



**The International Forum and Conference on  
Advanced Vehicle Technologies and Integration (VTI)**

Changchun, China

<http://www.vti-conf.org>

VTI2011: July 16-18, 2011 VTI2012: July 16-19, 2012

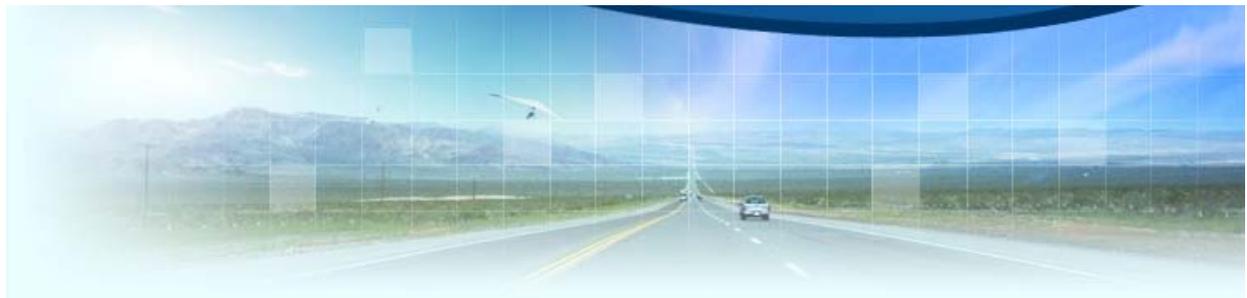
*Hosting Institutes:*

**Jilin University  
Society of Automotive Engineers of China  
China FAW Group**

**Technology • Green • Future**

*Sponsoring Institutes:*

National Natural Science Foundation of China  
China Association of Automobile Manufacturers



<http://www.vti-conf.org>

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Sponsored and supported by National Natural Science Foundation of China (NSFC) and China Association of Automobile Manufacturers (CAAM)



## 2011 International Forum on Advanced Vehicle Technologies and Integration (VTI 2011)

Changchun, China (July 16-18, 2011)

<http://www.vti-conf.org>

With the increasing concerns on climate change, the dwindling fossil fuels and the road safety, the automotive industry is facing ever increasing challenges. The complex urban mobility along with the global trends of urbanization and ageing society puts further pressure on the automotive industry that the industry has to reinvent itself to survive. All these, however, create golden opportunities for advanced vehicle technologies and their integration to play vital roles in coming up with new and revolutionary ways as how the future automobile is designed, engineered and manufactured.

VTI 2011 features highly selected keynote speeches from internationally recognized experts and scholars to share their strategic vision and technical insight on the challenging issues, potential solutions and technology roadmap to the automotive industry worldwide, with the aim for safer personal mobility and a sustainable automotive industry.

Different from many other forums either regional or international, VTI 2011 aims to provide a unique technical forum with sharp focus on automotive applications with challenging issues, and on emerging and new frontier technologies, with strong synergy among broad interdisciplinary programs and well-balanced emphases on both academia and industry.

As the largest automotive market and producer in the world since 2009, China has enjoyed rapid growth in its automotive industry. To maintain the sustainability, great effort has been made in China through intensive research and development on clean and fuel efficient vehicles, and on efficient vehicle manufacturing processes. VTI forum in China signifies the increasing demand and level of vehicle research and engineering in China, and its increasing involvement and contributions to automotive research and engineering communities. This is also a golden and global opportunity for both academic and industrial societies to get involved in and be part of the fast-growing automotive market and industry.

VTI 2011 will be held in Changchun China, the cradle of China's automotive industry and one of the largest automobile manufacturing centers. Changchun is also the host of Changchun International Automobile Fair, one of the three major auto fairs in China. The hosting institutes are Society of Automotive Engineers of China (SAE-China), China FAW Group, and Jilin University, one of the leading and largest universities in China with its College of Automotive Engineering to be the pioneer and one of the largest automotive colleges in China and the home to the State Key Lab of Automotive Simulation and Control (ASCL), one of very few highly regarded national automotive laboratories.

