

# PROGRAMME

## Monday 15.6.2026

18:00-20:00 **Pre-conference event: get-together at the Oulu City Hall**

For those who have secured a ticket.

## Tuesday 16.6.2026

8:30-9:30 **Registration**

9:30-10:30 **Session 1 Digital Transformation in Healthcare**  
101A (Leena Palotie Hall), Chair: Jarmo Reponen

9:30-9:40 Conference opening words Conference president, Prof. Jarmo Reponen, University of Oulu, Finland

9:40-9:50 Greetings from the Finnish Ministry of Education and Culture Minister of Science and Culture Mari-Leena Talvitie

**Keynote:**

9:50-10:20 Catalonia's Digital Health Implementation – New Innovations and Services Director Joan Guanyabens, TIC Salut i Social Foundation, Catalunya

10:20-11:00 **Coffee, Exhibitions and Posters**

11:00-12:30 **Session 2a – Digital Health Transformation, Innovations & Future Visions**  
Chair: Jarmo Reponen

**Invited Speeches:**

11:00-11:20 How to design digital health services and sustain their use Professor Sabine Koch, Karolinska Institutet, Sweden

11:20-11:40 A Socio- technical journey: Strategies for implementation and digital transformation, the incremental process Professor Rune Pedersen, NORD University, and Norwegian Centre for E-health Research, Norway

**Scientific Presentations:**

11:40-11:47 Profiting from 6G System for the Smart Hospital of the Future Fan Wang; Seppo Yrjölä; Risto Jurva; Timo Koivumäki; Aigerim Dairabekova; Petri Ahokangas

11:47-11:54 Identifying Social Sustainability Drivers and Future Scenarios in Digital Healthcare Through a Stakeholder-Based Method Sehrish Khan; Petri Ahokangas; Johanna Annunen; Johanna Uusimaa; Jonna Komulainen-Ebrahim; Minna Isomursu

11:54-12:01 Implementation of the Digital-First Policy in Finnish Well-Being Services Counties: A Cross-Sectional Survey Maiju Kyytsönen; Arild Faxvaag; Rune Pedersen; Jeppe Eriksen; Ove Lintvedt; Jarmo Reponen

12:01-12:08 Electronic Health Record System Market Concentration in Finland, 2007-2028 Timo Tuovinen; Petra Kuikka; Paula Veikkolainen; Niina Keranen; Virpi Ekholm; Vesa Jormanainen; Jarmo Reponen

12:08-12:15 Digital Health: From Policy to Reality in the Nordic Countries Arild Faxvaag; Jarmo Reponen; Guðrún Auður Harðardóttir; Tuulikki Vehko; Johanna Viitanen; Jeppe Eriksen; Rune Pedersen; Sabine Koch; Vivian Vimarlund; Christian Nöhr

12:15-12:22 Toward Standardized Evaluation of Synthetic Health Data Across Modalities for the European Health Data Space Aino-Lotta Ilona Alahäivälä; Tunc Asuroglu; Juha Pajula; Ileana Montoya Perez; Tapio Pahikkala; Antti Airola

**Corporate presentations:**

12:22-12:29 Digital Health Finland  
12:29-12:36 OYSTER Incubator

11:00-12:30 **Session 2b – Personalised Digital Health – From Omics to Interventions, Telemedicine and eRehabilitation**  
F202, Chair: Eero Kajantie

**Invited Speeches:**

11:00-11:20 Systemic approach to the development and implementation of national digital health solutions Special Advisor Gudrun Audur Hardardottir, Ministry of Health, Iceland  
11:20-11:40 Understanding metabolic ageing and disease risk via omics sciences Docent Ville-Petteri Mäkinen, University of Oulu, Finland

**Scientific presentations:**

11:40-11:47 Dynamic Digital Precision Nutrition for Cardiometabolic Prevention in Cancer Survivorship Maryam Gholamalizadeh; Saeid Doaei; Raul Zamora-Ros  
11:47-11:54 Feasibility Evaluation of a Multidisciplinary Digital Rehabilitation Delivered by Community Health Workers for Mild Stroke in Indonesia Eeva Aartolahti; Suci Muqodimatul Jannah; Opifia Dian Wahyono; Dela Fariha Fuadi; Andrew Wijaya Saputra; Nesi; Moh Rendy Herdiansyah; Michael Oduor; Kari-Pekka Murtonen; Muhammad Irfan; Katariina Korniloff; Hilmi Zadah Faidullah  
11:54-12:01 Hybrid Teleophthalmology Pilot for Ophthalmologist Appointments Anniina Häyrynen; Joonas Wirkkala  
21:01-12:08 A Telemedicine Pathway for Secondary Prevention in Coronary Artery Disease: Real-World Implementation Outi Haggren, Jari Laukkanen, Anna-Mari Hekkala, Sinikka Yli-Mäyry, Jaakko Immonen, Johanna Keränen, Kari Ylitalo, Kari Kaikkonen  
12:08-12:15 Observations from the Digital Social and Health Care Center (DSHCC) of Wellbeing Services County of North Karelia - Siun Sote, Finland Nora Tarvus; Mika Kortelainen; Paulus Torkki; Mikael Ripatti; Marjo-Riikka Huppunen-Vänskä; Enni Sanmark

