



**AUTOMOTIVE COMPOSITES
CONFERENCE & EXHIBITION**
Novi, MI • September 6-8, 2023
Presented by SPE Automotive and Composites Divisions
WORLD'S LEADING AUTOMOTIVE
COMPOSITES FORUM

COMPOSITES THE KEY TO EV
AUTO & AIR MOBILITY



ACCE DAY 1 - Wednesday, September 6, 2023 - Schedule subject to change (Times listed are EDT)

7:30 - 8:00 AM	REGISTRATION / COFFEE / EXHIBITS OPEN			
8:00 - 8:15	OPENING REMARKS AND AWARD PRESENTATIONS: Including Best Paper and Scholarship Awards (Opal/Garnet/Onyx) - Christoph Kuhn and David Jack, 2023 SPE ACCE Co-chairs; Dana Miloaga and Mehdi Tajvidi, 2023 SPE ACCE Technical Program Co-chairs			
8:15 - 9:00	KEYNOTE ADDRESS (Opal/Garnet/Onyx) - What Does Disruptive Electrification of Transport Mean for Industrialization of Composites? - Joe Summers, Airborne UK			
9:00 - 10:00	EXHIBITS OPEN / COFFEE BREAK			
	Opal/Garnet/Onyx	Emerald/Amethyst	Gold/Copper/Granite	Silver/Bronze
	Thermoplastic Composites	Sustainable Composites	Additive Manufacturing & 3D Printing	
10:00 - 10:30	Development of a Novel Light Weight Reinforced Thermoplastic (LWRT) for Automotive Applications - Richard Kim, Hanwha Azdel	Upcycling the Impossible: Recovered Glass Fiber for a Genuine Circular Economy - David Morgan, Carbon Rivers	Investigation of Surface Characteristics on Additively Manufactured Composites - Sung Jun Choi, Purdue University	
10:30 - 11:00	Green Composites from Hop Natural Fiber and Bioplastic - Arturo Rodriguez Uribe, University of Guelph	Designing for Sustainable Content and Performance in Phenolic Sheet Molding Compound - Hugh MacDowell, Teijin Automotive Technologies	Introduction of Continuous Fiber Thermoplastic Tapes and Laminates into 3D Printed Structures - Jonathan Spiegel, Polystrand, Avient Corporation	
11:00 - 11:30	JUDGING OF STUDENT POSTERS			
11:30 AM - 12:30 PM	NETWORKING LUNCHEON - Student presentations for SAE Auto Demonstrations			
	Opal/Garnet/Onyx	Emerald/Amethyst	Gold/Copper/Granite	Silver/Bronze
	Thermoplastic Composites	Sustainable Composites	Additive Manufacturing & 3D Printing	Enabling Technologies
12:30 - 1:00	The Lightweight Solution for Underbody Protection Panels of BEVs: Glass fiber-PP Organo-sheets - Udo Steinhauer, Profol	Novel Cellulose Composites for Automotive Applications - Marton Kardos, Volkswagen Group of America, Inc.	Advancing the Use of Sandwiched Composites through Hybrid Manufacturing the Core Structures - Savannah Rose, Baylor University	Simultaneous Estimation of In-Plane Permeability and Porosity in Fiber Reinforcement - Anand Bora, Moldex3D Northern America, Inc.
1:00 - 1:30	Thermoplastic Structural Composites for Sustainable Weight Reduction of Automotive Components - Chris Johnston, Aerlyte	Sustainable Polyolefin Composites for Today and Tomorrow - Kevin George, GEON Performance Solutions	Flexible Fusion 3D: Advancing Additive Molding Fabrication for Enhanced Mechanical Properties of FDM - Alex Kravchenko, Old Dominion University	Integration of NDT into the Manufacturing Process Chain of Functionalized UD-tape Components - Aaditya Suratkar, Fraunhofer ICT
1:30 - 2:00	Restoration of Strength in Polyamide Woven Glass Fiber Organosheet After Impact Using Hot Pressing - Mohammad Nazmus Saquib, Old Dominion University	Elements of Sustainability for FRP Composites - John Schweitzer, American Composites Manufacturers Association (ACMA)		Enhancing Recycled Thermoplastic Composite Parts Using Recycled Composite Laminate Cutouts - Garam Kim, Purdue University
2:00 - 3:00	EXHIBITS OPEN / COFFEE BREAK			
	Opal/Garnet/Onyx	Emerald/Amethyst	Gold/Copper/Granite	Silver/Bronze
	Thermoplastic Composites	Sustainable Composites		Enabling Technologies
3:00 - 3:30	Use of Thermal Black as Filler in High Performance HDPE Films - Mihaela Mihai, National Research Council of Canada	Hybridized Coir/glass Fiber Reinforced Polypropylene Composites - Sanjita Wasti, University of Tennessee - Knoxville		Accelerating Sustainable Composites Manufacturing with Dielectric Sensors and Machine Learning - Alec Redmann, NETZSCH
3:30 - 4:00	Continuous Fiber Reinforced Thermoplastic Tape Laying and Consolidation for Automotive Cycle Times - Louis Kaptur, Western University	Use of Thermal Black in PLA Films for Industrial Applications - Sajjad Saeidlou, National Research Council of Canada		High Performance, Bio-based & Sustainable Sandwich Core Materials for Automotive & Air Mobility - Russell Elkin, Baltek Inc.
4:00 - 4:30	ATSP Innovations Esthorm Oligomer for Enhancing Properties of Certain Thermoplastics - Fred Deans, Allied Composite Technologies, LLC	Westlake Epoxy's Roadmap to Reduce Carbon Footprint - Kameswara Nara, Westlake Epoxy		Smart SMC Cutting and Stacking Solutions in Conjunction with Advanced SMC Production Lines - Raimond Grimm, Dieffenbacher
4:30 - 5:15	KEYNOTE ADDRESS (Opal/Garnet/Onyx) - A Role for Composites in GM's Vision for Simulation-driven Design and Sustainable Material Impact - Jason Coryell, General Motors			
5:15 - 6:30	COCKTAIL RECEPTION			
6:30	CONFERENCE ADJOURNS FOR THE DAY			

