



1:30 pm - 4:00 pm

1:30 pm - 2:00 pm

2:00 pm - 2:30 pm

2:30 pm - 3:00 pm

**New Technology Forum- Innovation in Packaging**

White River C/D

Moderator: Mark Spalding

Driving Sustainability Through Value Chain Collaboration and Packaging Innovations

Rajen Patel, Fellow, Dow Chemical Company

Innovation and Trends in Rigid Plastic Packaging

Laurie Goetz, Director of Product Development, Amcor

Trends in Modified Atmosphere Packaging

Eva Almenar, Associate Professor, Michigan State University

3:00 pm - 3:30 pm	Modeling to Predict Application Performance of Polyethylene Films
3:30 pm - 4:00 pm	Pavan Valavala, Mechanical Designer, Dow Chemical Company Trends in Flexible Packaging
1:30 pm - 5:30 pm	James McKirahan, Assistant Professor, Indiana State University <b>Extrusion- Process Modeling I</b> JW Grand Ballroom 7 Moderator: Deep Samanta Keynote: Overview of Numerical Engineering contributions on Extrusion processes optimisation
1:30 pm - 2:30 pm	
2:30 pm - 3:00 pm	Philippe david, General Manager, SCC Simulation of Co-Rotating Fully Intermeshing Twin-Screw Compounding Extruders: Alternatives for Process Design
3:00 pm - 3:30 pm	Paul Andersen, Coperion Effect of Extensional Viscosity, Elasticity and Die Exit Stress State on Neck-In Phenomenon During Extrusion Film Casting: Theoretical Study
3:30 pm - 4:00 pm	Martin Zatloukal, Professor, Tomas Bata University in Zlin The Effect of Flow Channel Aspect Ratio on Layer Uniformity in Flat Extrusion Dies
4:00 pm - 4:30 pm	Sam Iuliano, Chief Technologist, Nordson EDI Automatic Optimization of Extrusion Dies
4:30 pm - 5:00 pm	Mahesh Gupta, Plastic Flow, LLC Effects of Viscoelasticity on Film Die Flow Uniformity
1:30 pm - 5:30 pm	Hyunwoo Kim, The Dow Chemical Company <b>Extrusion- Pharmaceutical Extrusion</b> JW Grand Ballroom 8 Moderator: Michael Thompson Keynote: Polymers and Polymer Processing as Enablers of Drug Delivery
1:30 pm - 2:30 pm	
2:30 pm - 3:00 pm	Graciela Terife, Senior Scientist, Merck Rheology Optimized Processing Temperature for Preparation of Amorphous Solid Dispersion Via Hot Melt Extrusion(HME)
3:00 pm - 3:30 pm	Fengyuan Yang, Merck MEASUREMENT OF HOT MELT EXTRUSION THERMAL RESIDENCE DISTRIBUTIONS

3:30 pm - 4:00 pm	Francis Flanagan, Merck & Co. Inc. STUDY OF KETOPROFEN'S DISSOLUTION IN POLYETHYLENE OXIDE FORMULATIONS PREPARED BY HOT MELT EXTRUSION
4:00 pm - 4:30 pm	Laura Restrepo Uribe, Instituto de Capacitación e Investigación del Plástico y del Caucho - ICIPC MODELING OF DISPERSIVE MIXING IN A TWIN-SCREW EXTRUDER WITH THREE PARAMETER RESIDENCE STRESS DISTRIBUTION
4:30 pm - 5:00 pm	Benjamin Dryer, University of Maryland HEAT ACTIVATED DRY GRANULATION WITHIN THE TWIN SCREW GRANULATOR
5:00 pm - 5:30 pm	Michael Thompson, McMaster University THE EFFECT OF HOT MELT EXTRUSION OPERATING CONDITIONS ON DEGRADATION AND WATER CONTENT OF A PHARMACEUTICAL SOLID DISPERSION
1:30 pm - 4:00 pm	Benjamin Dryer, University of Maryland <b>Joining of Plastics and Composites- Adhesive Joining</b> Room 102 Moderator: Sergio Amancio
1:30 pm - 2:00 pm	Bonding of Plastics
2:00 pm - 2:30 pm	George Ritter, EWI Advances In Adhesive Technology for Bonding Liquid Silicone Rubbers to Plastics and Metals
2:30 pm - 3:00 pm	Paul Wheeler, Technology Leader, In-Mold Bonding Products, LORD Corporation Time is Money: High Speed Adhesive Solutions for Instant Bonding
3:00 pm - 3:30 pm	Timothy Holmes, Application Engineer , Henkel Multicomponent Injection Molding Of Thermoplastics And Liquid Silicone Rubber (LSR) – Either Cured By Heat Or UV Light
3:30 pm - 4:00 pm	Christof Schlitt, Ph.D Student, University of Kassel/ Germany THE ULTIMATE THERMAL TRANSITIONS AND ISOTHERMAL CURING BEHAVIORS OF A TWO-PART EPOXY-AMINE ADHESIVE SYSTEM: EFFECTS OF DIFFERENT MIXERS
1:30 pm - 5:00 pm	Xiaoping Guo, St Jude Medical Inc. <b>Product Design and Development Session</b>

