

IEEE Estonia Section & IES/PELS/IAS/PES Joint Societies Chapter

in cooperation with

Center of Excellence in Energy Efficiency

FUTURE-PROOF ELECTRIFICATION TECHNOLOGIES Program

13.00 – 14.00 Energy Efficiency Research in Estonia

- 13:00-13:05 **Formal Opening** – Andrei Blinov, TalTech
- 13:05-13:15 **"Mission and Vision of the Estonian Center of Excellence in Energy Efficiency"** – Dmitri Vinnikov, TalTech
- 13:15-13:30 **"Estimating the Energy Production of BI/BAPV Systems from Civil Engineering Viewpoint"** – Jaanus Hallik, TalTech
- 13:30-13:45 **"Data-Driven Approach to Improvement of Buildings Energy Performance"** – Eduard Petlenkov, TalTech
- 13:45-14:00 **"Renovation Wave as a socio-technical transition"** – Veiko Lember, TalTech

14.00-15.15 Trends, Plans and Smart Solutions for Future Electricity Systems

- 14:00-14:15 **"Broadband Identification Techniques for Power-Electronics and Grid-Connected Systems in DC Electrification"** – Tomi Roinila, Tampere University, Finland
- 14:15-14:30 **"Photovoltaic Cooling with Hydro Capillary Systems"** – Janis Zakis, Riga Technical University, Latvia
- 14:30-14:45 **"Future and Future-proofing Tallinn Urban Lighting"** – Joan-Tähven Vene, Tallinn Urban Environment and Public Works Department
- 14:45-15:00 **"Emerging Thin-Film Chalcogenides for Scalable, Tailored PV in Sustainable Electronics & Electrified Infrastructures"** – Nicolae Spalatu, TalTech
- 15:00-15:15 **"Digitally Unlocking Grid Flexibility with Heat Pumps"**, Marc Schreurs, Daikin Europe, Belgium

15.15-15.30 Coffee Break

15.30-16.15 DC Technologies for Efficient Renewable Production and Delivery

- 15:30-15:45 **"Improving Photovoltaic Production in Snowy Conditions Using Bidirectional Microinverter for Active Snow Melting"** – Sachin Chauhan, TalTech
- 15:45-16:00 **"Shifting to DC for a More Efficient and Flexible Lighting System"** – Niwton Gabriel Feliciani Dos Santos, TalTech
- 16:00-16:15 **"Fuel Cells for EV and Energy storage: Principles, Technologies, and Future Prospects"** – Vinod Kumar Yadav, TalTech

16.15-17.45 Future-Proof Power Electronics Systems for Sustainable Electrification

- 16:15-16:30 **"Improved Bidirectional Partial Power Converter for Efficient DC Power Transfer"** – Tuhin Mitra, TalTech
- 16:30-16:45 **"Electromagnetic Compatibility of DC-DC Converters for DC Microgrids"** – Hetal Sharma, TalTech
- 16:45-17:00 **"Wide-Range Bidirectional Electric Vehicle DC Charger"** – Hans Anniste, TalTech
- 17:00-17:15 **"Sizing of PV and Battery Storage for Single-Family Estonian Residential Buildings"** – Tofopefun Nifise Olayiwola, TalTech
- 17:15-17:30 **"Smart Energy Router for Prosumer Buildings"** – Salamat Ali, TalTech
- 17:30-17:45 **"High Power Density Non-Isolated DC-DC Converters for Harsh Operating Environments"** – Abdul Majid, TalTech

17.45-18.00 Wrap-up and open discussion

 **Date: June 3, 2025, 13:00-18:00**
 **Location: TalTech Energy Building, NRG-226**
 **Join: <https://shorturl.at/pTNs8>**



Register



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Energy Efficiency Centre of Excellence
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i³ DC
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