ACCE DAY 2 - Thursday, September 7, 2023 - Schedule subject to change (Times listed are EDT)

7:30 - 8:00 AM	REGISTRATION / COFFEE / EXHIBITS OPEN			
8:00 - 9:00	WELCOMING REMARKS and KEYNOTE ADDRESS (Opal/Garnet/Onyx) - An Overview of Transportation of Transportation Trends and Related Opportunities - Gregory Peterson, ASX (Airspace Experience Technologies)			
9:00 - 10:00	EXHIBITS OPEN / COFFEE BREAK			
	Opal/Garnet/Onyx	Emerald/Amethyst	Gold/Copper/Granite	Silver/Bronze
	Thermoset Composites		Modeling of Composites	Composites in Electric Vehicles
10:00 - 10:30	Effect of Starch-based Hybrid Additive on Mechanical & Thermal Properties of Epoxy-based Composites - Lynsey Baxter, MITO Material Solutions		Predicting Fatigue Responses for Polymeric Materials - Satvir Aashat, General Motors	The Interdependency of Design, Materials, and Manufacturing to Optimize a Composite Battery Solution - Gregory Poterala, Solvay
10:30 - 11:00	Snap Cure Resin for High Rate FST Rated Automotive Composites - Henry Sodano, Trimer Technologies		Intralaminar Fatigue Crack Propagation Modeling of Central Notched CFRP Composite Laminates - Arief Yudhanto, Baylor University	Lightweight Hybrid Composite Design for E/V Battery Pack Case to Enhance Safety and Productivity - Jong Hyun Kim, Hanwha Advanced Materials
11:00 - 11:30			Opportunities and Challenges of Composites Forming Simulation for Digital Product Development - Dominik Dorr, Simutence GmbH	Flame Retardant Intumescent Sheet Molding Compound for Electric Vehicle Battery Cover Application - Steven Prasciuc, Teijin Automotive Technology
11:30 AM - 12:00 PM	JUDGING OF STUDENT POSTERS			
12:00 - 1:00	NETWORKING LUNCHEON - Student presentations for SAE Auto Demonstrations			
	Opal/Garnet/Onyx	Emerald/Amethyst	Gold/Copper/Granite	Silver/Bronze
	Thermoset Composites	Carbon Composites and Reinforcements	Modeling of Composites	Composites in Electric Vehicles
1:00 - 1:30	Metal Organic Thickeners for Styrene-Free Resins in Sheet Molding Compound - Eric Martin, Fraunhofer Innovation Platform for Composites Research	Carbon Fiber from Corn-stover-derived Lignin: Effect of Molecular Weight on Processing & Properties - Sagar Kanhere, Center for Advanced Fibers and Films, Department of Chemical Engineering, Clemson University	Press Forming of E-glass Fabric Reinforced Polypropylene: A Numerical Study - Pankaj Mallick, University of Michigan - Dearborn	Development and Validation of an EMI Enhanced SMC Compound for BEV Applications - Adam Halsband, Forward Engineering North America
1:30 - 2:00	Next Generation Polyolefin Thermosets for High Volume HP-RTM Mobility Applications - Jeffery Valentage, Materia Inc.	Extrusion Deposition/Compression Molding of Hybrid Carbon/Glass Fiber Thermoplastic Oil Pans - Brian Knouff, Oak Ridge National Laboratory	Simulating the Effect of Bead Microstructure on Interlayer Adhesion in AM Extrusion-Deposition - Douglas Smith, Baylor University	Material Selection for Automotive Fire-resistant Applications - Ian Swentek, Westlake Epoxy
2:00 - 3:00	EXHIBITS OPEN / COFFEE BREAK			
	SPECIAL TOPIC - Sustainability and Vehicle End of Life (Opal/Garnet/Onyx)			
3:00 - 3:45	Circularity for End of Life Vehicles - Kari Bliss, PADNOS			
3:45 - 4:30	Recycling Plastics from End-of-Life Vehicles: The Final Frontier? - David Wagger, Institute of Scrap Recycling Industries (ISRI)			
4:30 - 5:45	PANEL DISCUSSION: Sustainability and End of Vehicle Life - Moderators: Christoph Kuhn (Volkswagen of America, Inc.), Sara Simon (Forward Engineering North America) Panelists: Eric Walker (Honda), Kari Bliss (PADNOS), David Wagger (ISRI), Mehdi Tajvidi (University of Maine), Amar Mohanty (University of Guelph), Dan Dowdall (INEOS)			
5:45 - 7:00	COCKTAIL RECEPTION			
7:00	CONFERENCE ADJOURNS FOR THE DAY			

