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 Rajen Patel, Fellow, Dow Chemical Company
2:00 pm - 2:30 pm	Innovation and Trends in Rigid Plastic Packaging Laurie Goetz, Director of Product Development, Amcor
2:30 pm - 3:00 pm	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
	Pavan Valavala, Mechanical Designer, Dow Chemical Company
3:30 pm - 4:00 pm	Trends in Flexible Packaging
	James McKirahan, Assistant Professor, Indiana State University
1:30 pm - 5:30 pm	**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
	Philippe david, General Manager, SCC
2:30 pm - 3:00 pm	Simulation of Co-Rotating Fully Intermeshing Twin-Screw Compounding Extruders: Alternatives for Process Design
	Paul Andersen, Coperion
3:00 pm - 3:30 pm	Effect of Extensional Viscosity, Elasticity and Die Exit Stress State on Neck-In Phenomenon During Extrusion Film Casting: Theoretical Study
	Martin Zatloukal, Professor, Tomas Bata University in Zlin
3:30 pm - 4:00 pm	The Effect of Flow Channel Aspect Ratio on Layer Uniformity in Flat Extrusion Dies
	Sam Iuliano, Chief Technologist, Nordson EDI
4:00 pm - 4:30 pm	Automatic Optimization of Extrusion Dies
	Mahesh Gupta, Plastic Flow, LLC
4:30 pm - 5:00 pm	Effects of Viscoelasticity on Film Die Flow Uniformity
	Hyunwoo Kim, The Dow Chemical Company
1:30 pm - 5:30 pm	**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
	Graciela Terife, Senior Scientist, Merck
2:30 pm - 3:00 pm	Rheology Optimized Processing Temperature for Preparation of Amorphous Solid Dispersion Via Hot Melt Extrusion(HME)
	Fengyuan Yang, Merck
3:00 pm - 3:30 pm	MEASUREMENT OF HOT MELT EXTRUSION THERMAL RESIDENCE DISTRIBUTIONS

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

Room 312
Moderators: Mark MacLean-Blevins
Albert McGovern

1:30 pm - 2:00 pm
Application of Triz Tools To Develop a New Plastic Chemical Dispenser

Ivan Lopez, ICIPC

2:00 pm - 2:30 pm
Injection Molded Asymmetric Spur Gear Tooth Deflection: Numerical and Experimental Investigation

Johnney Mertens, Ph.D Student, Indian Institue of Technology

2:30 pm - 3:00 pm
Eye Opening Impact of Simple Design Errors on Product Costs

Vikram Bhargava, Consultant and Author

3:00 pm - 3:30 pm
CASE STUDY OF UTILIZING ROUND-TABLE PLASTIC DESIGN REVIEWS TO PROMOTE PLASTICS ENGINEERING EXCELLENCE

David Tucker, HP

3:30 pm - 4:00 pm
Development of an Injection Molded Automotive Hoop Spoiler

Zhihao Zuo, Autodesk

4:00 pm - 4:30 pm
INVESTIGATION ON WARPAGE AND SINK MARK FOR INJECTION MOULDED PARTS USING TAGUCHI METHOD

Omar Mohamed, Swinburne University of Technology

4:30 pm - 5:00 pm
Experimental Co-relation of Vibration Welded Bead's Burst Pressure using Finite Element Techniques

Praveen S R, IIT, Chicago

1:30 pm - 4:30 pm
Thermoplastic Elastomers Session
White River I
Moderator: Armando Sardanopoli

1:30 pm - 2:00 pm
Thermoplastic Elastomers in Sporting Goods

Jeffrey Wiggins, Director, School of Polymers and High Performance Materials, University of Southern Mississippi

2:00 pm - 2:30 pm
Development of a New Styrenic Elastomer Using Renewable Monomer

Hoan Tran, Kuraray America Inc.

2:30 pm - 3:00 pm
Highspeed tensile testing of polymer materials considering force-oscillations and its origin

Jan Klein, Institute of Plastics Processing at RWTH Aachen University

3:00 pm - 3:30 pm
SCRATCH BEHAVIOR OF POLYURETHANE ELASTOMERS WITH VARIATION IN

SOFT SEGMENT TYPE

Shuang Xiao, Texas A&M University
3:30 pm - 4:00 pm THERMOPLASTIC POLYURETHANE CHITOSAN / CELLULOSE NANOCRYSTALS COMPOSITES FOR WOUND HEALING APPLICATIONS

Diego Pedrazzoli, Research Associate, Case Western Reserve University
4:00 pm - 4:30 pm Tutorial: Fundamentals of Styrenic Block Copolymer TPEs

Mark Berard, Dow Chemical Company
1:30 pm - 4:00 pm **Applied Rehology-Flow analysis and Rheometry**
Room 309/310
1:30 pm - 2:00 pm Flow of Molten Plastics: Puzzles and Problems

John Dealy, Professor Emeritus, McGill University
2:00 pm - 2:30 pm A new evolution equation for polymer coils With non-affine rotation

Donggang Yao, Georgia Tech
2:30 pm - 3:00 pm Evaluation of Branched Polypropylene Degradation By Using Different Constitutive Equations

