



1:30 pm - 4:00 pm

New Technology Forum- Innovation in Packaging

White River C/D

Moderator: Mark Spalding

1:30 pm - 2:00 pm

Driving Sustainability Through Value Chain Collaboration and Packaging Innovations

2:00 pm - 2:30 pm

Rajen Patel, Fellow, Dow Chemical Company

Innovation and Trends in Rigid Plastic Packaging

2:30 pm - 3:00 pm

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

Extrusion- Process Modeling I

JW Grand Ballroom 7

Moderator: Deep Samanta

1:30 pm - 2:30 pm

Keynote: Overview of Numerical Engineering contributions on Extrusion processes optimisation

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

Extrusion- Pharmaceutical Extrusion

JW Grand Ballroom 8

Moderator: Michael Thompson

1:30 pm - 2:30 pm

Keynote: Polymers and Polymer Processing as Enablers of Drug Delivery

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 Joining of Plastics and Composites- Adhesive Joining Room 102
1:30 pm - 2:00 pm	Moderator: Sergio Amancio 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. Product Design and Development Session

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 Institute 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 Thermoplastic Elastomers Session 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. Highspeed 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
Applied Rheology-Flow analysis and Rheometry
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
Color & Appearance Session II
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 Injection Molding + Mold technologies Joint Session White River A
1:30 pm - 2:00 pm	Moderator: Glenn Starkey Inversed Cooling Channel Design for Injection Moulds based on local Cooling Demand and Material Properties
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 Composites-Innovation White River G
1:30 pm - 2:30 pm	Moderator: Dale Brosius Composites: Holding our World Together with Plastics – New Challenges and Opportunities
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 Polymer Modifiers and Additives Session 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 Synergistic GRAS Stabilizer for Polyolefins
3:00 pm - 3:30 pm	Robert Sherman, Polymer Stabilization Scientist, Baerlocher Using ZeMac [®] 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 Engineering Properties and Structure: Composites 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
Thermoplastics Materials and Foams: New applications of thermoplastics and foams

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

Bamidele Ali, Vice President of Business Development, Architected Material