

May 17, 2010

Top U.S. auto hybrid researcher moving to McMaster

Ali Emadi has been appointed Canada Excellence Research Chair in Hybrid Powertrain and will relocate to McMaster University.

Hybrid vehicle development in Canada has received a huge jolt of propulsion.

Ali Emadi, a leading U.S. developer of electric powertrain technology, has been appointed Canada Excellence Research Chair in Hybrid Powertrain and will relocate to McMaster University. The appointment will see the construction of a new 15,000 square-foot hybrid vehicle research facility at McMaster Innovation Park.

The appointment was announced today by federal Minister of Industry Tony Clement and federal Minister of State for Science and Technology Gary Goodyear. It is one of 19 new Canada Excellence Research Chair (CERC) appointments at 13 universities. Each appointment receives up to \$10 million in federal funding over seven years.

"Canada has just been elevated another notch as a global leader in developing hybrid vehicle technology," said Peter George, President and Vice-Chancellor, McMaster University. "The appointment reinforces McMaster's leadership in automotive research and places us at the forefront of hybrid vehicle research in this country."

"The Government of Canada recognizes the importance of supporting leading-edge research and world-class researchers," said Tony Clement, Minister of Industry. "The CERC program confirms Canada's standing as a global centre of excellence in research and higher learning. This program supports our government's commitment to ensuring Canada's future economic growth by investing in innovation and research capacity in priority areas."



Emadi is currently the Harris Perlstein Endowed Chair Professor of Engineering and director of the Electric Power and Power Electronics Centre at the Illinois Institute of Technology in Chicago. He is also the founder and president of Hybrid Electric Vehicle Technologies, Inc., a spin-off company of the Institute.

"The government's commitment to research through the CERC program and McMaster's vision for leadership in sustainable automotive research were too strong to resist," said Emadi. "I am looking forward to joining the strong network of automotive researchers in Canada and helping to advance the development of hybrid vehicles."

Emadi's hybrid vehicle research facility will be part of a new 50,000 square-foot automotive resource centre being planned for McMaster Innovation Park. The Centre is to be located within the current Careport building and bring together private and public sector organizations to develop new technologies such as hybrid engines, batteries and lightweight materials.

"Dr. Emadi's appointment adds to the critical mass of expertise being assembled at McMaster for developing the next generation of lightweight, energy-efficient vehicles," said Mo Elbestawi, vice president research and international affairs for McMaster. "He will help attract more like-minded researchers and entrepreneurs, and his experience in spinning off start-up companies will be invaluable to the community."

Emadi's research encompasses the development of advanced electric drive vehicles, power electronics and motor drives, vehicle-to-grid interface of plug-in vehicles with Smart Grid, hybrid battery/super-capacitor energy storage systems, and adaptive vehicle control and power management systems.

"One of Dr. Emadi's strengths is systems integration," said David Wilkinson, dean of the Faculty of Engineering. "He has the insight and the knowledge of advanced technologies to shift hybrid vehicle research and development to another level in Canada. He can move research closer to implementation."

As part of his appointment, Emadi will also become director of the McMaster Institute for Automotive Research and Technology, known as MacAUTO, the coordinating body for automotive research and education at the university. It encompasses some 75 researchers in engineering, science, business and other faculties involved in initiatives valued at over \$100 million in programs and infrastructure.

"His appointment is part of a strategy to introduce new programs and train engineers in the area of power engineering and electronics, control systems,

Smart Grid, and related technologies," said Wilkinson. "McMaster will have the greatest concentration of powertrain research anywhere in the country."

The CERC program was announced in Budget 2008 as part of the federal government's Science and Technology Strategy to help build expertise in strategic areas. Research conducted by the chairholders will focus on the areas of environmental sciences and technologies, natural resources and energy, health and related life sciences and technologies, and information and communications technologies.

The CERC program is administered jointly by Canada's three research granting agencies: the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council and the Canadian Institutes of Health Research.