WEDNESDAY, SEPT. 7, 2016

7:00–8:15 a.m. REGISTRATION / BREAKFAST - Diamond Ballroom

8:15–8:45 OPENING REMARKS (Including Awards & Announcements) Rani Richardson, 2016 SPE ACCE Chair - Diamond Ballroom

8:45–9:00 BREAK / OPENING OF EXHIBITS & JUDGING FOR STUDENT POSTER & BEST COMPOSITE PARTS COMPETITIONS (Hall C)

	IN ONYX	IN OPAL/GARNET	IN EMERALD/AMETHYST	IN PEARL
	SESSION 1: BONDING, JOINING & FINISHING - PART 1 OF 3: *Adhesion & Finishing Issues*	**SESSION 2: OPPORTUNITIES & CHALLENGES WITH CARBON COMPOSITES - PART 1 OF 2: *B-Class & Recycled Fibers***	**SESSION 3: ADVANCES IN THERMOPLASTIC COMPOSITES - PART 1 OF 5: *High-Volume Applications***	**SESSION 4: ADDITIVE MANUFACTURING & 3D PRINTING - PART 1 OF 2:**
9:00-9:30	Andy Stecher, *Plasmatreat North America* Enhancing the Bonding of Dissimilar Materials with Atmospheric Plasma	Hiroyuki Hamada *Kyoto Institute of Technology* Utilization of B Class Carbon Fiber in Composite Materials	Ji Hwan Choi, *Hanwha Advanced Material Co.* Development of Automobile Front Bumper Beam using CFRP and GMT	Robert Gorham, *National Center for Defense Manufacturing and Machining (NCDMM), America Makes* Smart Collaboration: America Makes - Adventures in Public Private Partnerships
9:30-10:00	Raymond Sanedrin, *Krüss USA* Why Test Inks Cannot Tell the Full Truth About Surface Free Energy	Frazer Barnes, *ELG Carbon Fibre* The Role of Recycled Carbon Fibres in Cost Effective Lightweight Structures	Tomasz Czarnecki, *EconCore N.V.* Continuous Production of Thermoplastic Honeycomb Sandwich Components for Automotive Interiors: Low Weight – Low Cost Technology	Rajasundar Chandran, *École Polytechnique Fédérale de Lausanne (EPFL)* Non-Isothermal Fusion Bonded Soft/Hard Interfaces for Thermoplastic-Based Materials
10:00-10:30	Shan Gao, *Western University* Powder Coating of Underhood Plastic Components		Queein Månson, *EELCEE* High-Volume Manufacturing of Composite Door Module by a Novel 3D-Preform Technology	

10:30-11:00 BREAK / EXHIBITS & JUDGING FOR STUDENT POSTER & BEST COMPOSITE PARTS COMPETITIONS (Hall C)

	SESSION 5: BONDING, JOINING & FINISHING - PART 2 OF 3: *Welding & Bondline Issues*	**SESSION 6: VIRTUAL PROTOTYPING & TESTING - PART 1 OF 4: *Woven Composites & Draping***	**SESSION 7: ADVANCES IN THERMOPLASTIC COMPOSITES - PART 2 OF 5: *Emissions, FR, & Tailored Fiber Placement***	**SESSION 8: ADDITIVE MANUFACTURING & 3D PRINTING - PART 2 OF 2:**
11:00-11:30	Michael Barker, *Ashland Inc.* Lightweighting with Composites: Adhesive Properties and Initial Bond Line Read Through Measurements	Paul Van Huffel, *Altair Engineering* Composite Draping to Enhance Structural Analysis	Tanmay Pathak, *A. Schulman* Low Emission Polypropylene Composites for Automotive Interiors	Douglas Smith, *Baylor University* Continuous Fiber Angle Topology Optimization for Polymer Composite Fused Deposition Modeling
11:30 a.m.-12:00 p.m.	Akio Ohtani, *Kyoto Institute of Technology* Effect of Energy Director on Welding State of Ultrasonic Welding for c-FRTP	William Rodgers, *General Motors Co.* Draping Simulation of Woven Fabrics	Ruomiao "Grace" Wang, *Hanwha Azdel* Self-Extinguishing Light Weight Reinforced Thermoplastic Composite	Ron Rogers, *e-Xstream engineering* Holistic Multiscale Simulation Approach for Additive Layer Manufacturing of Plastics
12:00-12:30	Sarah Stair, *Baylor University* *2013-2014 SPE ACCE Scholarship Winner* Investigation & Identification of the Bondline between a Carbon Fiber Reinforced Laminated Composite and a Metal Structure via Ultrasonic Techniques	Chris Boise, *Baylor University* *2015-2016 SPE ACCE Scholarship Winner* Construction and Implementation of a Material Independent Finite Element for use in Orthotoropic Stiffness Tensor Prediction of a Woven Fiber Composite Lamina	Hironori Nishida, *Doshisha University* Development of Automatic Placement Machine for CFRTP Tapes Using Machine Stitching	Blake Heller, *Baylor University* Computing Mechanical Properties from Orientation Tensors for Fiber Filled Polymers in Axisymmetric Flow and Planar Deposition Flow