1:30 pm - 2:00 pm	Room 312 Moderators: Mark MacLean-Blevins Albert McGovern Application of Triz Tools To Develop a New Plastic Chemical Dispenser
2:00 pm - 2:30 pm	Ivan Lopez, ICIPC Injection Molded Asymmetric Spur Gear Tooth Deflection: Numerical and Experimental Investigation
2:30 pm - 3:00 pm	Johnney Mertens, Ph.D Student, Indian Institue of Technology Eye Opening Impact of Simple Design Errors on Product Costs
3:00 pm - 3:30 pm	Vikram Bhargava, Consultant and Author CASE STUDY OF UTILIZING ROUND-TABLE PLASTIC DESIGN REVIEWS TO PROMOTE PLASTICS ENGINEERING EXCELLENCE
3:30 pm - 4:00 pm	David Tucker, HP Development of an Injection Molded Automotive Hoop Spoiler
4:00 pm - 4:30 pm	Zhihao Zuo, Autodesk INVESTIGATION ON WARPAGE AND SINK MARK FOR INJECTION MOULDED PARTS USING TAGUCHI METHOD
4:30 pm - 5:00 pm	Omar Mohamed, Swinburne University of Technology Experimental Co-relation of Vibration Welded Bead's Burst Pressure using Finite Element Techniques
1:30 pm - 4:30 pm	Praveen S R, IIT, Chicago <b>Thermoplastic Elastomers Session</b> White River I
1:30 pm - 2:00 pm	Moderator: Armando Sardanopoli Thermoplastic Elastomers in Sporting Goods
2:00 pm - 2:30 pm	Jeffrey Wiggins, Director, School of Polymers and High Performance Materials, University of Southern Mississippi Development of a New Styrenic Elastomer Using Renewable Monomer
2:30 pm - 3:00 pm	Hoan Tran, Kuraray America Inc. Higspeed tensile testing of polymer materials considering force-oscillations and its origin
3:00 pm - 3:30 pm	Jan Klein, Institute of Plastics Processing at RWTH Aachen University SCRATCH BEHAVIOR OF POLYURETHANE ELASTOMERS WITH VARIATION IN

	SOFT SEGMENT TYPE
3:30 pm - 4:00 pm	Shuang Xiao, Texas A&M University THERMOPLASTIC POLYURETHANE CHITOSAN / CELLULOSE NANOCRYSTALS COMPOSITES FOR WOUND HEALING APPLICATIONS
4:00 pm - 4:30 pm	Diego Pedrazzoli, Research Associate, Case Western Reserve University Tutorial: Fundamentals of Styrenic Block Copolymer TPEs
1:30 pm - 4:00 pm	Mark Berard, Dow Chemical Company <b>Applied Rheology-Flow analysis and Rheometry</b> Room 309/310
1:30 pm - 2:00 pm	Flow of Molten Plastics: Puzzles and Problems
2:00 pm - 2:30 pm	John Dealy, Professor Emeritus, McGill University A new evolution equation for polymer coils With non-affine rotation
2:30 pm - 3:00 pm	Donggang Yao, Georgia Tech Evaluation of Branched Polypropylene Degradation By Using Different Constitutive Equations
3:00 pm - 3:30 pm	Martin Zatloukal, Professor, Tomas Bata University in Zlin Analytical Solutions of Nonlinear Constitutive Equation for Large Amplitude Oscillatory Shear (LAOS) Flow
3:30 pm - 4:00 pm	Jung-Eun Bae, Kyungpook National University USING INFRARED TEMPERATURE SENSORS TO STUDY TEMPERATURE CHANGES OF PVC DURING FLOW WITH THE INCORPORATION OF MELT ROTATION TECHNOLOGY
1:30 pm - 4:00 pm	Stacey Johnson, Penn State Erie <b>Color &amp; Appearance Session II</b> Room 302/303 Moderator: Mark Freshwater Keynote: Innovations and Trends in Coloration
1:30 pm - 2:30 pm	
2:30 pm - 3:00 pm	Diane Langer, Technical Manager for Transportation, Industrial Coatings & Plastics Technical Service, BASF Accelerated Weathering Test Standards for Plastics: Why Don't They Work?
3:00 pm - 3:30 pm	Sean Fowler, Q-Lab Corporation High Gloss "Piano Black" Acetal Copolymer

