj Pandey. Digital Sovereignty and AI: Developing India’s National AI Stack for Strategic Autonomy
11:46 AM – 12:00 PM	Yashwant Singh Yadav. Agile Organizing of National Cyber Defence Capabilities: Decoupling External Dependencies and Catalysing Digital Sovereignty
12:00 PM – 13:00 PM	Lunch Break
Session 4. National Digital Sovereignty and Societal Impact (Continuation) Session Chair: Sherin Moussa, UFE.	
13:01 PM – 13:15 PM	Kasturi Routray, Padmalochan Bera, and Sambeet Mishra. Efficient and Secure Fine-Grained Authorization for Fog-Enabled Cyber-Physical Systems: Towards Trust and Autonomy in Digital Sovereignty
13:16 PM – 13:30 PM	Martha Klare, Razvan Hrestic, Aida Stelter, Ulrike Lechner, and Stefan Schult. Digital Sovereignty and Digital Transformation Practice Recommendation for the Software Life Cycle Process
13:31 PM – 13:45 PM	Ayan Chatterjee. Enhancing Digital Sovereignty in Automated Stroke Prediction and Recommendation System with Explanations and Semantic Reasoning
13:46 PM – 14:15 PM	Networking/Mingling – Coffee.
Session 5. Human-Centric Digital Sovereignty and National Digital Sovereignty and Societal Impact (Continuation)	

14:16 PM – 14:30 PM	Callistus Ikwuazom, Francisca Ogwueleka, Sanjay Misra, and Sabarathinam Chockalingam. Securing Mobile Edge Computing: A Survey on Cyber-physical Threat Mitigation for Digital Sovereignty
14:31 PM – 14:45 PM	Razi Iqbal, and Shereen Ismail. Unbiased AI for a Sovereign Digital Future: A Bias Detection Framework
14:46 PM – 15:00 PM	Mona Sadik, Ahmed Elsayed, Sherin Moussa, and Z. T. Fayed. Sovereign Sound in Federated Learning: Secured Arabic Pronunciation Assessment for Children in Noisy Environments
15.01 PM – 15.30 PM	Closing: Announcements and Feedback.

Program for Online Presentations

Date/Time: 28th November 2024, 16:01 PM – 18:45 PM (Oslo Time/CET).

Session Chair: Sabarathinam Chockalingam, Institute for Energy Technology (IFE), Norway.	
16:01 PM – 16:15 PM	Sudhakar Kumar, Sunil K. Singh, Rakesh Kumar, Chandra Kumari Subba, Kwok Tai Chui and Brij B. Gupta. Neoteric Threat Intelligence ensuring Digital Sovereignty and Trust through ML-Infused Proactive Defense Analytics for NEXT-G and Beyond Ecosystems,
16:16 PM – 16:30 PM	Anunita K P, Devisri S R and Chamundeswari Arumugam. Federated Learning: Countering Label Flipping Attacks in Retinal OCT
16:30 PM – 16:45 PM	Dharavath Ramesh, Thakur Santosh, Munesh Chandra Trivedi and Chi Hieu Le. Ensuring Digital Sovereignty in Cross-chain EHR Sharing: A Relay-as-a-Service Approach for Secure Healthcare Interoperability
16:46 PM – 17:00 PM	Sanjay Misra, Kousik Barik, and Petter Kvalvik. Digital Sovereignty in the Era of Industry 5.0: Challenges and Opportunities
17:01 PM – 17:15 PM	Anju Kalupahanage, Dilmith Bulathsinhala, Shammi Herath, Thilina Herath, Shashika Lokuliyana and Deemantha Siriwardana. Resilient IoT Infrastructures: Machine Learning Approaches to Autonomous Anomaly Detection and Threat Neutralization
17:16 PM – 17:30 PM	Sadananda Behera, Neelamadhab Padhy, Rasmita Panigrahi, and Sanjay Kumar Kuanar. Crop Disease Prediction Using Deep Learning in a Federated Learning Environment: Ensuring Data Privacy and Agricultural Sustainability
17:31 PM – 17:45 PM	Chamundeswari Arumugam, Kamalika Karuppuchamy C, Amarnath B K, and Jeyasuriya B. Internal Audit Effectiveness for Data Compliance Using Privacy Federated Learning Model in Hospital Environment
17:46 PM – 18:00 PM	Desigan Shanmugam, and Chamundeswari Arumugam.

	<p>Effective Communication Compression Framework Using Federated Learning Privacy Model for Smart Grid</p>
18:01 PM – 18:15 PM	<p>Rohit Shorya and Priti Jagwani.</p> <p>Enhancing Digital Autonomy in Peer-to-Peer Energy Trading: A Blockchain and Predictive Analytics Approach</p>
18:16 PM – 18:30 PM	<p>Ibomoie Domor Mienye.</p> <p>ChatGPT in Education: Ethical Challenges and Approaches to Enhancing Transparency and Privacy</p>
18:31 PM – 18:45 PM	<p>#103 Absalom E. Ezugwu, Sontaga Forane, and Kevin Igwe.</p> <p>Digital Sovereignty through Africa-Centric Emotional Intelligence: A Proof of Concept for AI-Enhanced Mental Health Support</p>