ACCE DAY 3 - Friday, September 8, 2023 - Schedule subject to change (Times listed are EDT)

7:30 - 8:00 AM	REGISTRATION			
8:00 - 8:45	KEYNOTE ADDRESS (Opal/Garnet/Onyx) - We Don't Just Open Doors, We Lightweight Them: The Journey of Ultra-lightweight Carbon Fiber Reinforced Thermoplastic Composite Door Assembly - Ryan Hahnlen, Honda, and Srikanth Pilla, University of Delaware			
8:45 - 9:00	AWARD PRESENTATIONS: Student Poster Competition and Parts Competition Award Presentations (Opal/Garnet/Onyx): Douglas Smith, 2023 ACCE Student Poster Competition Co-chair and Keith Nagara (Dassault Systemes), Student Poster Competition Sponsor; Leonardo Simon, 2023 ACCE Parts Competition Chair			
9:00 - 10:00	EXHIBITS OPEN / COFFEE BREAK			
	Opal/Garnet/Onyx	Emerald/Amethyst	Gold/Copper/Granite	Silver/Bronze
	2023 Special Edition: Partnerships Advancing Composites in Automotive Applications: Honda North America - Clemson University	Carbon Composites and Reinforcements	Bonding, Joining & Finishing	
10:00 - 10:30	Design Development of a Lightweight Carbon Fiber Reinforced Thermoplastic Composite Automotive Door - Amit Deshpande, Center for Composite Materials at University of Delaware	Automated Foreign Object Detection for Composite Laminates Using High-Resolution Ultrasound Testing - Rifat Ara Nargis, Baylor University	Ultrasonic Welding Optimization of Continuous Carbon Fiber Thermoplastic Reinforced Composite Piles - Harry Lee, Purdue University	
10:30 - 11:00	Performance Evaluation of World's First Thermoplastic Composite Door via Finite Element Analysis - Gang Li, Clemson University	Agility and Accuracy: Phased Array vs Single-Element Ultrasonic Testing in the Characterization of Barely Visible Impact Damage in CFRP Laminates - Rachel Van Lear, Baylor University	EVO PT®: The Self-Tapping Evolution in Clamp Load Generation for Highly Engineered Plastics - Thiago Kalife, EJOT-ATF	
11:00 - 11:30	Digital Lifecycle : Rethinking Auto Product Development with Thermoplastic Composites - Sai Aditya Pradeep, Clemson Composites Center	Crack Growth Monitoring and Fatigue Analysis for CFRPs using Ultrasonic Inspection - Khaled Matalgah, Baylor University	Influence of Waterjet Cut Quality for Fabrication of Test Specimen on Mechanical Testing Results - Jacob Montrose, Purdue University	
11:30 AM - 12:00 PM	Advanced Manufacturing for Lightweight Continuous Carbon Fiber Thermoplastic Composite Door Assembly - Pal Swaminathan, Envalior			
12:00 - 12:15	CLOSING REMARKS (Opal/Garnet/Onyx) Christoph Kuhn and David Jack, 2023 SPE ACCE Co-chairs			
12:15	CONFERENCE ADJOURNS FOR THE YEAR			