12:30-1:30 LUNCH, STUDENT POSTERS, LARGE-PART DISPLAY (Hall C)

		SESSION 10: VIRTUAL PROTOTYPING & TESTING - PART 2 OF 4:	**SESSION 11: ADVANCES IN THERMOPLASTIC COMPOSITES - PART 3 OF 5: *Lightweighting with LFT & D-LFT***	**SESSION 12: ADVANCES IN REINFORCEMENT TECHNOLOGIES - PART 1 OF 1:**
1:30-2:00		Benedikt Fengler, *Karlsruhe Institute of Technology* Application of a Multi Objective Optimization Approach for Continuous Fiber Tapes in Hybrid Composite Structures	Christoph Kuhn, *Volkswagen AG* *2016 Best Paper Award Winner* Lightweight Design with Long Fiber Reinforced Polymers – Technological Challenges due to the Effect of Fiber Matrix Separation	Hiroyuki Hamada *Kyoto Institute of Technology* Development on Fabrication and the Mechanical Property of Hybrid-SMC
2:00-2:30		Michael Doyle, Dassault Systèmes Progress on Light-Weight Automotive Materials (1 hr)	Russell Goering, *Addcomp North America Inc.* Progress on Light-Weight Automotive Materials	Gleb Meirson, *Fraunhofer Project Centre for Composites Research* Basalt Fiber and its Application to Structural Composite Design
2:30-3:00			Ying Fan, *Western University* *2016 Best Paper Award Winner* Effects of Processing Parameters of the Thermal and Mechanical Properties of D-LFT Glass Fiber/Polyamide 6 Composites	Asami Nakai, *Gifu University* Fabrication of Thermoplastic Composites with Partially-Impregnated Commingled Yarn as New Intermediate Materials

3:00-3:30 BREAK / EXHIBITS HALL C

3:30-3:45 **Uday Vaidya: Student Poster Competition Winners** – Diamond Ballroom

3:45-4:15 KEYNOTE 1 – Diamond Ballroom: **Craig Blue, *CEO, Institute for Advanced Composites Manufacturing Innovation (IACMI)***
IACMI – The Composites Institute: Progress, Roadmap and Opportunities

4:15-5:15 KEYNOTE 2 – Diamond Ballroom: **Rick Neff, *BAAM Sales Manager, Cincinnati Inc.***
BAAM - Big Area Additive Manufacturing - Using Reinforced Plastics to Drive Innovation in Big 3D Printing

