



## **FOR IMMEDIATE RELEASE: (19 August 2012)** **SPE-ACCE-06-12**

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### **2012 SPE® ACCE BEST PAPER AWARD WINNERS ANNOUNCED**

**TROY (DETROIT), MICH.** – The organizing committee for the **SPE® Automotive Composites Conference & Exhibition (ACCE)** today announced **Best Paper Award** winners for the group's twelfth-annual show, **September 11-13, 2012** at the MSU Management Education Center (here). Three winners – two from industry and one from academia – who received the highest average ratings by conference peer reviewers out of a field over 70 contenders will be honored for excellence in technical writing during opening ceremonies. Honorees are Duane Emerson, senior applications engineer – Composites Strategic Programs Group with Ticona Engineering Polymers and Christoph Greb, deputy head of Composites, Institut für Textiltechnik (Institute for Textile Technology) at RWTH Aachen University who both tied for first place in this year's competition, and Dr. Jan Seyfarth, DIGIMAT product manager at e-Xstream engineering came in second place.

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2012 SPE ACCE Best Paper Award Winners Announced  
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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.

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.

Jan Seyfarth of [e-Xstream engineering](#) was lead author on a paper entitled ***Stiffness, Failure & Fatigue of Fiber Reinforced Plastics*** that will be presented by co-author, Roger Assaker in the *Virtual Prototyping & Testing of Composites* session on September 13 from 8:30-9:00 a.m. The paper provides an overview of recent micromechanical approaches to predict stiffness, failure, and fatigue for short-, long-, and continuous-fiber reinforced polymer composites more accurately. Each type of composite provides its own challenge and needs individual treatment to predict performance and this is made all the more complex owing to the influence of reinforcements on composites as it causes anisotropic and locally different material behavior depending on processing conditions, strain rates, temperature, static or dynamic loading, and other end-use conditions. The goal is to provide material models in an efficient manner so they can be used in an industrial simulation environment.

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## 2012 SPE ACCE Best Paper Award Winners Announced 3-3-3-3

Held annually in suburban Detroit, the ACCE draws over 500 speakers, exhibitors, sponsors, and attendees and provides an environment dedicated solely to discussion and networking about advances in the 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. Fully one-third of attendees indicate they work for automotive and light truck, agriculture, truck & bus, heavy truck, or aviation OEM, and another 25% representing tier suppliers. Attendees also represent composite materials, processing equipment, additives, or reinforcement suppliers; trade associations, consultants, university and government labs; media; and investment bankers. The show has been jointly sponsored by the SPE Automotive and Composites Divisions since 2001.

Current supporters of the show include: PREMIER SPONSORS: Ticona Engineering Polymers, BASF Corp., Bayer MaterialScience, Dieffenbacher GmbH, Momentive Specialty Chemicals Inc., Schuler Group, Continental Structural Plastics, PPG Industries; ASSOCIATE SPONSORS: Acrolab, Ltd., Addcomp North America, Inc., American Chemistry Council - Plastics Div., AOC Resins, Asahi Kasei Plastics North America, Inc., Ashland Inc., Bulk Molding Compounds Inc., e-Xstream engineering, LayStitch Technologies, Mitsubishi Rayon Co. Ltd., Newport Adhesives & Composites Inc., National Research Council Canada (NRC-CNRC), Plasan Carbon Composites, Plasticomp, LLC, Polystrand, Quantum Composites, RTP Co., The Composites Group, Toho Tenax America, Inc., Williams, White & Co., Zoltek, OCV Reinforcements, Core Molding Technologies, Inc., Fraunhofer Project Centre @ Western University, Trexel, Inc., ESI Group, Henkel Corp., Otsuka Chemical Co. Ltd., Engel North America, Saertex Group, A&P Technology, CoreTech System Co., Ltd. (Moldex3D), TenCate Advanced Composites USA, Inc., Albis Plastic Corp., ATF, Inc., Zotefoams, Plc; EXHIBITORS: XG Sciences, NETZSCH Instruments North America, LLC, Polyscope Polymers, WesTool Corp., Lawton Machinery Group; COFFEE BREAK SPONSORS: Magna Exteriors and Interiors, Multimatic Engineering, and DowAksa Advanced Composites Holdings BV; MEDIA/ASSOCIATION: Modern Plastics India Magazine, Reinforced Plastics magazine, Polymotive magazine, Automotive NewsWire magazine, Composites Technology magazine, High-Performance Composites magazine, CompositesWorld Weekly magazine, Plastics Technology magazine, Plaspec Global Plastics Selector, Plastech magazine, TheMoldingBlog.com, PrototypeToday.com, SAE International, Automotive Engineering International magazine, WardsAuto.com, China Plastics & Rubber Journal, China Plastics & Rubber Journal International, Global Automotive Lightweight Materials Conference, Plastics Engineering magazine, Automotive Design & Production magazine, AutoField Blog, JEC Group, and Lightweighting AutoPlastics 2012 Conference.

