8:00 am - 11:00 am	**Extrusion- Tutorials I** JW Grand Ballroom 7 Moderator: Adam Dreiblatt
8:00 am - 8:30 am	Specification of Twin Screw Extruders Adam Dreiblatt, Director of Process Technology, CPM Century Extrusion
8:30 am - 9:30 am	Melting Mechanisms: Single vs. Co-rotating Twin-screw Extruders Gregory Campbell, Castle Associates Paul Andersen, Coperion
9:30 am - 10:00 am	SPECIFIC MECHANICAL ENERGY AS A PARAMETER FOR CORRELATING PROCESS CHARACTERISTICS AND MATERIAL RESPONSE IN MELT

COMPOUNDING AND REACTIVE EXTRUSION OPERATIONS

Joe Golba, Lead Scientist - Reactive Extrusion, PolyOne Corporation
10:00 am - 10:30 am Model-Based Inferential Sensing of Melt Flow Rate In Polymer Compounding Operations

Costas Tzoganakis, Professor, University of Waterloo
10:30 am - 11:00 am Applying Ludovic 1D Twin Screw Extrusion Simulation for the Analysis and Scale-Up of Melt Compounding and Reactive Extrusion Processes

Jane Spikowski, Senior R&D Engineer, PolyOne Corporation

8:00 am - 11:00 am **Extrusion- Tutorials II**
JW Grand Ballroom 8

8:00 am - 8:30 am A SHORT REVIEW OF RHEOLOGY PRINCIPLES OF MOLTEN POLYMERS FOR EXTRUSION APPLICATIONS

Olivier Catherine, Technical Director, Cloeren
8:30 am - 9:00 am A New Software for Optimization of Extrusion Dies

Mahesh Gupta, Michigan Tech University
9:00 am - 9:30 am Understanding Materials and Equipment as a Film Processor

Karen Xiao, Celgard, LLC
9:30 am - 10:00 am Compounding Process 3D Simulation Tutorial

Philippe david, General Manager, SCC
10:00 am - 10:30 am Fundamental of Single Screw Extruders

Hassan Eslami, Macro Engineering and Technology
10:30 am - 11:00 am Trouble shooting Multilayer coextrusion systems

Eldridge Mount III

8:30 am - 10:30 am **New Technology Forum- Macromolecules in Medical and Healthcare Applications**
White River C/D
Moderator: Len Czuba

8:30 am - 9:00 am The Future of Plastics in Orthopedics

Jordan Freedman, Research Manager - Biomaterials, Zimmer Biomet, Inc.
9:00 am - 9:30 am The Development of an Artificial Meniscus Using Medical Grade Plastics

Jack Farr, Vice President, Clinical and Regulatory Affairs, Active Implants
9:30 am - 10:00 am The Red Queen: Antimicrobial Challenges in Medical Devices

	Peter Gabrielle, Vice President, Research and Development, Secant Medical
10:00 am - 10:30 am	Novel Applications of Polymers for Medical and Pharmaceutical Product Concept
	Vipul Dave, Enterprise Resin Director & Fellow, Plastics Category, Medical Device Supply Chain, Johnson & Johnson
8:30 am - 11:30 am	**Alloys and Blends- Design, Performance and Characterization of Advanced Engineering Blends**
	Room 305/306
	Moderator: Rubinder Kaur Lakhman
8:30 am - 9:00 am	Comparative Analysis of Low-Smoke, Zero-Halogen Compounds for Wire and Cable Applications
	Jon Malinoski, General Cable
9:00 am - 9:30 am	INFLUENCE OF FILLER DISPERSION ON ELECTRICAL AND RHEOLOGICAL PROPERTIES OF PC/SAN BLENDS WITH GRAPHITE NANOPLATES OR EXPANDED GRAPHITE
	Petra Potschke, IPF Dresden
9:30 am - 10:00 am	FIRE SURVIVAL CABLE: UNDERSTANDING OF LAB SCALE TO MANUFACTURING SCALE CABLE VALIDATION
	Sathish Kumar Ranganathan, Lead Engineer, General Cable
10:00 am - 10:30 am	The Surface Resistance Value and Physical Properties of Conductivity Fiber Filler-compounded PES OPTIMIZATION OF MECHANICAL PERFORMANCE AND MISCIBILITY OF RECYCLED PET AND PC BLENDS BY VENTED INJECTION MOLDING
	Supaphorn Thumsorn, Researcher, Kyoto Institute of Technology
10:30 am - 11:00 am	EFFECTS OF REACTIVE POLYMER AS MODIFIER ON IMPACT STRENGTH AND HYDROLYTIC STABILITY OF PC/ABS BLEND
	Kohhei Nishino, Denka Company Limited
11:00 am - 11:30 am	The Surface Resistance Value and Physical Properties of Conductivity Fiber Filler-compounded PES
	Hiroyuki Hamada, Professor, Kyoto Institute of Technology
9:00 am - 11:00 am	**Applied Rheology-Assessing Processibility II**
	Room 309/310
9:00 am - 9:30 am	Study on Extrudate Swell of High-Density Polyethylenes in Slit (Flat) dies
	Vinod Kumar Konaganti, University of British Columbia
9:30 am - 10:00 am	THERMAL AND TIME-DEPENDENT RHEOLOGICAL STABILITY BEHAVIOR OF