3:30 pm - 4:00 pm	Bruce Mulholland, Celanese High Performance Inorganic Pigments
1:30 pm - 4:00 pm	Mark Ryan, Marketing Manager, Shepherd color <b>Injection Molding + Mold technologies Joint Session</b> White River A Moderator: Glenn Starkey Inversed Cooling Channel Design for Injection Moulds based on local Cooling Demand and Material Properties
1:30 pm - 2:00 pm	
2:00 pm - 2:30 pm	Philipp Nikoleizig, Institute of Plastics Processing at RWTH Aachen University Evaluation of Methodologies Utilized to Determine the Pressure Drop Throughout an Injection Mold
2:30 pm - 3:00 pm	David Hoffman, Senior Instructor, Plastics Education & Training , American Injection Molding Institute Keynote
3:00 pm - 3:30 pm	Kym Conis 3D Printing Offers a Giant Step for Short Run Injection Molds
3:30 pm - 4:00 pm	Gil Robinson, Senior Applications Engineer, Stratasys Automated generation of venting system in plastic injection mold
1:30 pm -5:00 pm	Hou Binkui, Huazhong University of Science & Technology <b>Composites-Innovation</b> White River G Moderator: Dale Brosius Composites: Holding our World Together with Plastics – New Challenges and Opportunities
1:30 pm - 2:30 pm	
2:30 pm - 3:30 pm	Kenneth Reifsnyder, University of Texas Arlington Design, Modeling and Simulation in Composites Manufacturing
3:30 pm - 5:00 pm	R. Byron Pipes IACMI(Institute for Advanced Composites Manufacturing Innovation) Progress to Date  Dale Brosius, Chief Commercialization Officer, IACMU Ray Boeman, Oak Ridge National Laboratory Michael Connolly, Program Manager, Huntsman Ron Steuterman

1:00 pm - 5:00 pm	John Busel, Vice President, Composites Growth Initiative, American Composites Manufacturer's Association Craig Schmidter, Evonik Corporation <b>Polymer Modifiers and Additives Session</b> Room 305/306 Moderator: Raj Maddikeri
1:00 pm - 1:30 pm	Development and Application Studies on a Novel Kind of Low Alkaline Hindered Amine Light Stabilizer encapsulated in Porous Polypropylene
1:30 pm - 2:00 pm	Chunrui Sheng, R&D Engineer, Sunshow (Yantai) Specialty Chemicals Co. Ltd Impact of Processing Method and Loading of Active scavenger (Linoleic Acid) on Properties of Polyethylene Terephthalate
2:00 pm - 2:30 pm	Michael Miranda, utoledo Evaluation of LCP as an additive for PBT to improve processing and properties
2:30 pm - 3:00 pm	Anshuman Shrivastava, Resin Development Engineer, Delphi Packard New Synergisic GRAS Stabilizer for Polyolefins
3:00 pm - 3:30 pm	Robert Sherman, Polymer Stabilization Scientist, Baerlocher Using ZeMac <sup>®</sup> Copolymers To Increase Performance and Processibility of High RV Nylons
3:30 pm - 4:00 pm	Mike Drzewinski, Vertellus Improving PLA-based Material for 3D-Printers Using Fused Deposition Modeling (FDM)
4:00 pm - 4:30 pm	Saied Kochesfahani, IMERYS EFFECTS OF SMALL RANGE COLOR (PIGMENT) CONCENTRATION LEVELS ON PLASTIC INJECTION MOLDED PARTS
4:30 pm - 5:00 pm	Akhilesh Nimmagadda, Mechanical Engineer, Roche Diagnostics-eTeam Inc, The effect of high solvating plasticizers on fusion behavior and mechanical properties of pvc-based luxury floor tiles.
1:30 pm - 4:30 pm	Brad Farrell, R&D applications Intern, Emerald Performance Materials <b>Engineering Properties and Structure: Composites</b> Room 103/104 Moderator: Jason Lyons Moderator: Hoang Pham
1:30 pm - 2:00 pm	Recent developments in nano composite materials  Satish Kumar, Georgia Institute of Technology

