



2012 SPE[®] ACCE Best Paper Award Winners to be Honored During Opening Ceremonies

Three Best Paper Award winners – two from industry and one from academia – will be honored during opening ceremonies at the 2012 SPE ACCE. These authors received the highest average ratings by conference peer reviewers out of a field over 70 contenders and will be honored for *Excellence in Technical Writing* during opening ceremonies.

This year's winners are Duane Emerson, Senior Applications Engineer – Composites Strategic Programs Group with Ticona Engineering Polymers; Christoph Greb, Deputy Head of Composites, Institut für Textiltechnik (Institute for Textile Technology) at RWTH Aachen University; and Dr. Jan Seyfarth, DIGMAT Product Manager at e-Xstream engineering.



Duane Emerson of *Ticona Engineering Polymers* will present a paper entitled *Using Unidirectional Glass Tapes to Improve Impact Performance of Thermoplastic Composites in Automotive Applications* in the Advances in Thermoplastic Composites session on September 13 from 8:30-9:00 a.m. The paper describes a study conducted by organizations in Europe

and North America last year that looked at methods to increase stiffness/strength and impact resistance of thermoplastic composites by using continuous-strand, unidirectional-glass (UD) tapes to produce woven fabrics as well as tailored blank laminates. Combinations of the tape fabrics and the tape laminates in various layup patterns were then used in conjunction with charges produced in the direct-long-fiber thermoplastic (D-LFT) inline compounding (ILC) process to compression mold both test plaques and later an actual automotive underbody-shield part to determine the extent to which impact performance could be improved and to ensure cycle times were consistent with automotive production requirements.

Emerson is a Senior Applications Engineer – Composites Strategic Programs Group with Ticona Engineering Polymers. He has been a member of Ticona's Technical Services group in Auburn Hills, Michigan, U.S.A. since 2001, focusing on new client and application development related to alternative-processing technologies, including the fabrication of thermoplastic composites. Emerson's expertise includes a wide range of metal-to-plastic conversions within the automotive industry (e.g. exterior body components and windshield-wiper systems), military hardware, and Industrial applications (e.g. fluid-handling pumps, air compressors, door hardware, power tools, and min-

ing & construction equipment). He holds a Bachelor's degree in Mechanical Engineering from the University of New Hampshire.

Christoph Greb of the *Institut für Textiltechnik (Institute for Textile Technology) at RWTH Aachen University* in Germany will present a paper entitled *Economic Potential of Single- & Multi-Step Preforming for Large-Scale Production of Automotive Composite Structure* in the Preforming Technologies session on September 12 from 9:00-9:30 a.m. The paper discusses the economic potential of single-step and multi-step preforming processes. Three different process chains for an automotive composite structure were designed and evaluated with regard to cycle times and costs per unit. Validation was carried out using a modified multi-axial weft insertion machine and the university's own ITA-Preformcenter. In the described case study, piece costs were reduced by 11% and cycle time was decreased by 77% vs. conventional processing of standard reinforcement textiles.



In 2008, Greb became a Scientific Co-Worker in the Fiber-Reinforced Composites Department at RWTH Aachen University's Institute for Textile Technology with a focus on preforming technologies for fiber-reinforced composites. In 2010, he became Head of the Research Group on 3D Preforming there, and in 2011, he became Deputy Head of Composites. Greb holds a Diploma in Mechanical Engineering from RWTH-Aachen University.