

DAY 1 - WEDNESDAY ACCE SCHEDULE  
Final Schedule for September 5, 2018

|             |  |   |   |   |  |
|-------------|--|---|---|---|--|
| 7:00-8:00   | <b>REGISTRATION / BREAKFAST - DIAMOND BALLROOM</b> Sponsored by <b>Faurecia</b>  |   |   |   |  |
| 8:00-8:30   | OPENING REMARKS (Including Best Paper and <b>MEDC</b> Scholarship Awards/Composites Person of the Year Award): Alper Kiziltas & Matt Carroll, 2018 SPE ACCE Chairs / Eric Shreffler, Managing Director, Automotive Office MEDC / Ian Swentek, ACCE Awards Chair - Diamond Ballroom       |   |   |   |  |
| 8:30-9:00   | KEYNOTE 1 - Diamond Ballroom: John Viera, <b>GLOBAL DIRECTOR, Sustainability and Vehicle Environmental Matters at Ford Motor Co.</b> , Sustainable Manufacturing at Ford and How Composites Can Help to Address Industry Challenges  |   |   |   |  |
| 9:00-10:00  | <b>EXHIBITS OPEN (no sessions) &amp; JUDGING FOR STUDENT POSTER COMPETITION (Hall C)</b>   |   |   |   |  |
|             | In Onyx  | In Opal/Garnet  | In Emerald/Amethyst   | In Pearl  | In Platinum  |
|             | <b>SESSION 1: Advances in Thermoplastic Composites - 1/5</b>   | <b>SESSION 2: Advances in Thermoset Composites - 1/7</b>  | <b>SESSION 3: Virtual Prototyping &amp; Testing - 1/4</b>   | <b>SESSION 4: Reinforcement Technologies - 1/3</b>  | <b>SESSION 5: Additive Manufacturing and 3D-Printing - 1/3</b>   |
| 10:00-10:30 | Substitution of Aluminum By Thermoplastic SMA/ABS-GF15 In Guide Rails for A Sunroof Roller-Blind Module, Jacques Vivien, Webasto   | Evaluation of Epoxy Resins for Under-the-Hood Applications, Anthony Coppola, General Motors   | Determination of Mode II Traction Separation Law for S-2 Glass/Epoxy Composite Interface Under Different Loading Rates, Sandeep Tamrakar, Ford Motor Company<br><b>BEST PAPER AWARD</b> | Advancements in Carbon Fiber SMC, Thomas Skelskey, Ashland  | What's Next in 3D Printing? A Tutorial on Viscous (Paste) Material Additive Manufacturing, Andrew Finkle, Structur3D   |
| 10:30-11:00 | New Manufacturing Process Concept for Structural Thermoplastic Parts, Estibalitz Arregi, Fagor Arrasate and Nora Beevers, Grupo Antolin NA   | High TG Fast Cure Resin System, Jay Berndt, Toray Composite Materials America   | Plastic Strain Based Criterion for Failure Predictions of Short Fiber Reinforced Plastics at Structural Level, Dustin Souza, e-Xstream Engineering                                      | Recycled Carbon Fibres Nonwoven Reinforcements for CFRP: A Sustainable Path for Composites Applications, Marion Flahaut, ELG CF | XSTRAND™: State of the Art Material Developed for the Fused Filament Fabrication of Functional Parts, Jay Yang, Owens Corning  |
| 11:00-11:30 | Long Fiber Thermal Plastics Composites for Seating Structures, Daniel Fuller, Celanese   | Continuous Fiber Pre-Pregs Optimized for High Volume Manufacturing, Dustin Davis, Norplex-Micarta   | Modular Approach to Material Card Generation Accelerating Composite Part Development, Adam Halsband, Ruhl Strategic Partners  | Engineered Braided Fabrics Enable Significant Cost Savings, Billy Wood, A&P Technology  | High Speed Extrusion Additive and High-Performance Plastics Can Save Time and Money for Automotive, Dr. Nirup Nagabandi, Essentium   |
| 11:30-12:30 | <b>LUNCH (Hall C) Sponsored by Arkema / JUDGING FOR BEST COMPOSITE PARTS</b>   |   |   |   |  |
|             | In Onyx  | In Opal/Garnet  | In Emerald/Amethyst   | In Pearl  | In Platinum  |
