

**IEEE IC and mmWave Platforms and Advanced Circuit Technologies  
for 6G Communications (IEEE IMPACT-6G)  
Final Technical Program**

Technical Sponsors



Date Nov. 3<sup>rd</sup>. 2025  
Venue EIPE Future Hall, Dept. Electrical Engineering and Applied Physics, Aobayama Campus, Tohoku University  
<https://www.eng.tohoku.ac.jp/english/map/?menu=campus&area=d&build=14>  
Registration: Only on-site registration is available. Registration fee is 15,000 JPY, including a lunchbox, coffee break and dinner charge. Cash only. Receipt for the registration fee without the registration number is available.

Opening remarks

09:15-09:20 Arokia Nathan (Darwin College, Cambridge University)

Senior Professional Session 1 (20 min talk and 5 min Q&A)

Chair: Arokia Nathan (Darwin College, University of Cambridge)

09:20-9:45 Q/V-band LEO constellation SATCOM and its hardware technologies for 6G NTN  
Noriharu Suematsu (Tohoku University)

9:45-10:10 Design Challenges and Prototype Examples of W-Band GaN HEMT Amplifiers  
Shinji Hara (Nagoya University)

10:10-10:35 Time-Varying Dynamic MIMO Arrays for Joint Communication and Sensing  
Hua Wang TH Zurich)

10:35-10:45 Break

Senior Professional Session 2 (20 min talk and 5 min Q&A)

Chair: Keisuke Konno (Tohoku University)

10:45-11:10 Scalable and Energy-Efficient Distributed Massive Multiuser-MIMO for Enabling

6G Mobile Communications  
Fumiyuki Adachi (Tohoku University)

11:10-11:35 Semantic Networks  
Celimuge Wu (The University of Electro-Communications)

11:35-12:00 Recent progress on fully coherent optical mobile fronthaul  
Masataka Nakazawa (Tohoku University)

12:00-12:25 Development of Liquid Crystal-Based Beam-Steerable Reflectarray Antennas  
Qiang Chen (Tohoku University)

12:25-14:00 Lunch Break  
(Free lunch box is available for registered participants)

Young Professional Session 1 (15 min talk and 5 min Q&A)  
Chair: Hiroyasu Sato (Tohoku University)

14:00-14:20 6G Mesh Networks  
Jin Nakazato (Tokyo University of Science)

14:20-14:40 Electrically Tunable Multi-array Metasurface for Advanced Optical Modulation  
Lan Wang (UESTC and Tohoku University)

14:40-15:00 Concept of Privacy-Preserving Posture Sensing with Terahertz Waves in Elderly Care  
Hideya So (Kogakuin University)

15:00-15:20 Unleashing the Potential of Large-Scale Array Beamforming  
Kazuki Maruta (Tokyo University of Science)

15:20-15:30 Break

15:30-15:50 Channel Knowledge Map with Graph Representation Learning  
Katsuya Suto (Hokkaido University)

15:50-16:10 Integral Equation-Based Circuit Modeling of Near-Field Undersea Antennas  
Nozomi Haga (Toyohashi University of Technology)

16:10-16:30 Large Language Models Empowering Next-Generation Antenna Design

Chang Ge (Tohoku University)

16:30-16:50      Advances in Wideband Wireless Systems for Sensing and Communication:  
From FMCW Radar to Millimeter-Wave Power Prediction  
Kohei Ohno (Meiji University)

18:00-            Dinner, Korean BBQ restaurant DEJI-MARU  
<https://maps.app.goo.gl/TsLbN6egKthPosiW6>

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