The Best of COMVEC 2016
Select Technical Papers from the SAE Commercial Vehicle Engineering Congress

Edited by: Kevin Jost, Dr. Corina Sandu, Ryan Gehm

This special collection highlights some of the best technical papers that represent the breadth of the entire technical program. Leading industry perspectives are reflected by the corporate contributions that are included in this group, along with a specific focus on connectivity, the theme of the 2016 event.

The commercial vehicle industry has always been focused on improving efficiency. These ten characteristic offerings present cutting-edge trends, technologies, and solutions that provide greater benefit and the application of knowledge to solve problems and guide future innovation. These studies are presented by experts from industrial, governmental, and academic partners on topics that include:

- Autonomous commercial vehicles
- Computational fluid dynamics and aerodynamics for heavy-duty, on-road applications
- Fuel and emissions efficiency of medium-duty powertrain configurations
- Intelligently controlled air-suspension systems
- Improving total cost of ownership by gains in thermal efficiency
- New simulation and testing techniques enabling next generation on-road applications
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Drawing on the strength of the 2016 event’s program, which was shaped by the Executive Leadership of Daimler Trucks North America, this select compilation of technical papers was developed by the SAE Automotive and Commercial Vehicle Product Group in partnership with the SAE Journals and Media Groups. Its creation was made possible through significant input from Corina Sandu, the Editor-in-Chief for the International Journal of Vehicle Systems Modelling and Testing. She has organized sessions at the SAE Commercial Vehicle Congress, and has been a member of the COMVEC Activity Committee. She served on the Ground Vehicle Reliability Committee’s Terrain Modelling Task Force and participated in events organized by the SAE Women Engineers Committee and the Foundation’s Women’s Circle of Giving. She is currently a member-at-large in the SAE Engineering Meetings Board (EMB), Vice-Chair of the SAE International Journals’ Editors Committee, and Editor-in-Chief of the SAE International Journal of Commercial Vehicles. Dr. Sandu has received numerous awards for her academic, technical, and leadership excellence and is a fellow of the American Society of Mechanical Engineers (ASME). She is President of the International Society for Vehicle-Terrain Systems (ISVTS) and also provides editorial expertise to the Journal of Terramechanics, International Journal Mechanics Based Design of Structures and Machines, and the International Journal of Vehicle Systems Modeling and Testing.

About the Editors:

Kevin Jost is currently the Editorial Director & Content Strategist for SAE International’s Automotive and Commercial Vehicle Product Group in Warrendale, PA. Prior to that he served various SAE roles including Executive Director of Media, Books, Videos, and Intellectual Property and prior to that Editor of Automotive Engineering and Off-Highway Engineering. His industrial experience includes serving as Project Engineer for seat and interior from testing and then Product Engineer for seating and interior trim systems at Lear Corp. in Southfield, MI.

Dr. Corina Sandu is a Professor of Mechanical Engineering at Virginia Tech, Associate Department Head for Graduate Studies, and Director of the Advanced Vehicle Dynamics Laboratory (AVDL). She is a member of SAE and has been actively engaged in the Chassis Design and Vehicle Dynamics (CDVD) Committee and the former Chassis and Suspension Committee where she served in leadership roles. Dr. Sandu has organized sessions at the SAE Commercial Vehicle Congress, and has been a member of the COMVEC Activity Committee. She served on the Ground Vehicle Reliability Committee’s Terrain Modelling Task Force and participated in events organized by the SAE Women Engineers Committee and the Foundation’s Women’s Circle of Giving. She is currently a member-at-large in the SAE Engineering Meetings Board (EMB), Vice-Chair of the SAE International Journals’ Editors Committee, and Editor-in-Chief of the SAE International Journal of Commercial Vehicles. Dr. Sandu has received numerous awards for her academic, technical, and leadership excellence and is a fellow of the American Society of Mechanical Engineers (ASME). She is President of the International Society for Vehicle-Terrain Systems (ISVTS) and also provides editorial expertise to the Journal of Terramechanics, International Journal Mechanics Based Design of Structures and Machines, and the International Journal of Vehicle Systems Modeling and Testing.

Ryan Gehm is the Editor-in-Chief for SAE International’s Off-Highway Engineering magazine and e-products, and he also contributes to the Automotive Engineering publication. He has covered these transportation sectors since 2000 by editing, researching, and writing on a variety of advanced-technology topics. His responsibility also includes SAE’s Heavy Duty Technology website and the organization’s Truck & Bus Engineering content. His writing and editing has been recognized by Folio, the American Society of Business Publication Editors (ASBPE), the Truck Writers of North America, and the Press Club of Western Pennsylvania. Ryan is a member of SAE International, and he serves on the jury for the North American Concept Vehicle of the Year Awards as well as for the SPE Automotive Innovation Awards.

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