The main topics of VTI 2011 are selected to be:

- Advanced Vehicle Systems and Integration
- Advanced Propulsion Technologies
- Advanced Vehicle Dynamics and Controls
- Intelligent Vehicles and Mobility
- Advanced Technologies for Commercial Vehicles
- Advanced Vehicle Manufacturing Technologies
- Advanced and Future Vehicle Technologies

Please visit <http://www.vti-conf.org> or contact [vti@vti-conf.org](mailto:vti@vti-conf.org) for more information.



**Keynote Speakers** (in alphabetic order):



**Prof. C. C. Chan, Honorary Professor, University of Hong Kong, Hong Kong**  
Fellow, Royal Academy of Engineering (UK); Academician, Chinese Academy of Engineering  
Founding President, World Electric Vehicle Association & Electric Vehicle Association of Asia  
Pacific, Founding Director, International Research Centre for Electric Vehicles

**Research Interests:** Electric and hybrid vehicles

**Presentation Title:** Global Outlook of Electric Vehicles and Their Infrastructure



**Mr. Valerio Cibrario, LMS International N.V.**  
Key person of LMS International Competence Center on Driving Dynamics

**Research Interests:** Vehicles Dynamics, Chassis & Suspension technology

**Presentation Title:** Advances in multi-attribute chassis integration



**Prof. Faramarz Gordaninejad, University of Nevada, USA**  
ASME Fellow

**Research Interests:** Advanced suspension systems; Smart materials and structures; Vibration control;  
Field-controllable magneto-rheological fluids and devices; Composite materials, and Shape memory  
alloy actuators

**Presentation Title:** Advanced Suspension System for Land Vehicles



**Prof. Tim Gordon, University of Michigan, USA**  
Chair, Intl. Scientific Committee, 10th Intl. Symposium on Advanced Vehicle Control (AVEC 2010)

**Research Interests:** All aspects of dynamics and control, with special emphasis on advanced and  
nonlinear methods, and application areas within automotive engineering, etc

**Presentation Title:** Environmental Sensing, Situation Awareness and Cooperative Control of Road  
Vehicles



**Dr. Lei Gu, Beijing Automotive Group, China**  
Director of R&D Center

**Research Interests:** Vehicle safety and crashworthiness, Vehicle NVH and structure design.

**Presentation Title:** TBD



**Prof. Konghui Guo, Jilin University, China**  
Academician, Chinese Academy of Engineering

**Research Interests:** Vehicle dynamics & controls, vehicle chassis and integration, tire and driver  
modeling, etc.

**Presentation Title:** Conceptual Configuration of *UniTire* Modeling





**Prof. J. Karl Hedrick, University of California, Berkeley, USA**

ASME Fellow; Editor of ASME Journal of Dynamic Systems, Measurement and Control; Former Editor, Journal of Vehicle System Dynamics

**Research Interests:** Nonlinear control, automotive control systems, aircraft controls

**Presentation Title:** Automotive Power Train Modeling for Controller Design and Verification

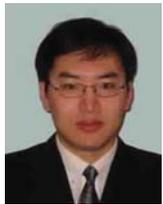


**Prof. Che-Wun Hong, National Tsing Hua University, Taiwan**

General Chair, 8th Intl. Symposium on Advanced Vehicle Control (AVEC 2006)

**Research Interests:** Fuel Cells, Li-ion Batteries, Super-Capacitors, Bio-Photo-electrochemical Solar Cells, Bio-Sensors, Organic LEDs, Hybrid Electric Vehicles, etc

**Presentation Title:** Green Power Research for Future Propulsion



**Prof. Zhencheng Hu, Kumamoto University, Japan**

Director of ITS Lab, Kumamoto University

**Research Interests:** Intelligent Vehicles, Sensor Fusion and Augmented Reality

**Presentation Title:** Trends and Practice in Driver Inattention Monitoring System



**Dr. Jun Li, FAW Group, China**

Deputy Chief Engineer of FAW Group, Director of FAW Technical Center, President of FISITA (2012-2014)