11:00-12:30 **Session 2c – Data-Driven and Modelling-Based Decision Support & Multimodal Health Data Analysis I**  
H1091, Chair: Simo Saarakkala

**Invited Speech:**

11:00-11:20 From Multimodal Models to Trustworthy Decision Support: Bridging Data-Driven AI and Clinical Impact Professor Karim Lekadir, University of Barcelona, Catalunya

**Scientific Presentations:**

11:20-11:27 A Multi-Filter and Multi-Scale U-Net for Cone-Beam Computed Tomography Mustafa Al-Rubaye; Andreas Hauptmann; Miika Nieminen; Mikael Brix  
11:27-11:34 Robust Running Cadence Estimation Using Multi-Axis IMU in Different Body Locations Nastaran Taefi Aghdam; Kai Noponen; Timo Hyart; Ahmed Shaheen; Rasmus Valtonen; Mikko Tulppo; Tapio Seppänen  
11:34-11:41 Computer Vision-Based Breast Volume Quantification Using Digital Mammography Data with Manual Measurement Validation Katariina Kilpivaara; Antti Isosalo; Pasi Ohtonen; Pieta Ipatti; Miika Nieminen; Terhi T Pilttonen; Tero Rautio  
11:41-11:48 Multimodal Machine Learning Approach for Timed Up and Go Test Score Prediction from Wearable Gait Data Nabid Faiem; Tunc Asuroglu; Koray Açıcı; Antti Kallonen; Mark van Gils  
11:48-11:55 Latency-Aware Evaluation of Bleeding Monitoring Algorithms for Real-Time Surgical Applications Prosper Magara; Bessie Malila; Lamees Ras; Sudesh Sivarasu  
11:55-12:02 Explainable Video-Based Facial Expression Analysis for Quantifying Temporal Emotion Dynamics: A Methodological Framework Toward ADHD Research Sameera Gamage  
12:02-12:09 A Modern Hopfield Network Approach for Alzheimer's and Dementia Classification Using EEG Signals Bhargava Bhamidipati; Sarthak Acharya; Rajkumar Saini  
12:09-12:16 Synthetic Data-Guided Feature Selection for Robust Activity Recognition in Older Adults Shuhao Que; Dieuwke van Dartel; Ilse Heeringa; Han Hegeman; Miriam Vollenbroek-Hutten; Ying Wang

11:00-12:30	<b>Session 2d – Connectivity Architectures and Cybersecurity in Digital Health</b> 338B, Chair: Erkki Harjula	
	<b>Invited Speech:</b>	
11:00-11:20	Edge AI in Digital Health	Assoc. Professor Aaron Ding, TU Delft, The Netherlands
	<b>Scientific Presentations:</b>	
11:20-11:27	Auditable Continuous Verification for Adaptive Security in Healthcare	Ijaz Ahmad; Ijaz Ahmad; Erkki Harjula
11:27-11:34	Cybersecurity Considerations for Home Care Within the Digital Transformation of Healthcare	Jenni Siermala; Hanna Paananen; Jarmo Reponen
11:34-11:41	End-to-End Architecture for Secure Cardiovascular Disease Risk Assessment and Clinical Care	Gaurang Sharma; Juha Pajula; Tuomas Granlund; Petri Alhainen; Tommi Kiljander; Ornela Bardhi; Jaakko Lähteenmäki; Aada Illikainen; Antti Väänänen; Noora Lipsonen; Sari Kaari; Ville Salaspuro; Mika Hilvo
11:41-11:48	Secure Cloud-Based Firmware Distribution Architecture for Medical Devices	Dinesh Kumar Sah; Lauri Lovén; Sharon Stephen
11:48-11:55	Analytical Power Model for SmartBAN Protocol	Thashmila Delkandura Arachchige; Matti Hämäläinen; Konstantin Mikhaylov
11:55-12:02	An Edge-Cloud Service Orchestration Platform for Cone-Beam CT Image Denoising	Abu Taher; Johirul Islam; Antti Isosalo; Erkki Harjula
12:02-12:09	Medical Device and System Security in 6G: Learnings from 5G and Edge	Ian Oliver; Kiti Mueller
12:09-12:16	The Surgical Cyber Safety Checklist	Ian Oliver; Kiran Pokharel; Ganesh Acharya
12:30–14:00	<b>Lunch, Exhibitions and Posters</b>	
14:00-15:30	<b>Session 3a – Next-Generation Wireless Health Technologies, Wearable Sensing, and Digital Twin Innovations</b> 101A (Leena Palotie Hall), Chair: Matti Hämäläinen	
	<b>Invited Speech:</b>	
14:00-14:20	Healthcare in the 5G/6G Era: Opportunities for Wireless Sensing and Monitoring	Professor Sandra Dudley, London South Bank University, UK
	<b>Scientific Presentations:</b>	
14:20-14:27	5G/6G Enabled Ultrawideband Radar-Based System for Non-Contact Remote Monitoring	Dilshan N. Wickramarachchi; Wai Lwin Phone; Robert Brown; Tasos Dagiuklas; Sandra Dudley
14:27-14:34	Spectrum Occupancy Characteristics of a Private 5G Network in Hospital Environment	Mohsin Iqbal Khan; Matti Hämäläinen; Erkki Harjula; Timo J Mäkelä; Jani Katisko
14:34-14:41	Prediction of Body Composition with a Low-Cost and Wearable Bioimpedance Analysis Device Across Various Body Locations	Leon Robertz; Nastaran Taefi Aghdam; Joni Kilpijärvi; Egor Panfilov; Tuire Salonurmi; Mika Nevalainen; Seppo Korkala; Tommi Jaako; Simo Saarakkala
14:41-14:48	The Future of Digital Twins in Healthcare: Results from an Expert Survey	Kerstin Denecke; Octavio Rivera
14:48-14:55	Digi-Phy Twin: An Augmented Framework for Medical Applications	Daljeet Singh; Sarthak Acharya; Rajkumar Saini; Mariella Särestöniemi; Teemu Myllylä
14:55-15:02	Characterizing Implant to Surface Radio Channels for Brain Computer Interface Applications	Mariella Särestöniemi; Kamran Sayrafian; Jani Katisko; Mikael von und zu Fraunberg; Teemu Samuli Myllylä; Jari Iinatti
15:02-15:09	Toward Stroke Rehabilitation: A Single Hand-Mounted IMU and TinyML for Therapeutic Hand Movement Recognition	Xiru Chen; Sohail Ahmed Soomro; Georgi V. Georgiev
15:09-15:16	Beyond the Wrist: Wearables as Reflective Infrastructure for Nurse Well-Being	Ove Lintvedt; Rune Pedersen; Karla Muñoz Esquivel; Nick Timmons
15:16-15:23	Wearable Device-Based Assessment of Sleep Timing and Structure in Frontotemporal Dementia	Eeva Alina Nevanranta; Sami Kauppinen; Emma Vitikka; Noora-Maria Suhonen; Kasper Katisko; Barbara Borroni; Anne Portaankorva; Annakaisa Haapasalo; Eino Solje; Mikko Finnilä; Johanna Krüger
	<b>Exhibitor presentations:</b>	