Martin Zatloukal, Professor, Tomas Bata University in Zlin
3:00 pm - 3:30 pm Analytical Solutions of Nonlinear Constitutive Equation for Large Amplitude Oscillatory Shear (LAOS) Flow

Jung-Eun Bae, Kyungpook National University
3:30 pm - 4:00 pm USING INFRARED TEMPERATURE SENSORS TO STUDY TEMPERATURE CHANGES OF PVC DURING FLOW WITH THE INCORPORATION OF MELT ROTATION TECHNOLOGY

Stacey Johnson, Penn State Erie
1:30 pm - 4:00 pm **Color & Appearance Session II**
Room 302/303
Moderator: Mark Freshwater
1:30 pm - 2:30 pm Keynote: Innovations and Trends in Coloration

Diane Langer, Technical Manager for Transportation, Industrial Coatings & Plastics Technical Service, BASF
2:30 pm - 3:00 pm Accelerated Weathering Test Standards for Plastics: Why Don't They Work?

Sean Fowler, Q-Lab Corporation
3:00 pm - 3:30 pm High Gloss "Piano Black" Acetal Copolymer

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

	John Busel, Vice President, Composites Growth Initiative, American Composites Manufacturer's Association Craig Schmidter, Evonik Corporation
1:00 pm - 5:00 pm	**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
	Chunrui Sheng, R&D Engineer, Sunshow (Yantai) Specialty Chemicals Co. Ltd
1:30 pm - 2:00 pm	Impact of Processing Method and Loading of Active scavenger (Linoleic Acid) on Properties of Polyethylene Terephthalate
	Michael Miranda, utoledo
2:00 pm - 2:30 pm	Evaluation of LCP as an additive for PBT to improve processing and properties
	Anshuman Shrivastava, Resin Development Engineer, Delphi Packard
2:30 pm - 3:00 pm	New Synergisitc GRAS Stabilizer for Polyolefins
	Robert Sherman, Polymer Stabilization Scientist, Baerlocher
3:00 pm - 3:30 pm	Using ZeMac? Copolymers To Increase Performance and Processibility of High RV Nylons
	Mike Drzewinski, Vertellus
3:30 pm - 4:00 pm	Improving PLA-based Material for 3D-Printers Using Fused Deposition Modeling (FDM)
	Saied Kochesfahani, IMERYS
4:00 pm - 4:30 pm	EFFECTS OF SMALL RANGE COLOR (PIGMENT) CONCENTRATION LEVELS ON PLASTIC INJECTION MOLDED PARTS
	Akhilesh Nimmagadda, Mechanical Engineer, Roche Diagnostics-eTeam Inc,
4:30 pm - 5:00 pm	The effect of high solvating plasticizers on fusion behavior and mechanical properties of pvc-based luxury floor tiles.
	Brad Farrell, R&D applications Intern, Emerald Performance Materials
1:30 pm - 4:30 pm	**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
	Luyi Sun, University of Connecticut
2:30 pm - 3:00 pm	Study on Orientation and Distribution of Metal Fiber in Epoxy Substrate by Using Electromagnetic Control
	Kuan-Hua Lee, Chung Yuan Christian University
3:00 pm - 3:30 pm	Graphene Nanoplatelet Polymer Composites: Challenges and Opportunities
	Lawrence Drzal, Michigan State University
3:30 pm - 4:00 pm	FABRICATION, MORPHOLOGICAL EVALUATION, AND CHARACTERIZATION OF SEMICONDUCTING OXIDE NANOFIBERS FROM GAS JET FIBER SPINNING
	Monoj Ghosh, The University of Akron
4:00 pm - 4:30 pm	Electrical conductivity and humidity sensing properties of PVA/CNT nanocomposites
	Mohammadmehdi Aghelinejad, York University
1:30 pm - 4:30 pm	**Thermoplastics Materials and Foams: New applications of thermoplastics and foams**
	White River J
	Moderator: Hani Naguib
1:30 pm - 2:00 pm	Fabrication of Hybrid Polymeric-Metallic Foams As Scaffolds for Bone Tissue Engineering
	Anil Mahapatro, Wichita State University
2:00 pm - 2:30 pm	Design, Fabrication and Characterization of Highly Active Piezoelectric Foams Based on a Honeybomb Structure
	Changchun Zeng, Florida State University
2:30 pm - 3:00 pm	On the Successful Fabrication of Auxetic Polyurethane Foams: Key Insights From Materials Science and Polymer Processing Perspectives
	Changchun Zeng, Florida State University
3:00 pm - 3:30 pm	EFFECT OF VOID FRACTION ON DIELECTRIC PROPERTIES OF INJECTION-MOLDED POLYPROPYLENE/MWCNT FOAMS
	Amir Ameli, Washington State University
3:30 pm - 4:00 pm	Standard Reference Materials for the Polymers Industry
	Walter McDonough, NIST
4:00 pm - 4:30 pm	Reducing Thermal Conductivity of Polymeric Foams with High Volume Expansion Made From Polystyrene/Expanded Graphite

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

Bamidele Ali, Vice President of Business Development, Architected Material