



UNIVERSITY OF ALBERTA

Media Release

Communiqué

University of Alberta researcher to lead national research team creating a smarter automotive engine

FOR IMMEDIATE RELEASE

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Edmonton, AB: Creating an automotive engine that can recognize different fuels and burn them effectively and efficiently is the goal of a national research team being led by a University of Alberta researcher. Dr. M. David Checkel, a mechanical engineering professor, is coordinating the team that consists of researchers at the University of Alberta, University of Windsor and Simon Fraser University. The team was recently awarded funding of up to \$986,000 from the AUTO21 Network of Centres of Excellence and several industry supporters.

The research explores variable valve timing engine controls, which are currently mechanically operated. The team is investigating ways to move the controls from fixed mechanics to an electronic system that offers more flexibility in operating systems. Once developed, an electronically controlled valve timing system could be used on an engine that burns gasoline or other alternative fuels.

“Such an engine offers several benefits, including increased fuel economy and lower emissions,” said Dr. Checkel. “When you review the life cycle of fuel in the “well to wheels process,” the energy required to refine the fuel and the emissions created from that process can be reduced because the engine is able to efficiently burn a lower quality gas or gas blend, or even fuel developed from raw tar sands without affecting the overall emission of greenhouse gases.”

“Dr. Checkel’s research is an important component of the Faculty of Engineering’s clean energy research program,” said Dr. David T. Lynch, Dean of Engineering. “We look forward to significant environmental benefits from the work of this inter-university team under Dr. Checkel’s strong leadership.”

“We are pleased to support this innovative project that will enhance today’s automotive engine,” says Dr. Peter Frise, CEO and Program Leader of AUTO21. “In addition to the technical knowledge created, the project provides an excellent training opportunity for nine students at the three universities to work with expert researchers and also collaborate with industry representatives. This experience will help develop the students into the innovators of Canada’s future automotive sector.”

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The project is one of seven new research projects worth a total of \$6.5 million being supported by the AUTO21 Network of Centres of Excellence and industry. AUTO21 is a federal program that supports 28 other auto-related R&D projects at 33 universities across Canada, with combined federal and industry funding of more than \$8 million per year. The new projects add 32 researchers and 53 student researchers to the AUTO21 investigative team. Over 250 university and industry researchers, and more than 250 graduate and post-graduate students are already part of the AUTO21 team. AUTO21 is funded by the Networks of Centres of Excellence of Canada program.

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