



**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 Manufactures



<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 Manufactures (CAAM)



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

Changchun, China (July 16-18, 2011)

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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 for more information.



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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

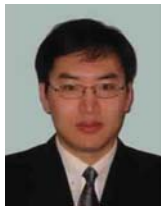


Prof. Che-Wun Hong, National Tsing Hua University, Taiwan

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

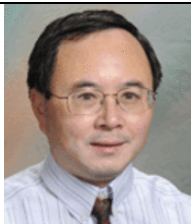


Prof. Keqiang Li, Tsinghua University, China

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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Advanced Vehicle Technologies and Integration (VTI 2012)

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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 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



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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



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