



AUTOMOTIVE COMPOSITES CONFERENCE & EXHIBITION

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Presented by SPE Automotive Division and SPE Composites Division

COMPOSITES: Forming the Future
of Transportation Worldwide

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SPE® ANNOUNCES 2019 AUTOMOTIVE COMPOSITES CONFERENCE & EXHIBITION (ACCE)

BEST PAPER AWARD WINNERS

TROY (DETROIT) MICH.- The organizing committee for the **SPE® Automotive Composites Conference & Exhibition** (ACCE) today announced the Best Paper Award winners of the group's nineteenth-annual show, **Sept. 4 – 6, 2019**. Three authors, who received the highest average ratings by conference peer reviewers out of a field of close to 100 contenders, will be honored for excellence in technical writing with a commemorative plaque during the SPE ACCE opening ceremonies on September 4th.

Sara Andrea Simon, a PhD candidate at the Polymer Engineering Center (PEC), University of Wisconsin-Madison (Madison, Wisconsin, USA), won first place in this year's competition; **Dr. Xiaoming Chen**, a Technical Expert at Ford Motor Company (Dearborn, Michigan, U.S.A.), won second place; and **Dinesha Ganesarajan**, a graduate student working on his Master of Science degree in the Chemical Engineering department at the University of Waterloo (Waterloo, Ontario, Canada), placed third in the competition.



Sara Andrea Simon won first place for her paper titled ***Direct Fiber Model Validation: Orientation Evolution in Simple Shear Flow***. The paper will be presented on **September 4th from 1:00 to 1:30 PM** in the **Advances in Thermoplastic Composites** session at the conference. About this topic, the author says, “The ability to simulate the processing of fiber reinforced composites has become indispensable for the automotive industry. Particle level simulation, in specific, is a promising tool that can be employed in the improvement of commercial software. In this work, reliable fiber orientation evolution data was obtained to aid in the validation and development of our particle modeling approach for reinforcing fillers.”

Simon is a PhD candidate at the Polymer Engineering Center (PEC), University of Wisconsin-Madison. She currently works in collaboration with Volkswagen on a new physical foaming injection molding technique to advance lightweight automotive constructions. Simon holds a Master of Science degree in Mechanical Engineering as well as a Master of Science degree in Natural Sciences. Her research interests focus on characterization and simulation of discontinuous fiber composites. In the past three years at the PEC, Simon investigated fiber breakage, fiber-matrix separation and fiber orientation during mold filling.



Dr. Xiaoming Chen won second place in the competition for her paper titled ***Fatigue and Strength CAE and Test Results***. She will present her paper on **September 6th from 10:30 to 11:00 AM** in the **Opportunities and Challenges with Carbon Composites** session at the conference. About her topic, Chen explains, “The carbon fiber composite subframe design was CAE driven. The performance of the prototype subframe was verified by component and vehicle tests. The CAE predictions for the tests had various degrees of correlation with the physical test results.”

Chen is a Technical Expert at Ford Motor Company. She holds a PhD in Mechanical Engineering from Northwestern Polytechnical University in China and is an Alexander von Humboldt fellowship recipient. Chen started her career as a crash safety engineer at Ford Truck Operations and later joined the Lightweight Architecture Team of Research and Advanced Engineering. She was the lead engineer for the crash safety development of an aluminum intensive passenger car, the Ford GT magnesium cross car beam, and an advanced high strength steel body side design using hydro forming technologies. Her current projects are related to lightweight chassis systems and components using advanced high strength steel, aluminum, magnesium and composites materials.



Third place winner, **Dinesha Ganesarajan's** paper is titled ***Latest Breakthroughs with Hybrid Reinforced Composites in Lightweight Applications.*** Dr. Leonardo Simon, University of Waterloo and ACCE Technical Program Co-Chair, will present his paper on **September 5th from 10:30 to 11:00 AM** in the Sustainable Composites session at the conference. About his research, Ganesarajan comments, “My work explores the utilization of hybrid composites in the automotive industry for body interior and under the hood applications. The use of naturally-sourced filler material with the combination of glass fiber yields superior performance properties with a lightweighting initiative. This is a necessary intermediate step to achieve the ambitious goal of a circular economy just like the introduction of hybrid vehicles before the emergence of electrification.”

Ganesarajan is a graduate student pursuing a Master of Science degree at the University of Waterloo’s Chemical Engineering department. His thesis topic explores the use of naturally sourced filler materials being combined with glass fiber to produce hybrid composites for body interior and under-the-hood applications in the automotive industry. He completed his undergraduate program at the University of Waterloo majoring in Chemical Engineering with an energy systems specialization.

Ganesarajan has four years of industry experience having worked at companies like Tesla Motors, Ford Motor Company, Ballard Power Systems, and Northern Cables. His expertise is in materials science and his passion is in sustainability and achieving a “circular economy”.

About ACCE:

Held annually in suburban Detroit, the ACCE draws over 900 speakers, exhibitors, sponsors and attendees and provides an environment dedicated solely to discussion, education and networking about advances in transportation composites. Its global appeal is evident in the diversity of exhibitors, speakers, and attendees who come to the conference from Europe, the Middle East, Africa, and Asia/Pacific as well as North America. About 17% of the attendees (150 approx.) work for automotive and light truck, agriculture, tuck & bus or aviation OEMs. Approximately 25% (225) of the attendees work for tiers including molders and material suppliers. The balance of attendees work for composite materials processing equipment, additives, or reinforcement suppliers; trade associations, consultancies, university and government labs; media; and investment banks. The show has been jointly produced by the SPE Automotive and Composites Divisions since 2001. This year's show will be held September 4 – 6, 2019 at The Diamond Banquet & Conference Center at the Suburban Collection Showplace, 46100 Grand River Avenue, Novi, MI. 48374. For more information about the SPE ACCE, go to <http://speautomotive.com/acce-conference>.

The SPE Automotive Division is active in educating, promoting, recognizing, and communicating technical accomplishments in all phases of plastics and plastic-based composite developments in the global transportation industry. **SPE's Composites Division** does the same with a focus on plastic-based composites in multiple industries. Topic areas include applications, materials, processing, equipment, tooling, design, and development. For more information see www.speautomotive.com and www.specomposites.org. For more information on the **Society of Plastics Engineers**, see www.4spe.org.

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