

DELTA Workshop 2026

August 19-20, 2026

Aalto University, Otakaari 1, Espoo, room U7.

Agenda

August 19

10:30-11:00 Welcome coffee

11:00 Opening

11:15 Keynote 1: Kaisa Ahonen, ESA BIC Finland (Chair: Jari Nurmi, TAU)

Space and Business: Opportunities for all

12:00 Digital Hardware (Chair: Jari Nurmi, TAU)

12:00 Zohaib Hassan, TAU: A Reconfigurable CGRA-Based Transmitter Architecture for Delay-Doppler Waveforms

12:20 Bilal Bashir, TAU: Massively Parallel VLSI Architecture for GRANDAB Universal Decoder

12:40 Maria Khan, TAU: Low-Power FPGA Design Using CSD and Zero-Skipping, Targeting Edge Devices & Google Speech Keyword Spotting

13:00 Lunch

14:00 Keynote 2: Marko Keskinen, Skylo (Chair: Riku Jäntti, Aalto)

Skylo - from Aalto spin-out to global leader in satellite connectivity

14:45 Communication Networks (Chair: Riku Jäntti, Aalto)

14:45 Roni Fagerholm, Aalto: Real-Time Fully Coherent Synchronization of Distributed GNSS-Denied Ad Hoc Networks

15:05 Guang Ngo, Aalto: Overhead-Optimized Short-Packet Communication for IIoT using DECT NR+ Networks

15:25 Fateimeh Rafiei Maleki, TAU: LEO Satellite Backhaul Connectivity for Air and Land Transportation Networks

15:45 Coffee break

16:10 Communication Systems (Chair: Norshahida Saba, Aalto)

16:10 Mohaiminul Haque, TAU: H-Matrix Optimization via Angular Phase Shift for MIMO Capacity Enhancement

16:30 Nikoloz Glonti, TAU: Multi-Level Outphasing with OTA Combining: 2D Beamforming and Measurements with Large Arrays

16:50 Uzman Ali, TAU: Quad-Band Antenna to Establish Wireless Intracranial Implant-to-Implant Communications

17:10 Xinyu Zhang, Aalto: Optical Camera Communication

17:30 End of program

18:00 Dinner in restaurant Fat Lizard

August 20

09:00 Keynote 3: Heidi Kuusniemi, TAU (Chair: Jari Nurmi, TAU)

Towards resilient and trustworthy multilayer PNT

09:45 Machine Learning Applications (Chair: Simona Lohan, TAU))

09:45 Fabliha Bushra Islam, TAU: Severity-Aware Personalization: A Data-Driven Framework for Federated Client Heterogeneity

10:05 Anusha Ihalapathirana, UO: Explainable AI-Driven Individualized Treatment Optimization for Breast Cancer Time-to-Event Outcomes

10:25 Xiaotian Bi, UWASA: Enhancing Injector Rig Testing Efficiency: AI-Based Rate of Injection Prediction from Experimental Data

10:45 SaiKrishna Yellapragada, Aalto, Computationally efficient Neural Receiver via Axial-Self Attention

11:05 Coffee break

11:30 GNSS Systems (Chair: Heidi Kuusniemi, TAU)

11:30 Nadir Khan, TAU: Meta-Learning Models for GNSS Spoofing Detection

11:50 Muhammad Safi, TAU: Integrating 3D GIS into GNSS for improved navigation

12:10 Majed Imad, TAU: Machine learning techniques to aid robust estimation

12:30 Yelyzaveta Pervysheva, TAU: Threshold Sensitivity of S4- and SigmaPhi-Based GNSS Ionospheric Scintillation Classification in High Latitudes

12:50 Lunch

14:00 Keynote 4: Jari Karppinen, Nokia (Chair: Riku Jäntti, Aalto)

Memory Driven Radio Network

14:45 Coffee break

15:00 Something Else (Chair: Simona Lohan, TAU)

15:00 Xichun Cheng, Aalto: Sparse Bayesian Filtering

15:20 Mariem Bouafif Mansali, Aalto: Sequential Patterns in Turn Durations of Dynamic Speech Interaction

15:40 t.b.d.

16:00 Closing

Additional participants

Rojan Roshankar, University of Vaasa

Ben Ottoman, University of Vaasa