15:23-15:30	Polar	
15:30-15:37	Philips	
14:00-15:30	<b>Session 3b – Health Technology Assessment &amp; Impact Evaluation</b> F202, Chair: Miia Jansson	
	<b>Invited Speeches:</b>	
14:00-14:20	Evaluation of Digital health technologies in Europe: from fragmentation to the harmonised european EDIHTA framework	Research Project coordinator Emmanouil Tsiasiotis, Università Cattolica del Sacro Cuore, Italy
14:20-14:40	What societal-economic effects can be identified from the implementation and use of eHealth services in the Nordic Countries? Issues and challenges to measure outputs	Professor Emerita Vivian Vimarlund, Linköping University, Sweden
	<b>Scientific Presentations:</b>	
14:40-14:47	Clinical Investigation of Health Technologies: A Scoping Review of Evaluation Methods	Axa Saukkonen; Henna Härkönen; Jenna Syrjälä; Minna Vanhanen; Elina Laukka; Paulus Torkki; Kirsi Talman; Monira Yesmean; Miia Jansson
14:47-14:54	Development of an Assessment and Reimbursement Model for Digital Therapies in the Finnish Healthcare System	Jari Haverinen; Raija Järvinen; Teemu Mustola; Petra Falkenbach
14:54-15:01	Post-Implementation Monitoring of CE-Marked AI-CDS in Radiology: A Longitudinal Mixed-Methods Evaluation of Spread, Scale-Up, and Sustainability	Line Silsand; Gro-Hilde Severinsen
15:01-15:08	Waiting Times from the Real-World Earliest Contacts to Realized Visits to Public Primary Healthcare in 2019-2025 in Finland: A National Register Study	Vesa Jormanainen
15:08-15:15	HTA and Ethical Impact Assessment: Preliminary Perspectives	Jaakko Hakula
15:15-15:22	A Novel Smartphone App Increases Smoking Cessation, Participants' HRQoL and Cost-Effectiveness in LDCT Lung Cancer Screening of Heavy Smokers	Antti Kurtti; Sanna Iivanainen; Jussi Koivunen
15:22-15:29	Coverage and Utilization of Digital Healthcare Services: A Registry-Based Observational Study	Alexandra C. H. Dahlberg; Taavi Kaartinen; Sakari Jukarainen; Petja Orre
15:29-15:36	Development of Health Promotional Support Service Based on the Mobile Personal Health Record Application to Prevent Heart Failure	Hiromasa Ito; Naoki Fujimoto; Kaoru Dohi
14:00-15:30	<b>Session 3c – Education in Digital Health I</b> H1091, Chair: Erika Jarva	
	<b>Invited Speech:</b>	
14:00-14:20	Learning with Intelligent and Immersive Systems: Rethinking Education in Digital Health	Maryam Alimardani, Associate Professor at Vrije Universiteit Amsterdam, Netherlands
	<b>Scientific Presentations:</b>	
14:20-14:27	Induction of Empathic Concern and Cognitive Empathy with Experts and Adults in an Immersive Virtual Reality Magnetic Resonance imaging (MRI) Experience with child's perspective	Iresh Bandara; Paula Alavesas; Severi Pitkänen; Sirpa Kekäläinen; Nirasha Thennakoon; Tarja Pölkki
14:27-14:34	Designing Safe Hybrid AI-XR Simulations for Healthcare Communication and Interaction Training	Kristina Mikkonen; Egle Butkeviciute; Patrikas Armalis; Evelina Aluzaitė; Rita Baranauskaitė; Lukas Paulauskas; Lina Spirgiene; Andrejus Subocius; Tomas Blažauskas; Olga Riklikienė
14:34-14:41	Examining Nursing Students' Perceptions of Virtual Reality for Language Learning and Culture Immersion	Agostinho Antônio Cruz Araújo; Paula Ropponen; Sari Pramila-Savukoski; Lucas Gardim; Isabel Amélia Costa Mendes; Kristina Mikkonen
14:41-14:48	Paramedic and Nursing Students' Experiences of Developing Pre-Hospital	Sari Pramila-Savukoski; Sofia Jaakkola; Heli-Maria Kuivila; Petri Roivainen; Erika Jarva; Hanna-Mari Ylitalo; Kristina Mikkonen