|             | <b>SESSION 6: Advances in Thermoplastic Composites - 2/5</b>   | <b>SESSION 7: Advances in Thermoset Composites - 2/7</b>  | <b>SESSION 8: Virtual Prototyping &amp; Testing - 2/4</b>   | <b>SESSION 9: Reinforcement Technologies - 2/3</b>  | <b>SESSION 10: Additive Manufacturing and 3D-Printing - 2/3</b>  |
| 12:30-1:00  | Method of Producing Complex Shape Composites with Xylylenediamine Derived Polyamide Matrix, Nobuhiko Matsumoto, Mitsubishi Gas Chemical  | New High Strength to Density Ratio Glass Bubbles for Use in Thermosets and Thermoplastics, Andrea Charif, 3M  | Development of Stiffness Evaluation System That Considers Molding-Induced Long-Fiber Waviness Using Numerical Simulations, Masatoshi Kobayashi, Honda                                   | Weight Reduction of Plastic Components by Using Modern Technology, Juergen Giesow, Arburg                                       | Model Analysis of Feedstock Behavior in Fused Filament Fabrication: Enabling Rapid Materials Screening, Jake Fallon, Virginia Polytechnic Institute and State University             |
| 1:00-1:30   | Moisture Effect on Dynamic Mechanical, Tensile and Thermal Properties of D-LFT Glass-Fiber/Polyamide 6 Composites, Sophia Fan, Western University  | The Effect of Nanocalcite-Modified Epoxy Resins On The Mechanical Properties and Tensile Fatigue Performance of Glass-Reinforced Composites, Jim Nelson, 3M | Latest Molding Simulation and Structural Analysis for Long Fiber Composites, Ivor (Huan-Chang) Tseng, Moldex3D  | Foaming of Polymer Composite Materials: Automotive Perspectives, Omar Faruk, University of Toronto                              | Finite Element Analysis of Thermoplastic Polymer Extrusion 3D Printed Material for Mechanical Property Prediction, Sunil Bhandari, University of Maine                               |
| 1:30-2:00   | 3-Point Bending Impact Test of Carbon Fiber Reinforced Thermoplastic Composites, Fumiaki Yano, Shimadzu  | A New Class of Metal Organic Thickeners for Sheet Molding Compound, Arun Duraisamy, Fraunhofer Project Centre   | The Effect of Glass Fiber Length On the Short-Term and Long-Term Behavior of Polypropylene, Dayton Ramirez, Madison Group   | Agave Fiber Filled Polypropylene Composites for Automotive Applications, Cindu Annandarajah, Iowa State University              |  |
| 2:00-3:00   | <b>EXHIBITS - Hall C (no sessions) / BREAK Sponsored by Buhlerman</b>  |   |   |   |  |
|             | In Onyx  | In Opal/Garnet  | In Emerald/Amethyst   | In Pearl  | In Platinum  |
|             | <b>SESSION 11: Advances in Thermoplastic Composites - 3/5</b>  | <b>SESSION 12: Advances in Thermoset Composites - 3/7</b>   | <b>SESSION 13: Virtual Prototyping &amp; Testing - 3/4</b>  | <b>SESSION 14: Reinforcement Technologies - 3/3</b>   | <b>SESSION 15: Additive Manufacturing and 3D-Printing - 3/3</b>  |
| 3:00-3:30   | Recyclable Composites Based on Polymers Reinforced With Thermotropic Liquid Crystalline Polymers, Donald Baird, Virginia Tech University   | Phenolic SMC for Automotive Fire Retardance, Ian Swentek, Hexion  | CAE Method for the Compression Molding of Discontinuous Fiber Reinforced Thermoplastic, Part 1: Bulk Form, Umesh Gandhi, Toyota Research Institute NA                                   | The Role of Basalt Fiber in Automotive Lightweighting, Jeffrey Thompson, Mafic  | Initial Fiber Orientation Effects on Predicting Thermo-Mechanical Properties of Large Volume, Fused Filament Composites, Timothy Russel, Baylor University                           |