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2012 SPE ACCE Best Paper Award Winners Announced  
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The mission of SPE is to promote scientific and engineering knowledge relating to plastics. SPE's Automotive and Composites Divisions work to advance plastics and plastic-based composites technologies worldwide and to educate industry, academia, and the public about these advances. Both divisions are dedicated to educating, promoting, recognizing, and communicating technical accomplishments for all phases of plastics and plastic-based composite developments, including materials, processing, equipment, tooling, design and testing, and application development.

For more information about the SPE Automotive Composites Conference, visit the Automotive Division's website at <http://speautomotive.com/comp.htm>, or the Composites' Division website at <http://compositeshelp.com>, or contact the group at +1.248.244.8993, or write SPE Automotive Division, 1800 Crooks Road, Suite A, Troy, MI 48084, USA. For more information on the Society of Plastics Engineers or other SPE events, visit the SPE website at [www.4spe.org](http://www.4spe.org), or call +1.203.775.0471.

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**FOR IMMEDIATE RELEASE: (19 August 2012)  
SPE-ACCE-06a-12**

TROY (DETROIT), MICH. – Duane Emerson of *Ticona Engineering Polymers* has been named a *Best Paper Award* winner by the peer-review committee for the *SPE® Automotive Composites Conference & Exhibition* (ACCE) for his paper entitled *Using Unidirectional Glass Tapes to Improve Impact Performance of Thermoplastic Composites in Automotive Applications*. Emerson will be honored with a special plaque for excellence in technical writing during opening ceremonies at the twelfth-annual SPE ACCE on September 11<sup>th</sup> and will present his work in the *Advances in Thermoplastic Composites session* on September 13 from 8:30-9:00 a.m.

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, Mich., 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 mining & construction equipment). He holds a Bachelor’s degree in Mechanical Engineering from the University of New Hampshire.

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**FOR IMMEDIATE RELEASE: (19 August 2012)**  
**SPE-ACCE-06b-12**

TROY (DETROIT), MICH. – Christoph Greb of the *Institut für Textiltechnik (Institute for Textile Technology) at RWTH Aachen University* in Germany has been named a **Best Paper Award** winner by the peer-review committee for the **SPE® Automotive Composites Conference & Exhibition** (ACCE) for his paper entitled ***Economic Potential of Single- & Multi-Step Preforming for Large-Scale Production of Automotive Composite Structure***. Greb will be honored with a special plaque for excellence in technical writing during opening ceremonies at the twelfth-annual SPE ACCE on September 11<sup>th</sup> and will present his work in the *Preforming Technologies session* on September 12 from 9:00-9:30 a.m.

In 2008, Greb became a scientific coworker 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.

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## **FOR IMMEDIATE RELEASE: (19 August 2012) SPE-ACCE-06c-12**

TROY (DETROIT), MICH. – Dr. Jan Seyfarth, DIGIMAT product manager at ***e-Xstream engineering*** has been named a ***Best Paper Award*** winner by the peer-review committee for the ***SPE® Automotive Composites Conference & Exhibition*** (ACCE) for his paper entitled ***Stiffness, Failure & Fatigue of Fiber Reinforced Plastics***. Co-author, Roger Assaker will accept a special plaque for excellence in technical writing on behalf of Seyfarth during opening ceremonies at the twelfth-annual SPE ACCE on September 11, 2012 and will present the paper at the conference in the *Virtual Prototyping & Testing of Composites session* on September 13 from 8:30-9:00 a.m.

Seyfarth is DIGIMAT product manager at e-Xstream engineering, a position he has held since 2010. At the company, Seyfarth is responsible for coordinating the development of new software and providing sales and marketing support in Southern Germany. Before joining e-Xstream, he was product manager for DIGIMAT at software reseller CADFEM GmbH from 2007-2010 where he was responsible for multiscale material modeling with the software for engineering applications. Seyfarth holds a Diploma in Chemistry from the Ludwig-Maximilians Universität München and upon graduating with a Ph.D. in Theoretical Chemistry from the University of Bayreuth, he received the Bayer MaterialScience Award for his doctoral thesis. He currently has more than five years of experience transferring micromechanics to the needs of industrial application.

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