Our 8th annual Inside China conference featured speakers talking about the current and future Chinese auto industry.

Bruce Belzowski from UMTRI’s Automotive Futures group framed the conference through a series of questions to be answered by the presenters over the course of the conference. He also presented an overview of 2014 production divided by the three main manufacturing groups in China: joint venture manufacturer brands, Chinese joint venture brands, and independent Chinese manufacturer brands. Finally, he presented some recent research from KPMG that predicted the share of e-vehicles in China in 2025 to be 12 percent, compared to the US (16 percent) and Western Europe (14 percent). This information became the backdrop for much of the discussion of electric vehicles in China during the conference.

Jacob George of JD Power discussed the comparison of vehicle quality perceptions between Chinese and U.S. car buyers.

- The majority of Chinese consumers are buying cars for the first time while majority of Americans are buying the car as a replacement.
- American and Chinese consumers both care about the styling and the exterior design of their automobiles which drives their passion to purchase the vehicle.
- The top complaints of Chinese consumers are the unpleasant leather or plastic odor coming from the interior of the vehicle and the loud noises coming from the brakes, wind, engine, and tires. On the other hand, the top complaint in the United States is the voice recognition system.
- The gap between foreign quality and domestic quality is decreasing. It is expected that domestic brands will be at par with international brands by 2019.

Loren Brandt from the University of Toronto discussed the effects of government policy on capability development in the auto industry and the construction equipment industry.

- Quality refers to features or attributes of a product or service that bear on its ability to satisfy the needs of the user.
- For construction equipment, there is a strong movement up the quality ladder. CLSA, Asia’s leading equity brokers and investment group, discovered that the technology gaps are nonexistent between top-tier Chinese and international companies.
- There is also a declining market share of domestic automotive OEMs.
- Before China joined WTO, there were high restrictions on entry and ownership in the automotive industry. There were many restrictions on foreign participation. Once China joined WTO, there was a rapid increase in joint ventures and independent Chinese firms.
- Government support for vehicles with less than 1.6 liter displacements focused independent auto companies on the lower end of the market, which grew. But as more independent Chinese firms joined the industry, the problem of catching up with the larger joint ventures companies became an issue. The smaller firms have tried to take short cuts to become as successful as the joint ventures, but lack the capability to compete in the middle and high end of the market.

Michael Thomas from Automotive Insight discussed the engineering services that Chinese auto manufacturers and suppliers need to be successful in China and globally.

- Fuel economy improvement, new energy vehicles, and controls and systems engineering are only a few of the engineering challenges that the Chinese auto industry must face.
• The way to succeed in the industry is to increase the levels of technology and innovation.
• Case studies were performed on some of the new innovations, and lessons were learned with each project.
• With the development of the plug-in hybrid electric vehicle, the main lesson learned was that prototype does not mean production ready.
• With the suspension components sales representation, the main lesson learned was that breaking into the market requires new engineering and innovation.
• With the fuel efficiency technologies assessments, the main lesson learned was that the processes to review plans are weak.
• With the manufacturing launch readiness, the main lesson learned was that improvements are not implemented when management confidence is lacking.

Yingzi Su from General Motors provided her insights into the current Chinese automotive market and future market trends.
• When China joined WTO in 2001, vehicle sales increased significantly.
• Although China has the largest vehicle market in the world, the Chinese economy is slowing. The percent growth in China’s vehicle sales are decreasing much sharper than people expected.
• China is transitioning from an investment or exports driven economy to a consumption driven one.
• Other trends include the decrease in vehicle prices in China for this year and the fast growing sales of SUVs.
• There is a growth shift from large coastal cities to small inner cities.
• Although the density of car ownership is still small compared to other top automotive countries, China still has great potential. China is at around 100 vehicles per 1,000 people and around 4,000 real GDP per capita.
• GM plans to spend over twelve billion dollars in the next five years to expand capacity and to offer new products.

Yan Zhou from Argonne National Labs provided her insight into the collaborative clean vehicle projects that are part of the U.S.-China Clean Energy Research Center.
• There is a large focus on electric vehicle technology research in China. The goal is to reduce transport energy demands and emissions.
• The US Department of Energy supports the research and development for the US CERC-CVC program. CERC-CVC 1.0 focused on areas such as advanced battery materials and system integration, clean APU, and vehicle electrification configuration and optimization.
• CERC-CVC 2.0 builds on the successes of CERC-CVC 1.0. CERC-CVC 2.0 focuses more on energy storage systems, vehicle technologies, connected and automated vehicles, and systems assessment and best practices.

Michael Dunne from Dunne Automotive discussed his research into electric vehicles in China.
• Why is China going for electrics? Seven out of the ten world’s most polluted cities are in China.
• China is not afraid of setting extreme goals. China only made forty percent of their 2009 target for electric and hybrid vehicle sales.
• The problem behind this is the individual buyers. Chinese and American consumers are both worried that they might run out of energy on the road.
• Another topic discussed were the top leaders of electric vehicles in China. They include BYD, Zotye, Beijing Automobile, Chery Automobile, and Shanghai Automotive. The government gives incentives to these companies to expand their production so that China can advance in new energy vehicles.
• Wealthy Chinese, internet-made billionaires and state enterprise chiefs are looking to produce high end electric automobiles in the United States. Chinese companies Faraday Future, NextEV, Atieva, and Karma are aiming to get these vehicles on American roads.