

May 9, 2013

Shaping what, how we drive with new \$26M auto lab

The McMaster Automotive Resource Centre (MARC) officially opened its doors today, revealing an 80,000-square-foot university lab where hundreds of researchers, students and industry professionals will work to resolve serious issues facing the automotive industry and design the future of human transportation.

The \$26-million facility, funded in part by Federal Economic Development Agency of Southern Ontario, is one of a handful in the world located in an academic setting. Inside the state-of-the-art facility, teams will be able to develop, design and test an electric or hybrid car.

Located in a once vacant appliance warehouse at the McMaster Innovation Park, the redeveloped space now includes state-of-the-art commercial garage space, with multiple bays ready to receive cars for experiments and testing.

Together, teams of engineers, scientists, social scientists and their students will develop sustainable solutions for the auto industry. These include the development of hybrid and electric powertrains, building highly efficient and cost-effective powertrain components, identifying lighter materials to make cars more fuel efficient and developing cars and smart controls that allow members of an aging society to drive safely for longer periods.

“Our Government is committed to bringing together the right tools and resources for businesses to succeed and for communities to prosper,” said Gary Goodyear, Minister of State for the Federal Economic Development Agency for Southern Ontario (FedDev Ontario) at the opening. “This investment is not only creating jobs here in Hamilton but will help put southern Ontario at the forefront of green automotive technology development, as well as advanced manufacturing.”

Funding was provided in part through FedDev Ontario’s Prosperity Initiative. McMaster received up to \$11.5-million to create MARC, which provides an environment where businesses, manufacturers, parts suppliers and researchers can collaborate.

“The opening of this centre is especially gratifying because it brings together several important principles that are the focus of our work at the university,” says McMaster president Patrick Deane. “It will allow our researchers to undertake exciting new projects and share new knowledge with our students. In creating modern manufacturing jobs, the centre will benefit the broader community and will enable the development of cleaner, more efficient cars for drivers everywhere. Finally, in keeping with our commitment to sustainability, this will all happen in a reclaimed building.”

The team of engineers, chemists, mathematicians, and others will be led by Ali Emadi, the Canada Excellence Research Chair in Hybrid Powertrain, who is also the director of the McMaster Institute for Automotive Research and Technology (MacAUTO). Emadi came to McMaster from Chicago’s elite Illinois Institute of Technology to lead this global centre.

“When fully equipped, this will be the most sophisticated, most advanced transportation electrification facility in academia in North America,” he says.

“In this space, we will work to change the future of transportation by bringing together intellectual capabilities, multi-disciplinary programs and initiatives - in a globally unique laboratory - to move away from the 100-year-old internal combustion engine to the electrification of transportation.”

More than 200 researchers will work on a variety of projects with industry partners including Ford, Chrysler and GM.

McMaster's automotive research was the subject of a feature story in the [Spring 2013 issue of the McMaster Times alumni newsmagazine](#).

Below, Emadi shows off Canada's first electric Ford Focus and talks about the wide range of auto research happening at McMaster. Emadi was joined for the magazine's cover shoot by colleagues Charlotte Yates and Saeid Habibi at MARC.

Dee Dr. Emadi talk about the Ford Focus Electric car (the first in Canada) on YouTube:

http://www.youtube.com/watch?feature=player_embedded&v=ikO2u6F-2NQ