

ERC – 2009 SYMPOSIUM

Theme: “*Reducing Fuel Consumption: Solutions and Prospects*”

June 10th and 11th, 2009
1106 Mechanical Engineering, Madison WI 53706

Final Program

First day program (June 10th):

- 7:30 AM** Continental Breakfast
– *Open Registration*
- 8:15 AM** Welcoming Address
– *Roxann L. Engelstad, Mechanical Engineering Chair, University of Wisconsin - Madison*
- 8:30 AM** **Session I - ENGINE SYSTEM OPTIMIZATION**
– *Session Chair – Professor Jaal Ghandhi*
- Keynote "Carbon Constrained and Energy Driven: Transportation's Transitions to Achieve 2050 Goals" (45 minutes)
– *David Haugen, Dir Adv Technology Div, EPA*
- "Making the Most of Our Energy Carriers" (45 minutes)
– *David Foster, Phil and Jean Myers Professor, Engine Research Center, University of Wisconsin - Madison*
- 10:00 AM** Refreshment Break (30 minutes)
– *Session Chair – Assistant Professor David Rothamer*
- "Hybrid Vehicles - Powertrain Architectures and Controls" (20 minutes)
– *Glenn Bower, Sr.Scientist, Mechanical Engineering, University of Wisconsin - Madison*
- "Electric Drives Research at UW-Madison for Future Vehicle Propulsion Systems" (20 minutes)
– *Tom Jahns, Professor, Electrical Engineering, University of Wisconsin - Madison*
- "Alternatives for Improving Heavy Truck Fuel Economy" (30 minutes)
– *Tom Reinhart, Program Mgr., Engine Design & Development, Southwest Research Inst*
- "An Otto Rankine Combined Cycle for High Efficiency Distributed Power Generation" (30 minutes)
– *David T. Montgomery, Program Mgr., Engine Design & Development, Caterpillar Inc.*
- 12:15 PM** Lunch (60 minutes)
– *Atrium of Engineering Centers Building*

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1:15 PM

Session II - COMBUSTION AND FUELS TECHNOLOGIES

– *Session Chair – Professor Chris Rutland*

Keynote "Technology and Policy Choices for Personal Mobility" (45 minutes)
– *Syed Shahed, Corporate Fellow Advanced Technology, Honeywell (retired)*

"Improving Fuel Efficiency with Fuel Reactivity Controlled Combustion"
(30 minutes)
– *Rolf Reitz, Wisconsin Distinguished Professor Engine Research Center, University of Wisconsin-Madison*

"Turbocharged Spark Ignited Direct Injection – A Fuel Economy Solution for the US" (30 minutes)
– *Paul Whitaker, Chief Technologist - Gasoline Engines, AVL North America Inc.*

3:00 PM

Refreshment Break (30 minutes)
– *Session Chair – Wisconsin Distinguished Professor Rolf Reitz*

"Progress towards understanding combustion inefficiencies: in-cylinder measurements of CO and UHC" (30 minutes)
– *Paul Miles, Principal Member, Technical Staff, Sandia National Labs*

"Improvement of HCCI Engine Performance by Fuel Composition" (30 minutes)
– *Gen Shibata, Chief Engineer of Fuel Production R&D Group, Nippon Oil Corporation*

“Future Powertrain Technology Solutions” (30 minutes)
– *Paul Najt, SI Engine Systems Group Manager, GM Research and Development*

6:00 PM

Evening - SYMPOSIUM DINNER – *Great Dane Brew Pub and Restaurant*
– *123 E. Doty St, Downtown Madison, sponsored by ACS*

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Second day program (June 11th):

- 8:00 AM** Continental Breakfast
- 8:30 AM** **Session III – INDUSTRY CHALLENGES**
– *Session Chair – Associate Professor Scott Sanders*
- Keynote "High Efficiency IC Engines – The Road Ahead" (45 minutes)
– *John Pinson, Vice President, Ricardo NA*
- "Clean Diesel - Real Life Fuel Economy and Environmental Performance" (30 minutes)
– *Alexander Freitag, Mgr Engine Lab and Emissions - Diesel Systems, Robert Bosch*
- "Engine Technologies for Improved Fuel Economy" (30 minutes)
– *Eric W. Curtis, Technical Leader Advanced Powertrain Research, Ford Motor Co.*
- 10:15 AM** *Refreshment Break (30 minutes)*
– *Session Chair – Assistant Professor Mario Trujillo*
- "Diesel Engine Fuel Economy Challenges and Opportunities"(30 minutes)
– *Ning Lei, Director- Advance Combustion, Navistar Inc.*
- "Hybrid Solutions for Medium Duty Commercial Vehicles" (30 minutes)
– *Hélène L. Cornils, Hybrid Business Development / Engineering Program Manager, Eaton Corporation*
- 11:45 AM** **DISCUSSION – Concluding Remarks**
– *David Foster, Phil and Jean Myers Professor, Engine Research Center, University of Wisconsin - Madison.*
- 12:00 PM** *Box Lunch*
- 12:30 PM** **LAB TOURS – Engine Research Center**
– *Session Chair – Michael Andrie, DERC Program Manager, University of Wisconsin - Madison*