| 3:30-4:00   | New Thermally Conductive Polycarbonates for Weight and Cost Savings in Automotive Applications, Jim Lorenzo, Covestro  | Sheet Molding Compound (SMC) Testing and Understanding for Greater Molding Reliance, Rani Harb, e-Xstream Engineering                                       | CAE Method for the Compression Molding of Discontinuous Fiber Reinforced Thermoplastics, Part 2: Sheet Form, Yuyang Song, Toyota Research Institute NA                                  | Advances In Basalt Fiber Technology, Matt Delaney, The Materials Group  | Effects of Fiber Length On Predicting Elastic Properties of Short Fiber Reinforced Composites Printed by Large Scale Polymer Additive Manufacturing, Zhaogui Wang, Baylor University |
| 4:00-4:45   | <b>EXHIBITS - Hall C (no sessions)</b>   |   |   |   |  |
| 4:45-5:45   | <b>EXHIBITS CLOSED</b><br><b>PANEL DISCUSSION 1 - Diamond Ballroom: How Can the Composites Industry Profit From the Next Generation of Vehicles?</b><br>Panelists: Jud Gibson (DSM), Paul Platte (Covestro), Dr. Jeffrey Helms (Celanese) and Robert Eller (Robert Eller Associates LLC) |   |   |   |  |
| 5:45 - 6:00 | Reception Sponsor Address  |   |   |   |  |
| 6:00-7:30   | <b>COCKTAIL RECEPTION: Fireside Room - Sponsored by Hexion</b>   |   |   |   |  |
| 7:30        | <b>CONFERENCE ADJOURNS FOR THE DAY</b>   |   |   |   |  |

**DAY 2 - THURSDAY ACCE SCHEDULE**  
Final Schedule for September 6, 2018

|             |   |   |   |  |  |
|-------------|---|---|---|--|--|
| 7:00-8:00   | <b>REGISTRATION / BREAKFAST - DIAMOND BALLROOM</b> Sponsored by <b>Magna Exteriors</b>  |   |   |  |  |
| 8:00-8:30   | KEYNOTE 2 - Diamond Ballroom: Mark Voss, <i>ENGINEERING GROUP MANAGER, Body Structures Advanced Composites and Pickup Boxes</i> , General Motors Co.,<br>The World's First Carbon Fiber Pickup Box  |   |   |  |  |
|             | <b>In Onyx</b>  | <b>In Opal/Garnet</b>   | <b>In Emerald/Amethyst</b>  | <b>In Pearl</b>  | <b>In Platinum</b>   |
|             | <b>SESSION 16: Advances in Thermoplastic Composites - 4/5</b>   | <b>SESSION 17: Business Trends &amp; Technology Solutions - 1/1</b>   | <b>SESSION 18: Virtual Prototyping &amp; Testing - 4/4</b>  | <b>SESSION 19: Nanocomposites - 1/2</b>  | <b>SESSION 20: Enabling Technologies - 1/4</b>   |
| 8:30-9:00   | Development of Lightweight Reinforced Thermoplastic (LWRT) Composites Featuring Multi-Basis Weight for Different Applications, Peng Cheng, Hanwha Azdel   | Manufacturing Plant Front Line Leadership Adaptations for Increased Thermoplastic Composites Production Success vs Traditional Metal Automotive Components, Andrew Pokewaldt, American Composites Manufacturers | Multi-Scale Material Modeling Applied From Specimen to Full Car Level, Dustin Souza, e-Xstream Engineering  | Cellulose Nanocomposites: Status of Development From a Commercial Perspective, Douglas Gardner, University of Maine  | Innovative Production Technology for Series Production – Novel, Automated Solutions for Bonding Processing and the Sequential Preforming Process, Tobias Fuerst, Schmidt & Heinzmann |
| 9:00-9:30   | Flow Simulation for the LFT-D Process, Gleb Meirson, Fraunhofer - Western University  | Navigating the EV Trend with Composite Solutions, Sanghamitra Sircar, Owens Corning   | Predicting Composite Matrix Performance with Molecular Simulation, Andrea Browning, Schrodinger   | Manufacture and Damping of Nanocellulose-Nylon Composites, Yufeng Tian, University of Michigan   | Rapid Fabrication of Vascular Channel Networks in Composite Materials, Anthony Coppola, General Motors   |