**Research Interest:** Engine and powertrain systems and controls

**Presentation Title:** TBD



**Prof. Keqiang Li, Tsinghua University, China**

Chairman of Department of Automotive Engineering, China Yangzi River Scholar

**Research Interest:** Vehicle Dynamics and Controls, Intelligent Vehicle; Electric Vehicle Dynamics and Controls

**Presentation Title:** TBD



**Prof. Jingshan Li, University of Wisconsin, Madison, USA**

Department Editor of *IIE Transactions*; Former Associate Editor of *IEEE Transactions on Automation Science and Engineering* and *Mathematical Problems in Engineering*

**Research Interests:** Design, analysis, control and improvement of production and service systems

**Presentation Title:** Production Systems Engineering: Toolbox and Automotive Applications





**Dr. Jianbo Lu, Ford Motor Company, USA**

Associate Editor of IFAC J. of Control Engineering Practice and the IEEE Trans. on Control Systems Tech., Chair of Intelligent Vehicular Systems and Control Technical Committee

**Research Interests:** Vehicle Dynamics and Controls, Intelligent and Adaptive Vehicle Systems, Integrated Sensing Systems, Driving Prognostics, and Active Safety Systems

**Presentation Title:** Modern Vehicle Dynamics and Controls for Automotive Adaptation, Personalization and Safety



**Prof. Semyon M. Meerkov, University of Michigan, Ann Arbor, USA**

IEEE Life Fellow; Former Editor-in-Chief of Mathematical Problems in Engineering

**Research Interests:** Systems and controls

**Presentation Title:** Production Systems Engineering: Academic and Industrial Perspective



**Mr. Hideichi Misono, President & CEO, TECNO Art Research CO., LTD, Japan**

TOYOTA Design Group, Director of JIDPO (Japan Industrial Design Promotion Organization)

**Research Interests:** Vehicle design; Vehicle dynamics and controls; Ergonomics

**Presentation Title:** Design and Business

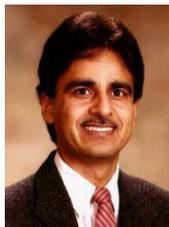


**Prof. Huei Peng, University of Michigan, Ann Arbor, USA**

ASME Fellow, Executive Director of Interdisciplinary and Professional Engineering Programs; Vice Chair of ASME Dynamic Systems and Control Division

**Research Interests:** Vehicle dynamics and control, active safety, hybrid electric vehicles

**Presentation Title:** Integration of plug-in vehicles with renewable energy sources



**Prof. Subhash Rakheja, Concordia University, Canada**

ASME Fellow, Editor of Int. Journal of Industrial Ergonomics and Int. Journal of Vehicle Performance, Associate editor of the Heavy Vehicle Systems Journal

**Research Interests:** Vehicular ergodynamics, vehicle dynamics and control

**Presentation Title:** Transient Fluid Slosh and Directional Control Performance of Baffled Road Tankers



**Prof. Gianfranco Rizzo, University of Salerno, Italy**

Chair of IFAC (Int. Federation of Automatic Control) Technical Committee on Automotive Control

**Research Interests:** Modeling and control of IC engines; Hybrid electric vehicles, Hybrid solar vehicles, Model based optimization and control of energy conversion systems.

**Presentation Title:** Solar Energy For Cars: Potentialities, Limits And Research Topics





**Dr. Xubin Song, Eaton Corporation, USA**

Founding Editor-in-Chief, International J. of Powertrains; Associate Editor of ASME J. of Dynamic Systems, Measurement and Control

**Research Interests:** Vehicle-Related Nonlinear and Non-Smooth Dynamics and Control, especially about Energy Efficient Control Systems for Ground Vehicles

