

Automotive Power Electronics and Semiconductors Workshop

@ McMaster Automotive Resource Centre (MARC)

in Partnership with Canada's Semiconductor Council (CSC)

Date: Wednesday, May 7, 2025

Location: McMaster Automotive Resource Centre (MARC)

McMaster Innovation Park (MIP)

200 Longwood Road South, MARC 266

Hamilton, Ontario, Canada L8P 0A6

Agenda:

9:00-9:30AM Registration and Coffee

9:30-10:00AM Welcome and Opening Remarks

Ali Emadi, Professor and Chairholder, McMaster University

Andy Knights, VP Research, McMaster University

Paul Slaby, Managing Director, Canada's Semiconductor Council

Kirk Ouellette, VP Global Strategy, STMicroelectronics

10:00-11:00AM Presentations

10:00-10:15AM Hybrid SiC/Si Traction Inverters, Parsa Beheshti, MARC (in collaboration with STMicroelectronics)

10:15-10:30AM Integrated Power Electronics, Chang Liu, MARC (in collaboration with Stellantis)

10:30-10:45AM SuperBox: Highly Integrated Automotive Power Electronic Converter, Sreejith Chakkalakkal, MARC, and Wesam Taha, Schaeffler

10:45-11:00AM Solid State Power Controllers and High-Power Traction Inverters, Yizhi Zhang and Di Wang, MARC (in collaboration with Eaton Corporation)

11:00-11:15AM Networking Coffee Break

11:15-11:30AM NRC e-Auto Challenge Program

Sooky Winkler, Program Director, e-Auto, National Research Council Canada

11:30-12:30PM Industry Panel on Automotive Microchips: Challenges and Opportunities

Panel Moderator: Kirk Ouellette, VP Global Strategy, STMicroelectronics

Panelists: Wilson Yu, Head of Advanced Technologies Group, AMD

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- 12:30-1:30PM Lunch and Networking
- 1:30-1:40PM OCI/OVIN Presentation, Raed Kadri, VP OCI and Head of OVIN (invited)
- 1:40-1:50PM NGen Overview Presentation, John Laughlin, CTO, NGen
- 1:50-2:00PM Mitacs Overview Presentation, Ryan Caldwell, Mitacs
- 2:00-3:00PM Industry Panel on Automotive Power Electronics: Challenges and Opportunities
Panel Moderator: Armen Baronian, Director, Advance Technology and Innovation, Eaton Aerospace
Panelists: Brett McQueen, Director of Innovation, North America, Linamar Corporation
Andrei Catuneanu, Team Lead, Advanced Product R&D, Dana Canada Corporation
Wesam Taha, Senior Systems Engineer, Schaeffler
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- 3:00-3:30PM Networking Coffee Break
- 3:30-4:30PM Proposed New Consortium for Automotive Power Electronics and Semiconductors – Next Steps and Brainstorming Panel Discussion
Panel Moderator: Ali Emadi, McMaster University
Panelists: Paul Slaby, Canada's Semiconductor Council
Amber Metham, McMaster University
Sooky Winkler, National Research Council Canada
John Laughlin, CTO, NGen
Mona Eghanian, Assistant VP OCI and Deputy Head OVIN (invited)
- 4:30-6:00PM Tour and Open House
McMaster Automotive Resource Centre (MARC)
McMaster Manufacturing Research Institute (MMRI)
Enedym FARM (Facility for Advanced Rapid Manufacturing)