Scope of 2019 Technical Program Sessions

Technical Program Co-Chairs:

- Dr. Norm Kakarala, SPE Fellow
- Dr. Alper Kiziltas, Ford Motor Company
- David Helmer, General Motors

Materials Development Session

Co-Chairs:

- Mike Balow, Asahi Kasei Plastics
- Mark Jablonka, The Dow Chemical Co.
- Peter Glenister, LyondellBasell

Session Scope:

- New developments in polyolefin resin, talc, mineral and other filler/reinforcement materials
- Innovations and new applications for high rigidity polyolefin compounds or composites with either fibrous or non-fibrous reinforcement
- New developments and innovations in impact modification
- Advancements in both traditional and novel additives and stabilizers to improve product performance

Surface Enhancements Session

Co-Chairs:

- Dr. Rose Ryntz, Ryntz & Associates, LLC
- Jeff B. Crist, Ford Motor Company
- Jim Keller, Mankiewicz Coatings, LLC

Session Scope:

- Coatings for TPO (New paint systems, Metallic paints, Clearcoats, Primers, Films)
- Visual Surface Enhancements (Colorability, TPO grades developed for improved aesthetics)
- Haptic Surface Enhancements
- Surface Performance Enhancements (Scratch and mar improvements, measurement of surface quality or durability)
• Surface Modifications (Pre-treatments, TPO grades developed for improved paint adhesion, Process developments for surface finish improvements)

• Surface Measurements (Scratch, surface energy, haptic, color, weathering or other testing).

**Interior Applications & Laminating Adhesives Session**

**Co-Chairs:**

• Sarah Gatzek, Ford Motor Company

• Hoa Pham, Freudenberg LP

• Dr. Pravin Sitaram, Haartz Corporation

**Session Scope:**

• Interiors for the Future

TPO/SEBS Skins

• TPO/TPE Coated Fabrics
• TPE/TPV Body/Glazing Seals
• TPO Airbags doors, Chutes and Ramps
• Polyolefin Foams
• Natural Fiber reinforced panels
• Foams/Core Back/Two Shot Molding methods
• Evolution of Trim Panels in Automotive Interiors
• Headliners
• Acoustic Opportunities for TPO and TPE
• Soft Touch/Two Shot TPE
• Role for graphene/conductive materials in interiors
• Flexible smart surfaces for automotive interiors
• Next generation coatings for TPO substrates
• Anti-microbial Surfaces
• Laminating Adhesives for Automotive Interiors
**Lightweighting of Polyolefin Parts Session**

**Co-Chairs:**

- Michael Shoemaker, Borealis
- Nadeem A. Bokhari, Ph.D., Sumitomo Chemical Group

**Session Scope:**

- Lightweighting Developments for TPO’s.
- Molding Process Options resulting in Lightweighting of parts.
- TPO Success Stories – Replacement with weight reduction of Metal & Other Plastics to TPO
- Actual case study/Project - Design, tooling, process and material perspectives.
- Reinforcement ingredient strategies to Lightweight parts
- Formulation/property/process optimization studies leading to lightweighting of TPO parts.
- Enabling molding/processing Technologies for lightweighting with TPO formulations.

**Process Developments & Simulations Session**

**Co-Chairs:**

- Dr. Suresh Shah, Delphi Corp. (Retired), SPE Automotive Division Councilor
- Dr. Li Lu, Ford Motor Company

**Session Scope:**

- Weight Savings Technologies
- Process optimization approaches to stay competitive.
- Part molding techniques for optimizing efficiency.
- Tooling approaches for optimal surface appearance.
- Part forming innovations by injection and blow molding, extrusion, compounding and thermoforming.
- Effect of predictive modeling and process simulation tools such as moldflow/CAE/FEA on program timing and cost
- Material Modeling, testing, and characterization of TPO
- Performance Simulation for Stiffness and Strength, Durability and Fatigue, Crash Safety, and joints
Bio Based & Recycled Materials Session

Co-Chairs

- Susan Kozora, IAC Group
- Dr. Alper Kiziltas, Ford Motor Company.

Session Scope:

- Quality and reliability of bio-based or recycled materials.
- Applications using of bio-based or recycled materials.
- Design for sustainability/recyclability.
- Processability of bio-based or recycled materials.
- Challenges for increased use of bio-based or recycled materials.
- Advances in bio-based and/or recycled materials.
- VOC, odor reduction strategies and antimicrobial solutions for bio-based and/or recycled materials.

Interior Emissions Session

Session Chair

- Dr. Laura Shereda, Asahi Kasei Plastics North America

Session Scope:

- Vehicle Indoor Air Quality (VIAQ) – odor, fog, VOCs
- Manufacturing advances to reduce emissions or novel new ingredients for reduction of VOCs
- Emissions testing methodology (chamber testing, electronic nose)
- Global testing specifications and legislative changes effecting VIAQ
Additive Manufacturing (3D Printing) Session

Co-Chairs:

• Kurt Anthony, Washington Penn Plastic Co., Inc.
• Dr. Suresh Shah, Delphi Corp. (Retired), SPE Automotive Division Councilor
• Nihir Bhuva, Asahi Kasei Plastics

Session Scope:

• Overview and advances in additive manufacturing equipment technologies.
• Rapid prototyping evolutions including 3D printing technologies.
• New material innovation/development for unfilled and filled systems.
• Current and future applications.
• Using Additive Manufacturing technology to improve injection mold tooling performance.
• Impacting product development and support through additive manufacturing.