Inside China: Understanding China’s Current and Future Automotive Industry

“Focus on the Future”
UM Automotive Research Conferences

WELCOME!

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Automotive Futures
University of Michigan
Transportation Research Institute

Funding

Affiliate Program
- Supporting Members
- Research Partners

Research
- Globalization
- Powertrains
- IT

Conferences
- 5 Annual Conferences
# Automotive Futures

**Affiliate Program**

## Affiliates Members and Research Partners

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<th>IT Organizations</th>
<th>Government/NGOs</th>
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<td>Oracle Corporation</td>
<td>NREL / EPA</td>
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<td>IBM</td>
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<td>HP</td>
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<td>Siemens-PLM</td>
<td>Energy Foundation</td>
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<td>The Hewlett Foundation</td>
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<td>National Resources Defense Council</td>
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<td>Union of Concerned Scientists</td>
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<td>CALSTART</td>
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<td>Argonne National Labs</td>
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<td>Toyota Tech Center</td>
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<td>Nissan Tech Center</td>
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<td>Ford Motor Company</td>
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<td>Chrysler LLC</td>
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# Automotive Futures
## Affiliate Program

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<td>Chevron</td>
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<td>Dana</td>
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<td>Peterson Spring</td>
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<td>Continental</td>
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<td>Valeo</td>
<td>Bosch</td>
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Automotive Futures
Affiliate Program

New Affiliates Members

Argonne National Labs
BorgWarner
Valeo

Thank you for your support
Automotive Futures
Current Research Programs

- Powertrains
  - 2014 Powertrain Strategies for the 21st Century Survey (Sponsor: Affiliates)
    - Survey will be sent out during early December
    - Sponsorship still available

- Total Cost of Ownership: Comparing Diesel and Gas Vehicles (Bosch)
  - Based on resale value of 30K vehicles sold through Mannheim auctions in 2012 / 2013
  - Report due in early Spring
Automotive Futures
Current Research Programs

• ITS
  • Integrated Mobile Observations: Micro-level weather reporting using cell phones in MDOT vehicles (Sponsor: MDOT and FHWA)
    • Continuing data collection through October, 2015
  • Roadway Evaluation Project: Measuring road roughness via accelerometers in cell phones mounted in MDOT vehicles
    • Final report draft at MDOT
  • Deploying Safety Technologies in Commercial Vehicles
    • Familiarity and penetration currently and in the future of: Forward Collision Warning / Lane Departure Warning / Blind Spot Detection / ESC / Vehicle Communications
    • Final report in progress (Sponsor: ITS America)
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Current Research Programs

• Globalization
  • Automotive Vehicle Programming: A Crucial Development and HR Challenge
    • Working with Japanese researchers to examine differences in vehicle software programmers across the EU/US/Japan/China
    • Data collection in 2015, report in 2016.
Upcoming UMTRI-AF Conferences

• February 18, 2015 (Wednesday): *New Business Models for New Mobility*. This new conference will bring the automotive industry and the new mobility providers together to discuss the business models that may be established as integrated mobility becomes a larger presence in the U.S. and globally.

• April 15, 2015 (Wednesday): *Inside Mexico: Understanding the Current and Future Mexican Automotive Industry*. Mexico continues to expand its automotive manufacturing footprint as the major automotive manufacturers expand their operations throughout Mexico. Our discussion will focus on this growth as well as Mexico’s lagging market for new vehicles.

• July 22, 2015 (Wednesday): *Powertrain Strategies for the 21st Century*. Our 7th annual conference provides insight into how manufacturers and suppliers are managing their resources to meet the needs of consumer while meeting government requirements.
Upcoming UMTRI-AF Conferences

The UM Alumni Discount

Alumni who sign up in advance for five conferences in a row receive a $250 discount
AM Presenters

• **Weijian Han**, Manager, Research and Advanced Engineering for Ford Asia Pacific

• **Zhixin Wu**, Vice President, China Automotive Technology and Research Center (CATARC)

• **Don Siegel**, Assistant Professor, Mechanical Engineering, University of Michigan
PM Presenters

• **Feng An**, Executive Director, The Innovation Center for Energy and Transportation

• **Lu Zhang**, Assistant Professor, Sociology, Temple University

• **Charles Chesbrough**, Senior Principal Economist, IHS Automotive
AM Schedule

9am: Bruce Belzowsk
   - Weijian Han / Q&A
   - Zhixin Wu / Q&A

10:55am-11:10am Break
   - Don Siegel / Q&A

Noon-1:30pm Lunch
PM Schedule

1:30pm
- Feng An / Q&A
- Lu Zhang / Q&A

3:05-3:15pm  Break
- Charles Chesbrough / Q&A

4:00pm     Adjourn
Conference Questions

• In terms of fuel economy and emissions, what are the strengths and weaknesses of the Chinese domestic auto manufacturers?

• What are the challenges China faces in terms of its need for fuel for vehicles?

• What strategies can companies use to meet the fuel economy goals set by the Chinese government?
Conference Questions

• How long will it take for China to reach Euro emissions and fuel quality standards?

• What processes does the Chinese government use to measure vehicle safety and recalls?

• Does the government do all of its own vehicle testing or does it rely on the vehicle manufacturer to do some of the vehicle testing?
Conference Questions

• What technologies have emerged from the joint research between the UM, industry partners, and Chinese universities and industry partners?

• What are some of the challenges that have been overcome in creating a working, collaborative environment across companies, universities, and countries?

• Why do some automakers import vehicles into China rather than building them in China?
Conference Questions

• What can the Chinese government do to increase fuel efficiency and emissions of vehicles without hindering domestic manufacturers?

• How likely is it that manufacturers will meet the Chinese government fuel economy goals by 2020? What happens if they don’t?

• Are there differences among the workers in the domestic manufacturers and the joint venture manufacturers?
Conference Questions

• What are the major grievances of workers in automotive plants in China? Do they differ between manufacturers and suppliers?

• How do companies solve problems between labor and management in the automotive plants?

• What are some of the differences we should expect in sales of vehicles across different provinces in China over the next five years?
Conference Questions

• What is the expected growth rate of new vehicle sales in China over the next five years?

• When will the Chinese market reach a saturation point?

• Is it possible for the Chinese fleet to reach 400 million vehicles and still meet emissions goals?
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Slides will be available on the website during the weekend

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