**Presentation Title:** Energy Efficient Powertrain Technologies for Commercial Vehicles



**Prof. Hirohisa Tanaka, Yokohama National University, Japan**

Vice President, Society of Automotive Engineers of Japan

**Research Interests:** Hydraulic, pneumatic, electro-hydraulic control, servo control, proportional valve; Driveline control, CVT and power transmission

**Presentation Title:** Traction Drive Technology



**Prof. Guoqing Xu, Hong Kong Chinese University, Hong Kong**

Director, Institute of Advanced Integration Technology, Chinese Academy of Science Shenzhen Institute, China

**Research Interests:** Hybrid and electric vehicles, electric motor and traction controls, etc

**Presentation Title:** Intelligent propulsion controls of electric vehicles



**Prof. Min Xu, Shanghai Jiao Tong University, China**

SAE Fellow

**Research Interests:** Design and development for vehicle engines, Hybrid vehicle engines, Vehicle integration and development

**Presentation Title:** Direct Injection Gasoline Engine Technical Challenges and Advanced Research



**Dr. Guoqing Yang, Zhejiang University**

Director of ESE Center, Zhejiang University

**Research Interests:** Embedded system; Automotive electronics

**Presentation Title:** Automotive Electronics and Software Development Based on Knowledge Reuse



**Prof. Yuying Yan, University of Nottingham, UK**

Chair of Thermofluids Engineering

**Research Interests:** Thermodynamics and heat transfer, energy-efficient vehicles

**Presentation Title:** Efficient Cooling Technologies For Vehicle Thermal Management





**Dr. Ying Yang, CEO of Hong Kong APAS R&D Center, Hong Kong**  
 CEO, Hong Kong Automotive Parts and Accessory Systems R&D Centre (APAS)

**Research Interests:** Vehicle control systems, electric/hybrid vehicles  
**Presentation Title:** Development Platform and Development Strategies for Energy Management System of Electric Vehicles



**Prof. Kyongsu Yi, Seoul National University, Korea**  
 Director of Vehicle Dynamics and Controls Lab

**Research Interests:** Vehicle control systems, active safety and driver assistance systems  
**Presentation Title:** Intelligent Vehicle Systems: Vehicle Dynamics and Driver Monitoring, Index-based Decision and Control



**Dr. Wende Zhang, General Motors Company, USA**  
 President of Sigma Xi at GM R&D Chapter in 2011-2012, and Organizing Committee Member of the Conference on Lasers and Electro-Optics

**Research Interests:** Perception and Sensing for Autonomous Driving, Pattern Recognition, Computer Vision, Artificial Intelligence, Security, and Robotics.  
**Presentation Title:** A Path towards Autonomous Driving: From Challenges to Opportunities



**Dr. Fuquan Zhao, Geely Holding Group, China**  
 Vice President of Geely Holding Group; SAE Fellow

**Research Interests:** Automotive Product Development  
**Presentation Title:** Automotive Technology Strategy to Cope with Energy Shortage

**Online Registration:** <http://www.vti-conf.org/vti-2011/home.html?id=VTI2011-HotelTravelRegistration.html>

**Registration Fee\*:**

Student: ¥1000 (\$150) Non-Student: ¥2000 (\$300)  
**Early Registration by 06/30/2011 (with 50% discount: student ¥500 and non-student: ¥1000)**

\*Registration fee covers food and snack, forum CDs, auto fair ticket, transportation cost, and etc.



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2012 International Conference on  
**Advanced Vehicle Technologies and Integration (VTI 2012)**  
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<http://www.vti-conf.org>

VTI 2012 is to bring together researchers, engineers, academic and industrial professionals from all over the world to exchange new concepts, ideas and views, and to explore various new frontier technologies. The VTI 2012 will also feature highly selected keynote speeches from internationally recognized experts and scholars to share their strategic vision and technical insight on the challenging issues, potential solutions and technology roadmap to the automotive industry worldwide, with the aim for safer personal mobility and a sustainable automotive industry. Stay tuned for Call for Papers and more information.