	Emergency Care Competence Using Mobile Game - a qualitative study	
14:48-14:55	Temporal Stress Patterns in VR-Based Trauma Care Training: a multimodal study of nursing students' physiological and interactional responses	Laura Kohonen-Aho; Delfin Tursin; Joonas Ojanen; Matti Pouke; Kristina Mikkonen
14:55-15:02	Co-Teaching with Machines: Generative AI in Simulation-Based Education	Nicholas Wee Siong Neo; Joko Gunawan; Tracy Levett-Jones; Eng Tat Khoo; Wei Ling Chua; Sok Ying Liaw
15:02-15:09	SurgiVerse-6G: AI Surgical Intelligence for Education	Paulo Sergio Rufino Henrique; Ramjee Prasad; Wagner de Oliveira; Marco Antonio Firmino de Sousa; Graça Bressan; Ricardo Zugaib Abdalla; Pavlos I. Lazaridis
15:09-15:16	MetaHealth Infra and MetaHealth Infra Development Projects: Building an Immersive Digital Development and Testing Environment for the Health Sector	Mika Paldanius; Outi Kajula
15:30-16:00	<b>Coffee, Exhibitions and Posters</b>	
16:00-17:30	<b>Session 4a – AI and LLMs in Healthcare: Tools for Professionals, Support for Citizens I</b> 101A (Leena Palotie Hall), Chair: Daljeet Singh	
	<b>Invited Speech:</b>	
16:00-16:20	LLM for clinical text handling: Recent Advances and Challenges	Professor Mourad Oussalah, University of Oulu, Finland
	<b>Scientific Presentations:</b>	
16:20-16:27	Deep Learning Models for Human Activity Recognition Using a Chest-Wearable Accelerometer Sensor	DK Arvind; Passara Chanchotisatien
16:27-16:34	Prognostic Risk Stratification of Hypertrophic Cardiomyopathy	Long Dang; Felix Agakov; Jari Hyttinen; Iacopo Olivotto; Mark van Gils
16:34-16:41	Trustworthy Federated Machine Learning in Healthcare: A Sociotechnical and Risk-Based Evaluation Using the Z-Inspection® Method	Pedro Kringen; Antti P Happonen; Petra Ekman; Charles Vesteghem; Benjamin Barlous; Antonios Danelakis; Mark van Gils; Pedro A Moreno-Sánchez; Magnus Westerlund
16:41-16:48	Feasibility of deep learning-based classification of lumbar T2-weighted MRIs in subjects with and without low back pain symptoms	Mustafa Al-Rubaye; Satu Inkinen; Jaro Karppinen; Miika Nieminen; Juuso Ketola
16:48-16:55	EEG-Based Mental Workload Classification Using Machine Learning in Software Engineering Tasks: A Methodological Approach	Sameera Gamage; Pantea Keikhosrokiani; Minna Isomursu
16:55-17:02	Real-Time Thermal Monitoring and Respiratory Analytics on Edge AI for Remote Healthcare	Christian Schuss; Kari Remes; Atte Koskela; Tapio Fabritius
17:02-17:09	Ethical Impact of AI Systems in Healthcare: A Survey of Recorded Incidents	Lauri Tuovinen
17:09-17:16	Alternative Regulatory Strategies for AI Medical Devices in the EU	Alpo Varri; Ilkka Juuso
17:16-17:23	Evaluating Predictive Performance of Machine Learning Based Patient Selection for Spinal Cord Stimulation in Chronic Pain	Mohosina Akhter; Minna Isomursu
17:23-17:30	A HumanAI Digital Health Architecture for Scalable Visually Impaired People (VIP) Navigation	Babar Shahzad Chaudary; Erkki Harjula; Petri Pulli
16:00-17:30	<b>Session 4b – User Experience, Acceptance &amp; Adoption of Health Information Systems</b> F202, Chair: Vesa Jormanainen	
	<b>Invited Speeches:</b>	
16:00–16:20	What are the factors for success and non-success in electronic health record systems implementations?	Professor Christian Nøhr, Aalborg University, Denmark