| 9:30-10:00  | Considering Process Induced Properties In Performance Simulation Of Hybrid Composite Parts, Justin Miller, Purdue University  | Utilizing Advanced Composite Molding Technologies, Paul Thom, Schuler Inc.  | The Validation of Process and Property Prediction Tools for Injection Molded Long Fiber Reinforced Thermoplastics, Ahmed Hassen, Oak Ridge National Laboratory  | Lightweighting of Injection-Molded Composites Using Nanoparticles, Natalie Chapleau, National Research Council Canada  | Characterization of Carbon and Glass Composites By Ultra High Resolution X-Ray Computed Tomography, Craig Metcalfe, Expanse Microtechnologies, Inc.                                  |
| 10:00-11:00 | <b>EXHIBITS - Hall C (no sessions) / BREAK</b> Sponsored by <b>Covestro</b>   |   |   |  |  |
|             | <b>In Onyx</b>  | <b>In Opal/Garnet</b>   | <b>In Emerald/Amethyst</b>  | <b>In Pearl</b>  | <b>In Platinum</b>   |
|             | <b>SESSION 21: Advances in Thermoplastic Composites - 5/5</b>   | <b>SESSION 22: Advances in Thermoset Composites - 4/7</b>   | <b>SESSION 23: Development of Fast Processing, High Performance Composites for the Transportation Industry - 1/3</b>  | <b>SESSION 24: Nanocomposites 2/2</b>  | <b>SESSION 25: Sustainable Composites - 1/4</b>  |
| 11:00-11:30 | Tailored Preforms for Compression Molding, Vlastimil Kunc, Oak Ridge National Laboratory  | Composite Solutions for the Automotive Industry, Elena Glik, Henkel Corporation   | VORAFUSE™ M6400: Advanced Carbon Fiber Prepreg for High Performance Components with Complex Geometry, Patrick Blanchard, Ford Motor Company   | Applications and Implications of Nano-enabled and Advanced Technologies in the Automotive Industry, Jo Anne Shatkin, Vireo Advisors                                | Exploring Innovative Green Solutions for 3D Printing of Sustainable Biopolymer Blends and Biocomposites, Manju Misra, University of Guelph   |
| 11:30-12:00 | Converging Technologies - Manufacturing of Thermoplastic Composites and Injection Molding of Structural Parts, Norbert Mueller, Engel Austria   | SNAP RTM: A Cost Effective Compression RTM Variant to Manufacture Composite Components for Automotive Applications, Lolei Khoun, NRC  | Process Modeling and Flexible Manufacturing of Multi-Phase Resin Based Thermoset and Thermoplastic Prepreg, Alex Reichanadter, Purdue University  | A Novel Approach to Light Weight and Cost Effective Automotive Trim Production by Integration of Graphene from Recycled Tire Waste, Burcu Okan, Sabanci University | Composite Board Prepared with Straw, Chong Meng, University of Waterloo  |
| 12:00-12:30 | Lightweighting Components with Advanced Thermoplastic Composites, Paul Moruzi, DSM  | Low VOC and Low Odor Resin Designed for Liquid Compression Molding Application, June Wu, Ashland  | Flow Pattern Predictions & Validation for Discontinuous Prepreg Using Anisotropic Viscous Flow Simulation, Anthony Favaloro, Composites Manufacturing and Simulation Center, Purdue University 3rd Place BEST PAPER AWARD |  | Effect of Polypropylene and Flax (Flax/PP) Pellet Length Variation on the Quality of Injection Molded Products, Louis Laberge Label, Université de Montréal                          |
| 12:30-1:30  | <b>LUNCH (Hall C)</b> Sponsored by <b>SAMPE / JUDGING FOR BEST COMPOSITE PARTS</b>  |   |   |  |  |
|             | <b>In Onyx</b>  | <b>In Opal/Garnet</b>   | <b>In Emerald/Amethyst</b>  | <b>In Pearl</b>  | <b>In Platinum</b>   |
|             | <b>SESSION 26:</b>  | <b>SESSION 27: Advances in Thermoset Composites - 5/7</b>   | <b>SESSION 28: Development of Fast Processing, High Performance Composites for the Transportation Industry - 2/3</b>  | <b>SESSION 29: Enabling Technologies - 2/4</b>   | <b>SESSION 30: Sustainable Composites - 2/4</b>  |
