

For Immediate Release

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Contact: John Wray
jwray@brtrc.com

Unique Army Partnership with Universities, Industry Addressing Future Mobility, Energy Security Concerns

- 18th Automotive Research Center conference May 21-22 in Ann Arbor
- DOD, commercial auto executives highlight speaker list
- ARC mantra: “Powering Future Mobility”

U.S. ARMY DETROIT ARSENAL, WARREN, Mich. – A leading group of researchers and engineers from the U.S. Army, the domestic automotive industry and esteemed universities – collectively known as the Automotive Research Center (ARC) – will hold its annual conference May 21-22 at the University of Michigan in Ann Arbor to explore energy security and the future of mobility.

Established in 1994, the ARC is an Army Center of Excellence for advancing the state-of-the-art in high-fidelity modeling and simulation of military and civilian ground vehicles. The ARC is a network of partnerships between the Army and several universities known for their modeling and simulation expertise – Wayne State University (Detroit), Oakland University (Rochester, Mich.), the University of Iowa, Clemson University, and Virginia Tech, as well as lead university, the University of Michigan.

The U.S. Army’s Tank Automotive Research and Development Center (TARDEC) serves as the technical leaders along with university counterparts.



This Army hybrid-electric concept vehicle will be on display at the 2012 ARC Conference in Ann Arbor.

“As the Defense Department strives to make ground vehicles more survivable, mobile and fuel-efficient, advanced modeling and simulation allows researchers to better understand potential solutions and trades prior to platform integration,” says TARDEC Chief Scientist Dr. David Gorsich. “Much of this groundbreaking work is conducted through the Automotive Research Center.”

The two-day conference – which is open to the media – features leading speakers from government, industry and academic institutions along with technology demonstration that can address public and private energy issues.

In addition to Gorsich, ARC 2012 scheduled speakers include (alphabetically):

- **Dr. Grace M. Bochenek**, Chief Technology Officer, U.S. Army Materiel Command
- **Dr. Matthew Brusstar**, Director, Advanced Powertrain Center, Environmental Protection Agency

– more –

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

- **Dr. Emilio E. Bunel**, Director, Chemical Science and Engineering Division, Argonne National Laboratory
- **Dr. Scott Fish**, Chief Scientist, U.S. Army
- **Dr. Stephen Forrest**, Vice President, Research, University of Michigan
- **Jennifer Hitchcock**, Interim Director, U.S. Army TARDEC
- **Kyle Kimel**, President and CEO, AVL Test Systems, Inc.
- **Professor Huei Peng**, U.S. Director, Clean Energy Research Center
- **Dr. Matthew Reed**, Head Biosciences Group UMTRI
- **Gary Rogers**, President and CEO, FEV, Inc.
- **Craig Savonen**, Director, Powertrain Engineering, Daimler Trucks
- **Dr. Peter Schihl**, Senior Technology Expert, U.S. Army TARDEC
- **Professor Anna Stefanopoulou**, ARC Director
- **Professor Dawn Tilbury**, ARC Deputy Director
- **David Thomas**, Director, TARDEC National Automotive Center

In the collaborative ARC setting, university students benefit from real-world interaction working alongside dedicated teams of researchers, and the opportunity to contribute to technology innovations that will save lives and make military vehicle systems more efficient. “It’s a total boost of motivation for the students,” explained Professor Anna Stefanopoulou, ARC director. “It’s like high-octane fuel for them, the fact that they work on something that matters. Every week, I open the newspaper and, on the front page, I read about a problem we’re addressing.”

On display at the ARC conference will be TARDEC’s Clandestine Extended Range Vehicle (CERV). Jointly designed by Quantum Fuel Systems Technologies and TARDEC’s National Automotive Center, CERV was designed for quick-paced mobility operations such as reconnaissance, surveillance and target designation. CERV pairs Quantum’s advanced all-wheel-drive diesel hybrid electric powertrain with a lightweight chassis to produce a torque rating that exceeds 5,000 ft.-lbs. The unit can maintain speeds of 80 miles per hour and climb 60 percent grades – all while reducing fuel consumption by up to 25 percent compared with conventional vehicles of comparable size.



In addition to the concept vehicle, the U.S. Army Shelters Technology, Engineering & Fabrication Directorate – part of the U.S. Army Natick Soldier Research, Development and Engineering Center – will display a solar-powered tent. Flexible Photovoltaic (PV) technology converts “free” light energy into electricity with no noise, moving parts, fuel consumption or pollutant emissions. It is lightweight, conformal, and relatively inexpensive. PV devices have already been directly integrated into shelter textiles, hold promise for future Warrior Systems, and offer an alternative way to power electronic equipment in the field. More info on NSRDEC can be found at <http://nsrdec.natick.army.mil>

More information about ARC is available at <http://arc.engin.umich.edu/index.html>

TARDEC is a major research, development and engineering center for Research, Development and Engineering Command and an enterprise partner in the TACOM Life Cycle Management Command. www.tardec.army.mil.