16:20-16:40	Digital health experiences from a patient perspective	Assoc. Professor Jeppe Eriksen, Aalborg University, Denmark.
	<b>Scientific Presentations:</b>	
16:40-16:47	Determinants of Citizen Adoption of the EUDI Wallet for Health Services in Finland: A Scoping Review and Conceptual Framework	Khaled Md Saifullah; Mohammad Rakibur Rahman; Miguel Bordallo Lopez; Timo Koivumäki; Kristina Mikkonen; Minna Isomursu; Olli Silvén; Constantino Alvarez Casado
16:47-16:54	Paramedicine Speech Recognition Adoption: A Socio-Technical Ranking Study	Desmond Hedderson; Helen Monkman; Ian E Blanchard; Karen L Courtney
16:54-17:01	Towards Healthy Ageing: Design and Implementation of a Person-Centered Digital Health System	Michele Atzeni; Margherita La Gamba; Laura Giani; Gokce B Laleci Erturkmen; Erika Jarva; Iiro Nerg; Sylvain Sebert; Teija Juola; Maria Bulgheroni
17:01-17:08	Assessing Community Health Workers' Experiences with Digital Rehabilitation: Usability, Barriers, and Implementation Needs in Primary Care Settings	Michael Oduor; Gerard Urimubenshi; Juliette Gasana; Eeva Aartolahti; Nassib Tawa; David Tumusiime; Katariina Korniloff
17:08-17:15	Surveying Nurses' Experiences of the National Patient Portal	Tuulikki Vehko; Kaija Saranto; Marko Elovainio; Vesa Jormanainen; Ulla-Mari Kinnunen
17:15-17:22	Nurses' Experiences Regarding the Impact of the Implementation of Digital Health and Social Center on Their Work and Other Practices: A Qualitative Interview Study	Egne Annala; Taina Pellikka; Hilka Korpi; Janna Nadav; Anu Kaihlanen; Paulus Torkki; Elina Laukka
17:22-17:29	Nurses' Usability Perceptions of an Established and Newly Adopted Electronic Health Record System, and Associations with Work Schedules	Signe Lohmann-Lafrenz; Eivind Schjelderup Skarpsno
16:00-17:30	<b>Session 4c – Wearable Sensors, Antennas and Physiological Measurement Systems</b> H1091, Chair: Mariella Särestöniemi	
	<b>Invited Speech:</b>	
16:00-16:20	Wearable Sensing for Health Monitoring in Real-World Conditions	Professor Oliver Amft, University of Freiburg, Germany
	<b>Scientific Presentations:</b>	
16:20-16:27	Evaluation of Two Novel Methods for Infant Sleep Depth Measurements in Home Environment	Laura Nauha; Hannu Kinnunen; Riikka Marttila; Matias Häggman; Juha Hannula; Tarja Pölkki; Sampsa Vanhatalo
16:27-16:34	Infrastructure Platform for Real-Time Blood Flow Imaging and Vascular Hemodynamics Monitoring	Ivan Lopushenko; Ana Diaz Dochado; Anton Sdobnov; Oleksii Sieryi; Mika Kaakinen; Lauri Eklund; Alexander Bykov
16:34-16:41	Liquid-Based Polarization-Reconfigurable Antenna Using Gravitational Method for WBAN Applications	Thanatchcha Satitchantrakul; Niklas Takanen; Ping Jack Soh
16:41-16:48	AMC-Backed Antenna for mmWave 5G Wearable Applications	Chaïmaâ Kissi; Mohamed Nabil Srifi
16:48-16:55	Skull Fracture Detection Using a Wideband Circularly Polarized Antenna with Metasurface Plane	Emmi Kaivanto; Mariella Särestöniemi; Teemu Samuli Myllylä; Ping Jack Soh; Jarmo Reponen; Mikael von und zu Fraunberg; Daljeet Singh; Kai Zhang; Sen Yan
16:55-17:02	Skin-to-Skin Interventions Provided Promising Results During Neonates' Recovery from Pain Stimulation	Hany Ferdinando; Anna-Kaija Palomaa; Sadegh Moradi; Juha Hannula; Tarja Pölkki; Teemu Samuli Myllylä
17:02-17:09	Bridging Science and Well-Being: Medical DX and Innovative Cuffless Sensors for Preventive Medicine	Yasuko K Bando
17:09-17:16	PPG and ECG Measurements on Physical Stimuli	Matti Huotari
17:16-17:23	New Vision-Portable and Label-Free Optical Detection of Sweat Glucose Using Functionalized Plasmonic Nanopillar Array	Ling Liu; Jianan Huang; Kuo Zhan
	<b>Exhibitor presentation:</b>	
17:23-17:30	PLM Group	
19:00-19:30	Arrival of conference guests.	