| 1:30-2:00   |   | Integrated Structural Monitoring of Composite Materials Via Distributed Optical Sensors, Jung-Ting Tsai, Purdue University<br><i>2nd Place Best Paper Award</i>   | Routes to Characterization of Discontinuous Prepreg Mesostructure and Performance, Matthew Kant, University of Tennessee  | Innovative Laser Processing Concepts for the Challenges of Tomorrow, Andreas Buchel, Jenoptik Automotive   | Benefits of a Sustainable Celstran-Thrive Blend in Semi-Structural Applications, Aimee Dahl, Celanese  |
| 2:00-2:30   |   | Recyclable High Pressure Resin Transfer Molding (HP-RTM) Epoxy Properties and How They Compare To A Commercial System, Gleb Meirson, Fraunhofer Project Center  | Surface and Interfacial Engineering of the Vorafuse M6400/Carbon Fiber Composite, Lawrence Drzal, Michigan State University   | Advancing Seating Design Through Composites, Mathew Parkinson, BASF  | Resin Transfer Molding of Bio-Based Composite Panels, Vikram Yadama, Washington State University   |
| 2:30-3:00   |   | A New Milestone in Carbon Fiber Sheet Molding Compound, Arun Duraisamy, Fraunhofer Project Centre   | Simulations of Mechanical Properties for Discontinuous Prepreg Composites, Benjamin Denos, Purdue University - CMSC   | One-Shot® Method for the Production of a Composite and Soundproof Cover for Internal Combustion Engines, Alfonso Molaro, Sapa                                      | Sustainable Hybrid Thermoplastic Composites for Lightweighting, Ian Tivendale, University of Waterloo  |
| 3:00-4:00   | <b>EXHIBITS - Hall C (no sessions)</b>  |   |   |  |  |
| 4:00-4:30   | Uday Vaidya: Student Poster Competition Winners - Diamond Ballroom Sponsored by <b>Ford Motor Company</b>   |   |   |  |  |
| 4:30-5:30   | <b>EXHIBITS CLOSED</b><br><b>PANEL DISCUSSION 2 - Diamond Ballroom: How 3D Printing is Changing the Automotive Composites Business</b><br>Panelists: Ellen Lee (Ford), Jeff DeGrange (Impossible Objects), Kara Noack (BASF), Soydan Ozcan (ORNL) and David F. Erb Jr. (UMaine) |   |   |  |  |
| 5:30-5:45   | Reception Sponsor Address   |   |   |  |  |
| 5:45-7:15   | <b>COCKTAIL RECEPTION: Fireside Room - Sponsored by Mitsubishi Chemical America</b>   |   |   |  |  |
| 7:15        | <b>CONFERENCE ADJOURNS FOR THE DAY</b>  |   |   |  |  |

DAY 3 - FRIDAY ACCE SCHEDULE  
Final Schedule for September 7, 2018

|               |  |   |  |  |  |
|---------------|--|---|--|--|--|
| 7:00-8:00     | <b>REGISTRATION / BREAKFAST - Diamond Ballroom</b> Sponsored by <b>DuPont Biomaterials</b>   |   |  |  |  |
| 8:00-8:30     | KEYNOTE 3 - Diamond Ballroom: Jeffrey Helms, <i>GLOBAL AUTOMOTIVE SALES DIRECTOR</i> , Engineered Materials, Celanese<br>Evolving Trends in Automotive Plastics and Composites   |   |  |  |  |
|               | In Onyx  | In Opal/Garnet  | In Emerald/Amethyst  | In Pearl   | In Platinum  |
|               | <b>SESSION 31: Bonding, Joining and Finishing - 1/2</b>  | <b>SESSION 32: Advances in Thermoset Composites - 6/7</b>   | <b>SESSION 28: Development of Fast Processing, High Performance Composites for the Transportation Industry - 3/3</b>                                       | <b>SESSION 34: Enabling Technologies - 3/4</b>   | <b>SESSION 35: Sustainable Composites - 3/4</b>  |
