

2024 Vehicle Technologies Office Annual Merit Review

Electrification R&D (ELT) Oral Presentation Detailed Schedule

Tuesday, June 4, 2024	
9:00 AM	ELT209: High-Voltage, High-Power Density Traction-Drive Inverter, Gui-Jia Su, ORNL
9:15 AM	
9:30 AM	ELT210: Development of Next-Generation Vertical Gallium-Nitride Devices for High-Power Density Electric Drivetrain, Andrew Binder, Sandia
9:45 AM	
10:00 AM	ELT218: Advanced Power Electronics Packages, Douglas DeVoto, NREL
10:15 AM	
10:30 AM	ELT212: Non-Heavy Rare-Earth High-Speed Motors, Vandana P Rallabandi, ORNL
10:45 AM	
11:00 PM	ELT221: Integrated Electric Drive System, Shajjad Chowdhury, ORNL
11:15 PM	
11:30 PM	Time Buffer
11:40 PM	Lunch Break
1:10 PM	ELT179: Low Cost, High-Performance, Heavy Rare-Earth-Free 3-In-1 Electric Drive Unit, David Crecelius, American Axle & Manufacturing
1:25 PM	
1:40 PM	ELT288: Scalable Ultra Power-Dense Extended Range (SUPER) Inverter, Harsha Nanjundaswamy, BorgWarner
1:55 PM	
2:10 PM	ELT287: Cummins High Power Density Inverter, Santhosh Krishnamoorthi, Cummins
2:25 PM	
2:40 PM	ELT 275: Low-Cost Rare-Earth Free Electric Drivetrain Enabled by Novel Permanent Magnets, Inverter, Integrated Design and Advanced Thermal Management, Ayman El-Refaie, Marquette University
2:55 PM	
3:10 PM	Time Buffer
3:15 PM	Break
3:45 PM	ELT217: Integrated/Traction Drive Thermal Management, Bidzina Kekelia, NREL
4:00 PM	
4:15 PM	ELT 215: Develop fine-grain RE permanent magnet with high coercivity at high temperature AND cost-effective manufacturing process for high performance soft magnetic materials in thin sheet form, Iver Anderson, Ames
4:30 PM	
4:45 PM	ELT216: Isotropic, Bottom-Up Soft Magnetic Composites for Rotating Machines, Todd Monson, Sandia
5:00 PM	
5:15 PM	Day 1 Ends

Wednesday, June 5, 2024	
9:00 AM	ELT282: Technology & Design Innovations to Maximize the Reduction Effect on DCFC Unit Cost Economics (Max-REDUCE), Luca Di Carlo, BorgWarner
9:15 AM	
9:30 AM	ELT283: A Solid State Technology Enabled Compact, Modular Design to Reduce DC Fast Charging Cost and Footprint, Bogdan Borowy, Eaton
9:45 AM	
10:00 AM	ELT238: Intelligent, Grid-Friendly, Modular Extreme Fast Charging System with Solid-State Direct-Current Protection, Srdjan Lukic, North Carolina State University
10:15 AM	
10:30 AM	ELT293: Ruggedized Mobile Fast Charger for Off-Road Vehicles, Brij Singh, John Deere
10:45 AM	
11:00 PM	ELT294: Modular Direct Current (DC) Back Bone Recharging System for Non-Road Vehicles in Austere Environments, Leandro Della Flora, Beta Technologies
11:15 PM	
11:30 PM	Time Buffer
11:40 PM	Lunch Break
1:10 PM	ELT295: EVs@Scale VGI & SCM, Jesse Bennett, NREL
1:25 PM	
1:40 PM	ELT265: A Secure and Resilient Interoperable SCM Control System Architecture for Electric Vehicle's-At-Scale, Duncan Woodbury, Liberas
1:55 PM	
2:10 PM	ELT264: Demonstration of Utility Managed Smart Charging For Multiple Benefit Streams, Stephanie Leach, Exelon/Pepco Holdings Inc.
2:25 PM	
2:40 PM	ELT274: eMosaic: Electrification Mosaic Platform for Grid-Informed Smart Charging Management, James Stoupis, ABB
2:55 PM	
3:10 PM	Time Buffer
3:15 PM	Break
3:45 PM	ELT296: Charging Infrastructure Interconnection Simplification Resource CIISR, Watson Collins, EPRI
4:00 PM	
4:15 PM	ELT297: Electric Vehicle Smart Program Management: Supporting Local Governments to Achieve Equitable Access to Electric Mobility, Ed Gilliland, IREC
4:30 PM	
4:45 PM	ELT236: Direct-Current Conversion Equipment Connected to the Medium-Voltage Grid for Extreme Fast Charging Utilizing Modular and Interoperable Architecture, Watson Collins, EPRI
5:00 PM	
5:15 PM	Day 2 Ends

Thursday, June 6, 2024	
9:00 AM	ELT298: Bidirectional Power Flow for Medium-duty Vehicle-to-Grid Connectivity, Steven Sokolsky, CALSTART
9:15 AM	
9:30 AM	ELT239: High-Power Inductive Charging System Development and Integration for Mobility, Omer Onar, ORNL
9:45 AM	
10:00 AM	ELT262: Long-Range, Heavy-Duty Battery-Electric Vehicle with Megawatt Wireless Charging, Ryan Reed, Kenworth
10:15 AM	
10:30 AM	ELT286: A Zero Emission Freight Future (SuperTruck 3), Eric Bond, Volvo
10:45 AM	
11:00 PM	ELT285: Development and Demonstration of Zero-Emission Technologies for Commercial Fleets (Supertruck 3), Maarten Meijer, PACCAR
11:15 PM	
11:30 PM	Time Buffer
11:40 PM	Lunch Break
1:10 PM	ELT299: EVs@Scale High Power Charging Pillar, John Kisacikoglu, NREL
1:25 PM	
1:40 PM	ELT300: EVs@Scale Codes and Standards Pillar, Ted Bohn, ANL
1:55 PM	
2:10 PM	ELT301: EVs@Scale Cyber-Physical Security Pillar, Richard Carlson, INL
2:25 PM	
2:40 PM	ELT302: EVs@Scale EV Modeling Toolkit, Andrew Satchwell, LBNL
2:55 PM	
3:10 PM	Time Buffer
3:15 PM	Break
3:45 PM	ELT290: Behind-the-Meter-Storage, Anthony Burrell, NREL
4:00 PM	
4:15 PM	Day 3 Ends