19:30 **Gala dinner at Restaurant Toivo of Radisson Blu Hotel**

For those who have booked the dinner at the time of conference registration

## Wednesday 17.6.2026

8:00-08:30 **Bus transportation from hotels to site visits**

8:30 – 10:30 **Site Visits**

**Bus transportation from site visits to Kontinkangas campus**

10:30 – 11:00 **Coffee, Exhibitions and Posters**

11:00-12:30 **Session 5a – AI and LLMs in Healthcare: Tools for Professionals, Support for Citizens II**  
101A (Leena Palotie Hall), Chair: Miika Nieminen

**Invited Speech:**

11:00-11:20 Human-Centered Large Language Models in Healthcare: Quality, Interaction, and Responsibility Professor Lucie Flek, University of Bonn, Germany

**Scientific Presentations:**

11:20-11:27 Comparative Analysis: AI and LLMs in Healthcare Syed Ifham Qadri; Syed Rameem Zahra; Juha Rönning; Brejesh Lall

11:27-11:34 EH-FSL: Secure and Scalable Edge-Hosted Federated Split Learning in Data-Intensive Healthcare Bilgehan Akdemir; Erkki Harjula

11:34-11:41 Physiotherapists' Perspectives on AI Tools for Future Practice Tuulikki Sjögren; Hilikka Korpi; Sanna Laine; Ville Heilala

11:41-11:48 Generating BPMN Healthcare Process Models Using LLMs Adam Grič; Silvia Putekova; Anna Petulova; Marek Rabincak; Fedor Lehocki

11:48-11:55 Delegating Tasks to AI: Current State in Dental Healthcare Ville Tuominen; Jaakko Vuolasto; Kari Koskinen

11:55-12:02 Pre-Treatment Chemotherapy Resistance Prediction in Endometrial Cancer Niny Salma; Chaïmaâ Kissi; Ch. Pradeep Reddy; Mohamed Nabil Srifi

12:02-12:09 Environmental Impacts of AI in Health Decision-Making Iina Latva-Teikari; Elina Hyrkäs; Outi Kanste

12:09-12:16 Measuring the Quality of AI-Generated Clinical Notes: A Systematic Review and Experimental Benchmark of Evaluation Methods Alexandra C H Dahlberg; Tiila Käenniemi; Tiia Winther-Jensen; Olli Tapiola; Rami Luisto; Tuukka Puranen; Max Gordon; Enni Sanmark; Ville Vartiainen

12:16-12:23 Structured Multi-Extraction Prompting Improves LLM-Based Biomedical Relation Extraction Without Fine-Tuning Frederik Marten Labonté; Suraj Giri; Claudius Herbrink; Lucie Flek

11:00-12:30 **Session 5b – Data-Driven and Modelling-Based Decision Support & Multimodal Health Data Analysis II**  
F202, Chair: Mark van Gils

**Invited Speech:**

11:00-11:20 Learning health systems as enabler of value-based care Professor Arild Faxvaag, Norwegian University of Science and Technology, NTNU, Trondheim, Norway

**Scientific Presentations:**

11:20-11:27	Establishing an AI Competence Center in a Public Healthcare Organization	Timo Alalääkkölä; Aappo Keränen; Jaana Kokko; Niko Korhonen; Roni Huhta; Joonas Haataja; Tenho Moilanen; Miika T Nieminen; Mikko Reinikka; Jarmo Reponen; Heikki Mikkonen
11:27-11:34	Extending Customer Journey Modelling Language for Complex Healthcare: A Design Science Research Approach in Kidney Cancer Care	Essi Miettinen; Anu Vehkamäki; Märta Vesinurm
11:34-11:41	Breath-Hold Effect on the Prefrontal Cortex Hemodynamics When Measured by fNIRS at Source-Detector Distances of 3 and 5 cm	Sadegh Moradi; Davood Simyar; Hany Ferdinando; Teemu Samuli Myllylä
11:41-11:48	Continuous Measurement of Cardiovascular Markers Using SCG During Cycle Ergometer Test	Aleksandra Zienkiewicz; Mikko Tulppo; Rasmus Valtonen; Teemu Samuli Myllylä
11:48-11:55	Lightweight, Explainable, and Efficiency-Aware Deep Learning for Early Sepsis Prediction from Structured Electronic Health Record Time-Series	Attaphongse Taparugssanagorn; Mariella Särestöniemi; Matti Hämäläinen; Jari Linatti
11:55-12:02	Robust Fatigue Prediction via Hybrid Generative-Ensemble Learning on Wearable Data	Fatemeh Sepehrmanesh; Antti Isosalo; Erkki Harjula
12:02-12:09	Attitudes Towards Workplace Data Collection Among Factory Workers	Milla Immonen; Satu-Marja Mäkelä; Elina Annanperä; Anna Rohunen; Kari Hiekkänen; Anu-Hanna Anttila; Pekka Siirtola
12:09-12:16	Focus is Not Just on the Eyes - Constructing Dynamic Areas of Interest for Eye-Tracking	Jaakko Kauramäki; Kerttu Huttunen
12:16-12:23	Multimodal Driver State Monitoring in a Simulated Environment: A Health-Oriented, Human-in-the-Loop Evaluation	Prabhash Rathnayake; Sameera Gamage; Akke-Pekka Törmänen; Ella Peltonen
12:23-12:30	Task-Dependent Central and Autonomic Responses to Sympathetic and Vagal Challenges	Runwei Lin; Annemijn Hoff; Ying Wang
11:00-12:30	<b>Session 5c – Education in Digital Health II</b> H1091, Chair: Kristina Mikkonen <b>Invited Speech:</b>	
11:00-11:20	Education and Competence Development in Digital Health <b>Scientific Presentations:</b>	Professor and Deputy Dean Gillian Vesty, Melbourne, Australia
11:20-11:27	Educators' Perceptions of a National Learning Material Repository in Finnish Medical and Dental Education	Tiina Salmijärvi; Konsta Partimaa; Henri Takalo-Kastari; Anu Kajamaa; Hanni Muukkonen; Petri Kulmala; Jarmo Reponen
11:27-11:34	Defining AI Competence for Health and Social Care Professionals: A Scoping Review of Competence Domains, Practice Requirements and Educational Gaps (2020–2025)	Birgitta Tetri; Outi Ahonen
11:34-11:41	From Shared Input to Negotiated Comparison and Situated Action: Staging a Transnational Course in Digital and Data-Driven Healthcare	Casper Knudsen; Signe Pedersen; Ditte Lystbæk Weber
11:41-11:48	Medical Students' Experiences of Digital Collaborative Learning in eHealth Training	Paula Veikkolainen; Erika Jarva; Timo Tuovinen; Petri Kulmala; Tiina Salmijärvi, Jonna Juntunen; Annukka Tuomikoski; Jarmo Reponen; Merja Männistö
11:48-11:55	Digital Competence of Filipino Nurses Working in Finland: A Cross-Sectional Study	Erika Jarva; Floro Cubelo; Elina Laukka
11:55-12:02	Exploring Digital Health Concepts Through Hands-on Education in Biomedical Engineering	Christian Schuss; Atte Koskela; Anuradha Uduwana Athukoralalage Dona; Tapio Seppänen; Tapio Fabritius
12:02-12:30	Pioneering the Future of Healthcare: The Development and Implementation of an Interdisciplinary Master's Program in Digital Health in Japan – a Case of Regional University	Kakuya Kitagawa; Yasuko K Bando; Hiroharu Kawanaka; Yusuke Sugitani; Hajime Sakuma
12:30-14:00	<b>Lunch, Exhibitions and Posters</b>	