| 8:30-9:00     | Welding of Plastics and Composites, David Grewell, Iowa State University   | Next Generation of PUPUR Overmolded Class A Interior and Exterior Composite Parts, Dan Rozelman, Hennecke                                       | Simulations Enabling Multimaterial Automotive Assemblies, Nathan Sharp, Purdue University  | New Benchmark in Continuous Fiber Thermoplastic Tailored Blank Manufacturing, Louis Kapur, Dieffenbacher North America                         | Use of Bio Sustainable Materials as Reinforcing Fillers for Plastic Parts in Specific Exterior Automotive Applications, Akshay Trivedi, Lear Corporation |
| 9:00-9:30     | Development of Rivet Fastening Process by Servo Press Machine Using Unidirectional CFRTP Rod, Takeshi Eguchi, Dai-ichi Dentsu  | High Strain-Rate Behavior of Non Crimp Fabric Composites Fabricated By HP-RTM Process, John Montesano, University of Waterloo                   | Progressive Crush Response of Discontinuous Carbon Fiber Composite Tubes, Rebecca Cutting, Purdue University   | A Systems Approach to Develop Lightweight Door System Using Fiber Reinforced Thermoplastics, Srikanth Pilla, Clemson University                | Glass Bubbles in Mineral Filled PA66 Composites for Light Weight Automotive Applications, Esra Kiziltas, Wellman   |
| 9:30-10:30    | <b>EXHIBITS - Hall C (no sessions) / BREAK</b> Sponsored by <b>Asahi Kasei Plastics</b>  |   |  |  |  |
|               | In Onyx  | In Opal/Garnet  | In Emerald/Amethyst  | In Pearl   | In Platinum  |
|               | <b>SESSION 36: Bonding, Joining and Finishing - 2/2</b>  | <b>SESSION 37: Advances in Thermoset Composites - 7/7</b>   | <b>SESSION 38: Opportunities &amp; Challenges with Carbon Composites - 1/1</b>   | <b>SESSION 39: Enabling Technologies - 4/4</b>   | <b>SESSION 40: Sustainable Composites - 4/4</b>  |
| 10:30-11:00   | Winter is Coming! A Manageable Approach to Surface Energy Measurements on Exterior Products in Extreme Temperature Conditions, Arthur Kasson, Kruss USA  | A Nondestructive Approach to Determine the Extent and Depth of Internal Damage in Carbon Fiber Laminates, Benjamin Blandford, Baylor University | Single Step Forming and Moulding of Prepreg Composites for Use in Automotive Applications, Rachel Weare, University of Warwick                             | Scaling Effects of Glass-Reinforced Epoxy in Fatigue Via HPRTM Production, Ian Swentek, Hexion   | Value-Added Biocarbon From Biomass for Cost Effective, Lightweight and Sustainable Automotive Parts, Atul Bali, Competitive Green Technologies           |
| 11:00-11:30   | Quality and Consistency of Plasma Treatments for Composite Materials, Giles Dillingham, BTG Labs   | Mechanical Behavior of Compression Molded Hybrid Composites, Alex Kravchenko, Old Dominion University   | The Design and Manufacture of Lightweight Suspension Components Using Hybrid Carbon Fibre Composite Materials, Helena Simmonds, WMG, University of Warwick | In-Process Monitoring of Induction Welding of Thermoplastic Composites Based on Fiber Optics, Michael van Tooren, University of South Carolina | Recycled Carbon Fiber Thermoplastic Compounds for Automotive Applications, Josh Ullrich, JM Polymers   |
| 11:30 - 12:30 | <b>LUNCH (DIAMOND BALLROOM)</b> Sponsored by <b>DSM</b>  |   |  |  |  |
| 12:30 - 1:30  | <b>EXHIBITS CLOSED</b><br><b>PANEL DISCUSSION 3 - Diamond Ballroom: Sustainable Materials Management and the Circular Economy in Automotive Applications</b><br>Panelists: Debbie Mielewski (Ford), Lauren Smith (GM), Jay Olson (John Deere), Mark Minnichelli (BASF), Mike Saltzberg (DuPont) and Don Wingard (Wellman/PRET) |   |  |  |  |
| 1:30-1:45     | CLOSING REMARKS & PART INNOVATION AWARDS: Alper Kiziltas and Matt Carroll, 2018 SPE ACCE Chairs  |   |  |  |  |
| 1:45          | <b>CONFERENCE ADJOURNS FOR THE YEAR</b>  |   |  |  |  |