5:15-5:30 RECEPTION SPONSOR ADDRESS - Diamond Ballroom

5:30-7:30 COCKTAIL RECEPTION (Fireside Room) **Sponsored by Hexion Inc.**

7:30 CONFERENCE ADJORNS FOR THE DAY

THURSDAY, SEPT. 8, 2016

7:00–8:00 a.m. REGISTRATION / BREAKFAST – DIAMOND BALLROOM

	IN ONYX	IN OPAL/GARNET	IN EMERALD/AMETHYST	IN PEARL
	SESSION 13: ADVANCES IN THERMOSET COMPOSITES - PART 1 OF 3: *Epoxy Systems*	**SESSION 14: VIRTUAL PROTOTYPING & TESTING - PART 3 OF 4: *Multi-Scale Modeling***	**SESSION 15: ADVANCES IN THERMOPLASTIC COMPOSITES - PART 4 OF 5: *Hybrid Composites***	**SESSION 16: NANOCOMPOSITES - PART 1 OF 3: *Key Trends & Hybrid Systems***
8:00-8:30	Gleb Meirson, *Fraunhofer Project Centre for Composites Research* Recyclable High Pressure Resin Transfer (HP-RTM) Molding Epoxy Systems and their Composite Properties	Andy MacKrell, *MultiMechanics* Multiscale Analysis of a Chopped Fiber Injection Molded Part using Abaqus and MultiMech	Warden Schijve, *SABIC* New Thermoplastic Composite Solutions Present Viable Options for Automotive Lightweighting	Jo Anne Shatkin, Vireo Advisors, LLC Addressing Safety, Health and Environmental Aspects of Nanocomposites Across the Product Life Cycle (1 hr)
8:30-9:00	Peter Dijkink, *Alzchem AG* New Liquid Latent Epoxy Hardeners for Automotive RTM Applications	Tod Dalrymple, *Dassault Systèmes* Multi-Scale Simulations for Material Modeling	Recep Yaldiz, *SABIC* Innovative Predictive Solutions for Hybrid Thermoplastic Composite Technology	
9:00-9:30	Sigrid ter Heide, *Hexion Inc.* Epoxy Matrix Technologies for Mass Production of Composite Leaf Springs	Don Robbins, *Autodesk, Inc.* Enhancement of Multiscale Modeling Methodology for Short Fiber Filled Injection Molded Parts Subjected to Bending Loads	Bert Rietman, *SABIC* Manufacturing Solutions for Hybrid Overmolded Thermoplastic UD Composites	Douglas Gardner, *University of Maine* Mechanical Properties of Hybrid Talc-Cellulose Nanofibril-Filled Polypropylene Composites
9:30-10:00	BREAK / EXHIBITS (Hall C)			
	SESSION 17: ADVANCES IN THERMOSET COMPOSITES - PART 2 OF 3: *Sheet-Molding Compound*	**SESSION 18: VIRTUAL PROTOTYPING & TESTING - PART 4 OF 4: *Simulation of Chopped Fiber-Reinforced Composites***	**SESSION 19: ADVANCES IN THERMOPLASTIC COMPOSITES - PART 5 OF 5: *Process Developments***	**SESSION 20: NANOCOMPOSITES- PART 2 OF 3: *Thermal & Mechanical Issues***
10:00-10:30	Husam Rasoul, *Ashland Inc.* Low VOC / Low Odor SMC for Interior Applications	Donald Baird, *Virginia Polytechnic Institute and State University* Simulation of the Role of Fiber Length on the Orientation Distribution During Injection Molding	Mark Cieslinski, *BASF Corp.* Material Properties of Injection Molded Glass and Carbon Fiber Reinforced Thermoplastic Composites – A Review	Leonardo Simon, *University of Waterloo* Improvement of Thermal and Mechanical Properties of Polyimide using Metal Oxide Nanoparticles
10:30-11:00	Michael Sumner, *Ashland Inc.* Development of Ultra Low Density Class A SMC with Reduced Water Absorption	Dustin Souza, *e-Xstream engineering* Local Anisotropic Stiffness & Damping Behaviors of SFRP for Automotive FEA Applications	John Dorgan, *Colorado School of Mines* Reactive Processing - Cure Time vs. Heat Transfer	Daniele Bonacchi, *Imerys* Effects of Graphite Selection on Thermally Conductive Compounds for LED Lamp Heat Sinks