14:00-15:30	<b>Closing Plenary – Future of Digital Health</b> Chair: Simo Saarakkala	
	<b>Invited Speeches:</b>	
14:00-14:30	Digital Transformation of Primary Health Care: Insights from a multi-country study	Assoc. Prof. Smisha Agarwal, Johns Hopkins, USA
14:30-14:50	From Vision to Infrastructure: The Evolution of Taiwan's Healthcare Systems Consortium in the Digital Age	Prof. Shao-Jen Weng, Tunghai University, Taiwan
14:50-15:10	From Strategy to Practice: The Esko Patient Information System Implementation at Pohde	CIO, Assist. Prof. Pasi Eskola, Wellbeing Services County of North Ostrobothnia, Finland
15:10-15:25	<b>Best Paper Awards</b>	
15:25	<b>Closing ceremony</b>	
15:25	Closing words	Conference Vice-President, Prof. Simo Saarakkala, University of Oulu, Finland
	<b>Poster exhibitions</b>	
1	From Guideline to Gameplay: A Pilot Study on AI Simulation in Medical Training	Maija Paukkunen; Elina Rintamäki; Kari Sinivuori; Eveliina Heikkala; Juhani Määttä; Jaro Karppinen
2	Impact of XR-Based Training on Radiation Knowledge and Workflow Performance in Healthcare Professionals	Marja Jaronen; Karoliina Paalimäki-Paakki; Adam Graham; Niko Männikkö; Tanja Schroderus-Salo; Tuulikki Keskitalo; Milla Immonen; Kristina Mikkonen
3	Industry-Driven Project-Based Learning in Digital Health Education	Raquel Simões de Almeida; Vítor Simões-Silva; Maria João Trigueiro
4	Low-Cost Platform for Self-Measured Balance in Seniors	Thomas Jensen; Pauli Mikkonen
5	A User-Centred mHealth Approach to Remote Routine Management and Mental Health Promotion in Higher Education	Vítor Simões-Silva; Maria João Trigueiro; Raquel Simões de Almeida
6	Use of a Gamified Tool for the Promotion of Physical Activity and the Reduction of Obesity in Young Adults	Maria João Trigueiro; Guilherme R Pinto; José M Nunes; Raquel Simões de Almeida; Vítor Simões-Silva
7	A Phenomenographic Research of Physiotherapy Teachers' Perceptions of Digitalization	Hilkka Korpi; Mari Harjunen; Tuulikki Sjögren
8	Artificial Intelligence-Assisted Clinical Decision Support in Nursing: A Qualitative Descriptive Study	Petra Suonnansalo; Henna Härkönen; Mika Alastalo; Zhou Wentao; Miia Jansson
9	Self-Adaptive AI in Clinical Decision Support: A Systematic Review	Wendakoon Mudiyansele Kavishwa Bhashitha; Nirnaya Tripathi
10	Artificial Intelligence for Reducing Alarm Fatigue in Hospitals: A Systematic Review	Milla Kosonen
11	A Safety-Constrained Architecture for Adaptive Clinical Decision Support	Wendakoon Mudiyansele Kavishwa Bhashitha; Nirnaya Tripathi
12	Structured LLM-Generated Clinical Discharge Summaries for Nordic Healthcare Digitalization and Wireless Health Integration	Aleka Melese Ayalew; Md Rabiul Hasan; Tapio Seppänen; Mourad F Oussalah
13	MEG-QA: Medical Evidence-Grounded Question Abbreviation for Consumer Health Queries via Retrieval-Augmented Generation and Knowledge Graph Constraints in Digital Health	Md Rabiul Hasan; Aleka Melese Ayalew; Mourad F Oussalah
14	Robust and Imperceptible QR Code Watermarking in Medical Images Using a Hybrid DWT-DCT-SVD Approach	Khadija Dinia; Chaïmaâ Kissi; Ch. Pradeep Reddy; Tarik Boujiha
15	An Evaluation of PQC Placement in Hybrid Quantum CNN and ViT Models	Khadija Amadoun; Chaïmaâ Kissi; Amlan Chakrabarti; Tarik Boujiha