2:00 pm - 2:30 pm	High Performance Organic/Inorganic Hybrid Nanocoatings
2:30 pm - 3:00 pm	Luyi Sun, University of Connecticut Study on Orientation and Distribution of Metal Fiber in Epoxy Substrate by Using Electromagnetic Control
3:00 pm - 3:30 pm	Kuan-Hua Lee, Chung Yuan Christian University Graphene Nanoplatelet Polymer Composites: Challenges and Opportunities
3:30 pm - 4:00 pm	Lawrence Drzal, Michigan State University FABRICATION, MORPHOLOGICAL EVALUATION, AND CHARACTERIZATION OF SEMICONDUCTING OXIDE NANOFIBERS FROM GAS JET FIBER SPINNING
4:00 pm - 4:30 pm	Monoj Ghosh, The University of Akron Electrical conductivity and humidity sensing properties of PVA/CNT nanocomposites
1:30 pm - 4:30 pm	Mohammadmehdi Aghelinejad, York University <b>Thermoplastics Materials and Foams: New applications of thermoplastics and foams</b>
1:30 pm - 2:00 pm	White River J Moderator: Hani Naguib Fabrication of Hybrid Polymeric-Metallic Foams As Scaffolds for Bone Tissue Engineering
2:00 pm - 2:30 pm	Anil Mahapatro, Wichita State University Design, Fabrication and Characterization of Highly Active Piezoelectric Foams Based on a Honeybomb Structure
2:30 pm - 3:00 pm	Changchun Zeng, Florida State University On the Successful Fabrication of Auxetic Polyurethane Foams: Key Insights From Materials Science and Polymer Processing Perspectives
3:00 pm - 3:30 pm	Changchun Zeng, Florida State University EFFECT OF VOID FRACTION ON DIELECTRIC PROPERTIES OF INJECTION-MOLDED POLYPROPYLENE/MWCNT FOAMS
3:30 pm - 4:00 pm	Amir Ameli, Washington State University Standard Reference Materials for the Polymers Industry
4:00 pm - 4:30 pm	Walter McDonough, NIST Reducing Thermal Conductivity of Polymeric Foams with High Volume Expansion Made From Polystyrene/Expanded Graphite



1:30 pm - 5:30 pm	<p>Minh Phuong Tran, Post-Doctoral, University of Toronto</p> <p><b>Failure Analysis &amp; Prevention and Plastic Pipe &amp; Fittings: Failure Prevention and Slow Crack Growth</b></p> <p>White River H</p> <p>Moderator: Brian Ralston</p>
1:30 pm - 2:30 pm	<p>Limitations of Existing Standards in Assessment of PE Pressure Pipe Lifetime in Brittle Fracture</p>
2:30 pm - 3:00 pm	<p>Alexander Chudnovsky</p> <p>Simulation of Fatigue Crack Growth of HDPE Using Crack Layer Theory; Effect of Loading Frequency</p>
3:00 pm - 3:30 pm	<p>Jung-Wook Wee, Korea University, Seoul, Republic of Korea</p> <p>SLOW CRACK GROWTH FRACTURE RESISTANCE PARAMETER EVALUATION OF PARENT AND JOINT HDPE MATERIALS</p>
3:30 pm - 4:00 pm	<p>Yunior Hioe, Engineering Mechanics Corporation of Columbus</p> <p>Failure Analysis of a Plastic Toy Helicopter</p>
4:00 pm - 4:30 pm	<p>Dale Edwards, Senior Managing Consultant, ESI</p> <p>CASE STUDIES OF PLASTIC FAILURES ASSOCIATED WITH METAL FASTENERS</p>
4:30 pm - 5:00 pm	<p>Jeffrey Jansen, Senior Managing Engineer and Partner, The Madison Group</p> <p>EVALUATING THE EFFECT OF NANOCCLAY AND RECYCLED HDPE ON STRESS CRACKING IN HDPE USING J-INTEGRAL APPROACH</p>
5:15 pm - 5:30 pm	<p>Suk Joon Na, Drexel University</p> <p>Presentation of the Myer Ezrin Best Paper Award (FAPSIG)</p>
1:30 pm - 4:30 pm	<p><b>Additive Manufacturing/3D Session II</b></p> <p>Room 101</p>
1:30 pm - 2:30 pm	<p>AM Pres/Future -Keynote</p>
2:30 pm - 3:00 pm	<p>Todd Grimm, President, T.A. Grimm &amp; Associates</p> <p>Qualifications / Training</p>
3:00 pm - 3:30 pm	<p>Chris Krampitz, Lead, Innovation and Strategy Development, Underwriters Laboratories, Inc.</p> <p>Part Quality / Inspections</p>
3:30 pm - 4:00 pm	<p>Rob Hassold, Founder and CEO, Cimquest</p> <p>Microlattice</p>

Bamidele Ali, Vice President of Business Development, Architected Material