11:00-11:30	Paul Rettinger, *Chromaflo Technologies Corp.* Lora Mason, *Ashland Inc.* Mayur Shah, *Continental Structural Plastics* UV Stable, Weather Resistant Sheet Molding Compound: An Alternative Approach to Building Strong, Durable Transportation Components	Sebastian Goris, *University of Wisconsin-Madison* *2014-2015 SPE ACCE Scholarship Winner* *2016-2017 Rehkopf Scholarship & 2016 Best Paper Award Winner* Progress on the Characterization of the Process-Induced Fiber Microstructure of Long Fiber-Reinforced Materials	Hiroyuki Hamada, *Kyoto Institute of Technology* Thermoplastic Prepreg Insert Injection Molding Composites: Mechanical & Adhesive Properties	Jacob Anderson, *PPG Industries* Thermal and Mechanical Performance of Polyamide-6 Reinforced with Glass Fibers and Nanoparticles
11:30 a.m.-12:00 p.m.	Atieh Motaghi, *Western University* Microstructure Characterization in Direct Sheet Molding Compound		Hiroyuki Hamada, *Kyoto Institute of Technology* Study of Production Stability in DFFIM	Nicholas Kamar, *Michigan State University* Graphene Nanoplatelet (GnP)/ Triblock Copolymer Epoxy Nanocomposites and GnP Modified CFRPs
12:00-1:00	LUNCH, LARGE-PART DISPLAY (Hall C)			
	Michael Connolly, *SPE Composites Div. Chair* will present **Uday Vaidya, *University of Tennessee-Knoxville*** with the **Composites Person of the Year Award**			
1:00-2:00	KEYNOTE 3 – Diamond Ballroom: **Rich Fields, *Mechanical Engineering Senior Manager, Lockheed Martin Missiles and Fire Control*** Accelerated Introduction of New Material Systems			
	SESSION 21: ADVANCES IN THERMOSET COMPOSITES - PART 3 OF 3: *Urethane & Epoxy Systems*	**SESSION 22: OPPORTUNITIES & CHALLENGES WITH CARBON COMPOSITES - PART 2 OF 2: *Applications & Technology Advances***	**SESSION 23: ENABLING TECHNOLOGIES - PART 1 OF 3: *Process Comparisons & Automatic Inspection***	**SESSION 24: NANOCOMPOSITES- PART 3 OF 3: *Graphene, Carbon Nanotubes, & Nanocellulose***
2:00-2:30	Corentin Pasco, *Warwick Manufacturing Group* Characterisation of the Prepreg Compression Moulding Process		Javier Acosta, *Fagor Arrasate* Manufacturing Cost Comparison of RTM, HP-RTM & CRTM for an Automotive Roof	Alper Kiziltas, *Ford Motor Co.* *2012-2013 SPE ACCE Scholarship Winner* Graphene-Reinforced Bio-Based Polyamide Composites
2:30-3:00	Daniel Park, *Fraunhofer Project Centre for Composites Research* Development of Polyurethane Sheet Molding Compound	Marco Bernsdorf, *Solvay* Automotive Serial Application Process & Resin Development for BMW M4 GTS hood program	Martino Lamacchia, *Cannon USA* CFRP Mass Production in Automotive: A Comprehensive Review of the Main Approaches Available from a Machinery Perspective	Gurminder Minhas, *Performance BioFilaments Inc.* Nano Fibrillated Cellulose for Reinforcing Composites
3:00-3:30		Yutaka Yagi, *Teijin Advanced Composites America Inc.* Changing the Future of Carbon Fiber Reinforced Thermoplastic Composites	Scott Blake, *Assembly Guidance Systems, Inc.* Automatic Inspection of Composite Parts	Hao Zou, *SINOPEC* Research on MWNTs and iPP Composites and their Mechanical Properties
3:30-4:00	BREAK / EXHIBITS (HALL C)			
4:00-5:30	PANEL DISCUSSION: Critical Issues in Automotive Composites: Technology, Policy and Supply Chain Moderator: Dale Brosius, *Institute for Advanced Composites Manufacturing Innovation (IACMI)* Panelists: Craig Blue, *IACMI*; Rich Fields, *Lockheed Martin*; Ove Schuett, *Dassault Systèmes*; James Staargaard, *Plasan Carbon Composites*; Rick Neff, *Cincinnati Inc.*			
5:30-5:45	RECEPTION SPONSOR ADDRESS - Diamond Ballroom			
5:45-7:30	COCKTAIL RECEPTION (Fireside Room) **Sponsored by Reception Sponsor #2**			
7:30	CONFERENCE ADJORNS FOR THE DAY			