16	Early Detection of Emerging SARS-CoV-2 Variants via Contrastive Siamese BiLSTM Embeddings and Temporal Outlier Persistence	Adnane Touiyate; Chaïmaâ Kissi; Tarik Boujiha
17	AI-Assisted Documentation in Social Welfare Services: Insights from a Pilot Conducted in the Wellbeing Services County of North Ostrobothnia	Niko Korhonen; Jarmo Reponen; Timo Alalääkkölä; Aappo Keränen; Jaana Kokko; Roni Huhta; Joonas Haataja; Tenho Moilanen; Miika T Nieminen; Mikko Reinikka; Heikki Mikkonen
18	WoMED: Designing a Clinical Tool to Aid in Diagnosis, Assessment, and Decision-Making by Utilizing Women's Health Data	Riikka Arffman; Marko Arffman; Janne Wäli; Elisa Hurskainen; Terhi T Piltonen
19	A Discrete Event Simulation Framework for Analysing and Optimising Emergency Medical Service Workflows	Kean Tang; Patrik Rydén
20	Predicting Length of Stay in High Throughput Hospital Units	Lars Mattsson; Patrik Rydén
21	Service Demand Predictive Models in Well-Being Services Counties Qualitative Research on Project Team Members' Experiences	Helmi Virtanen
22	Multiparametric MRI Analysis in Glioma Grading: Added Value of ADC Maps	Nourhan Ibrahim; Egor Panfilov; Niina Salokorpi; Tuija Keinänen
23	Optical Wireless Power and Data Transfer to Implantable Medical Devices Under Misalignment: Experimental Insights on Energy Harvesting	Syifaul Fuada; Mariella Särestöniemi; Guanghui Ma; Marcos Katz
24	Analysis of Available Optical Power in an in-Body Optical Link at 810 nm for OWPT Across Biological Tissue	Syifaul Fuada; Mariella Särestöniemi; Marcos Katz
25	Compact Antenna Cavity and Reflector Configurations for Portable Skull Fracture Detection	Emmi Kaivanto; Daljeet Singh; Jarmo Reponen; Mariella Särestöniemi; Mikael von und zu Fraunberg; Ping Jack Soh; Teemu Samuli Myllylä
26	Ultra-Low-Power on-Demand Ultrasound-Based Device Identification for Hand Hygiene Monitoring in Healthcare Environments	Frank Russow
27	Secure Connectivity Architectures for Resilient and Privacy-Preserving Digital Health Ecosystems	Himanshi Babbar; Rajeev Kumar; Teemu Myllylä; Daljeet Singh; Mariella Särestöniemi
28	A Modular Approach for Multi-Scale Whole-Brain Simulation: Integrating a Neuron-Astrocyte-Vascular Model Into the Virtual Brain	Rok Virant; Marja Leena Linne
29	Wearable-Measured Heart Rate Variability, Its Multi-Night Fluctuation and Cardiometabolic Health in Adults	Anna Maijala; Vahid Farrahi; Maisa Niemelä
30	BCI Controlled Humanoid Systems: A Multimodal Perspective	Sarthak Acharya; Daljeet Singh; Nampuraja Enose
31	The Human Body Twin Laboratory: A Multimodal Platform for Developing and Validating Wearable and Portable Medical Monitoring Technologies	Mariella Särestöniemi; Erkki Vihriälä; Daljeet Singh; Lukasz Surazynski; Teemu Myllylä
32	Human-AI Interaction in UAE Healthcare Sector	Loubna Saad Saoud; Omer Aftab Qureshi
33	Towards Realistic Phantom-Based Evaluation of MammoWave Microwave Breast Imaging	Mariella Särestöniemi; Daljeet Singh; Jarmo Reponen; Teemu Myllylä; Gianmarco Palomba; Alessandra Ronca; Navid Ghavami; Gianluigi Tiberi
34	Cost-Effectiveness of a Metabolomic Risk Score-Based Health Check Combined with a Digital Health Intervention for Cardiometabolic Disease Prevention in Finland	Piia Lavikainen, Leena Haikonen-Salo, Aku-Ville Lehtimäki, Kari Jalkanen, Jari Heiskanen, Tiina Laatikainen, Janne Martikainen