Different from many other conferences either regional or international, VTI 2012 aims to provide a unique technical forum with sharp focus on automotive applications with challenging issues, and on emerging and new frontier technologies, with strong synergy among broad interdisciplinary programs and well-balanced emphases on both academia and industry.

VTI2012 will be sponsored by several top international journals with special issues or committed publication with selected papers. For detail or update, please visit the website listed above.

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- Advanced Vehicle Systems and Integration
- Advanced Propulsion Technologies
- Advanced Vehicle Dynamics and Controls
- Intelligent Vehicles and Mobility
- Advanced Technologies for Commercial Vehicles
- Advanced Vehicle Manufacturing Technologies
- Advanced and Future Vehicle Technologies

**VTI 2012 Technical Committee:**  
(in alphabetical order)

**General Chairs:**



**Prof. Konghui Guo**, Jilin University, China  
Academician, Chinese Academy of Engineering

**Research Interests:** Vehicle dynamics & controls, vehicle chassis and integration, tire and driver modeling, etc.



**Prof. Masayoshi Tomizuka**, University of California, Berkeley, USA  
Executive Associate Dean, College of Engineering

Fellow of ASME, IEEE and SME  
**Research Interests:** Adaptive control, computer-aided manufacturing, control systems and theory, digital control, dynamic systems, manufacturing, mechanical vibrations



## Program Chairs:



**Prof. David Bevly, Auburn University, USA**  
Director, GPS and Vehicle Dynamics Laboratory

**Chair of VTI 2012 on “Intelligent Vehicles and Mobility”**

**Research Interests:** Control of dynamic systems, system identification, optimal estimation and control GPS and sensor fusion, vehicle dynamics and control, vehicle state estimation



**Prof. Zoran Filipi, University of Michigan, Ann Arbor, USA**  
Deputy Director, Automotive Research Center; Associate Editor, Int. Journal of Alternative Propulsion

**Chair of VTI 2012 on “Advanced Propulsion Technologies”**

**Research Interests:** Advanced IC engine combustion concepts, alternative powertrains, and impact of transportation on energy supply and climate change.



**Prof. Heinrich Kuhn, Catholic University of Eichstaett-Ingolstadt, German**  
Chair of Production and Operations Management

**Chair of VTI 2012 on “Advanced Vehicle Manufacturing Technologies”**

**Research Interests:** Production and Operations Management



**Prof. Subhash Rakheja, Concordia University, Canada**  
ASME Fellow, Editor of Int. Journal of Industrial Ergonomics and Int. Journal of Vehicle Performance, Associate editor of the Heavy Vehicle Systems Journal

**Chair of VTI 2012 on “Advanced Vehicle Systems and Integration”**

**Research Interests:** Vehicular ergodynamics, vehicle dynamics and control



**Prof. Corina Sandu, Virginia Tech, USA**  
Chair of ASME Vehicle Design Committee; Co-Chair, SAE Chassis and Suspension Committee; Editor of J. of Terramechanics

**Chair of VTI 2012 on “Advanced Vehicle Dynamics and Controls**

**Research Interests:** Vehicle dynamics and controls



**Prof. Vladimir Vantsevich, Lawrence Technological University, USA**  
ASME Fellow, Associate Editor, Int. Journal of Vehicle Noise and Vibration

**Chair of VTI 2012 on “Advanced Technologies for Commercial Vehicles”**

**Research Interests:** Inverse and direct dynamics, on mechanical and mechatronic system modeling, design and control with applications to autonomous and conventional vehicles and vehicle locomotion and driveline systems.



**Prof. Jie Yang, National Science Foundation, USA**  
Program Director,

**Chair of VTI 2012 on “Advanced and Future Vehicle Technologies”**

**Research Interests:** Multimodal human-computer interaction (modeling and learning), computer vision, and pattern recognition.

## Important Dates for VTI 2012 (preliminary):

Submission of Extended Abstract:	10/15/2011
Notification of Acceptance:	11/30/2011
Submission of Full Paper:	01/31/2012
Submission of Final Paper:	04/30/2012
Early Registration:	05/31/2012