FRIDAY, SEPT. 9, 2016

7:00–8:00 a.m. REGISTRATION / BREAKFAST – DIAMOND BALLROOM

	IN ONYX	IN OPAL/GARNET	IN EMERALD/AMETHYST	IN PEARL
	SESSION 25: USCAR/USAMP Carbon Fiber Composite Front Bumper Crush Can Project - PART 1 OF 2	**SESSION 26: SUSTAINABLE COMPOSITES - PART 1 OF 2: *Biopolymers & Bio-Precursors***	**SESSION 27: ENABLING TECHNOLOGIES - PART 2 OF 3: *Compression & Injection Molding***	
8:00-8:30	Omar Faruque, *Ford Motor Co.* Validation of Material Models for Crash Testing of Carbon Fiber Composites		Neil Reynolds, *Warwick Manufacturing Group* The Development of an Augmented Stamp-Forming Process for High-Volume Production of Thermoplastic Composite Automotive Structures	
8:30-9:00	Praveen Pasupuleti, *ESI Group* Design of a Composite Bumper and Assessment of Current Composite Crash Simulation Capabilities	Fatimat Bakare-Batula, *University of Böras* *2014-2015 SPE ACCE Scholarship Winner* Synthesis & Characterization of a Biobased Thermoset Resin from Lactic Acide & Allyl Alcohol	Matthias Graf, *Dieffenbacher GmbH Maschinen- und Anlagenbau* Tailored Fiberplacement LFT-D - Flexible and Economical Process for the Mass Production of Hybrid Lightweight Composites	
9:00-9:30	Derek Board, *Ford Motor Co.* Physical Crash Testing of Composite Bumper Beams	Christopher Ellen, *BioAmber Inc.* Bio-Based Succinate Polyester Polyols in Thermoplastic Urethanes	Stephen Greydanus, *Hexion Inc.* Liquid Compression Molding (LCM) Technology for Mass Production of Continuous Fiber Composite Epoxy Matrix Components	
9:30-10:00	Anthony Coppola, *General Motors Co.* Thermoset Composite Materials & Processing for a Composite Bumper Beam System	Ayse Ademuwagun, *Varroc Lighting Systems* Biobased Headlamp Housing for Automotive Lighting	Alexander Roch, *Fraunhofer Institute for Chemical Technology* 2-Component Air Guide Panel Manufactured by Co-Molding & Foaming using Core-Back Technology	
10:00-10:30	BREAK / EXHIBITS (Hall C)			
	SESSION 29: USCAR/USAMP Carbon Fiber Composite Front Bumper Crush Can Project - PART 2 OF 2	**SESSION 30: SUSTAINABLE COMPOSITES - PART 2 OF 2: *Carbon Capture & Natural Fiber Reinforcements***	**SESSION 31: ENABLING TECHNOLOGIES - PART 3 OF 3: *Tooling, Cores, Profiles, & HP-RTM Variants***	
10:30-11:00	Art Cawley, *Dow Automotive* Joining and Assembly System for Thermoset & Thermoplastic Composite Materials	Mica DeBolt, *Ford Motor Co.* Ford Blue Sky Project - The Future of Recycling CO_2 into Polyurethane Foams	Steve Verschaeve, *RocTool* An Innovation in Composites Process: Light Induction Tooling	
11:00-11:30	Praveen Pasupuleti, *ESI Group* Composite Fabric Manufacturing Studies by Simulation and Experiment	William Jordan, *Baylor University* Banana Fiber Reinforced LDPE Composites for Use in Injection Molded Parts: Properties and Processing	Ottorino Ori, *Persico SpA* New Moldable & Washable Cores for Hollow Composite Parts	
11:30 a.m.-12:00 p.m.	Jeff McHenry, *Shape Corp.* Development of Carbon Fiber Reinforced Thermoplastic Composites	Henning Karbstein, *BASF Corp.* Marc Hayes, *International Automotive Components* Natural Fiber-Reinforced Sunroof Frame	Klaus Jansen, *Thomas GmbH + Co. Technik + Innovation KG* Mass Production of Curved Profiles for Car Bodies - Process and Machines	
12:00-12:30	Cameron Dasch, *Highwood Technology LLC* Non-Destructive Testing throughout the Development of a Carbon Fiber Composite Automotive Crash Structure		Philipp Rosenberg, *Fraunhofer Institute for Chemical Technology* New Process Variants of the HP-RTM Process	
12:30-1:30	LUNCH, PARTS COMPETITION WINNERS, LARGE-PART DISPLAY (Hall C)			
1:30-2:00	KEYNOTE 4 – Diamond Ballroom: **Ove Schuett, *Vice President - Transportation & Mobility, Industrial Equipment Business Unit, Dassault Systèmes*** An Innovative Approach to Light Weighting and Managing Vehicle Development Complexity			
2:00-2:30	KEYNOTE 5 – Diamond Ballroom: **James Staargaard, *CEO, Plasan Carbon Composites*** Development of a Carbon Fiber Reinforced Roof Frame Using the High Pressure Resin Transfer Molding Process			
2:30-2:45	CLOSING REMARKS & PART INNOVATION AWARDS: Rani Richardson, 2016 SPE ACCE Chair - Diamond Ballroom			
2:45	CONFERENCE ADJORNS FOR THE YEAR			

EXHIBITION HOURS:

Wednesday:	8:45 a.m. to 5:00 p.m.
Thursday:	8:00 a.m. to 5:00 p.m.
Friday:	8:00 a.m. to 1:30 p.m.