POLYACRYLONITRILE WITH VARIOUS PLASTICIZERS

	Jianger Yu, Virginia Tech
10:00 am - 10:30 am	Determination of the Geometrical and Nnon-newtonian Correction Factors for the Calculation of Viscosity Function Using Screw Rheometers Applying the Self-consistent Method
	Myung-Ho Kim
10:30 am - 11:00 am	Non-Traditional uses for a capillary rheometer
	Tim Haake, General Manager, Goettfert
8:30 am - 12:30 pm	**Injection Molding- Troubleshooting & Processing**
	White River A
	Moderator: David Okonski
8:30 am - 9:00 am	TROUBLESHOOTING AND APPROPRIATE MAINTENANCE IN INJECTION MOLDING
	Kenny Saul, Managing Director, SHS plus GmbH
9:00 am - 9:30 am	Weld lines in injection molded parts - strength, mophology and improvement
	Ines Kuehnert, Leibniz-Institut fuer Polymerforschung Dresden e.V.
9:30 am - 10:00 am	Trouble Shooting Hot Tip Induced Polycarbonate Splay
	Jeremy Dworshak, Steinwall
10:00 am - 10:30 am	The Melt Temperature Variation in the Barrel of Injection Molding Machine
	JooHyeong Jeon, Ajou University
10:30 am - 11:00 am	Design Optimization of the Layout of the Heating/Cooling Pipes of Rapid Heat Cycle Molding
	Yanjin Guan, Shandong University
11:00 am - 11:30 am	EFFECT OF GAS COUNTER PRESSURE(GCP) ON SHRINKAGE AND RESIDUAL STRESS
	Wen-Ren Jong, Department of Mechanical Engineering, Chung Yuan Christian University
11:30 am - 12:00 pm	Development of an Inline Plasma Treatment during Injection Molding Process
	Timo Nordmeyer, University of Paderborn
12:00 pm - 12:30 pm	MICROINJECTION MOLDING: INFLUENCE OF MOLDING PARAMETERS ON THE ELECTRICAL CONDUCTIVITY OF POLYPROPYLENE FILLED WITH MULTI-WALLED CARBON NANOTUBES
	Shengtai Zhou, University of Western Ontario

8:30 am - 11:00am	**Injection Molding: Simulation 3** White River B Moderator: Lynzie Nebel
8:30 am - 9:00 am	TWO-SHOT OVERMOLDING COOLING SIMULATION Lu Chen, Autodesk
9:00 am - 9:30 am	Validation of Numerical approach and experiment in Metal Powder Molding by Using Injection Compression Technology Kuan-Hua Lee, Chung Yuan Christian University
9:30 am - 10:00 am	SIGMASOFT® Virtual Molding: A New Approach to Resin Selection Gabriel Geyne, SIGMASOFT Virtual Molding
10:00 am - 10:30 am	NUMERICAL SIMULATION FOR INSERT INJECTION MOLDING OF ONE-CONSTITUENT POLYPROPYLENE SINGLE-POLYMER COMPOSITES Nannan Jiang, Beijing Institute of Technology
10:30 am - 11:00 am	ACCURATE THREE DIMENSIONAL COOLING SIMULATION OF THE GAS-ASSISTED PLASTIC INJECTION MOLDING PROCESS Clinton Kietzmann, Autodesk Australia
8:00 am - 11:30 am	**Plastics in Building and Construction Session** White River H Moderator: Mahesh Narkhede
8:00 am - 9:00 am	Keynote - Novel Applications of Polymer Composites for Navigational Structures Hota GangaRao, West Virginia University
9:00 am - 9:30 am	POLYSTYRENE FOAM INSULATION: IMPLEMENTATION OF ALTERNATE SUSTAINABLE FLAME RETARDANT Shari Kram, Dow Chemical Co.
9:30 am - 10:00 am	IONOMERS AS SMART VAPOR BARRIERS FOR BUILDING APPLICATIONS John Bishop, DuPont
10:00 am - 10:30 am	ADVANCES IN STRUCTURAL ADHESIVES FOR BUILDING AND CONSTRUCTION APPLICATIONS Matt Kalinowski, Dow Chemical
10:30 am - 11:00 am	Impact Modeling of Single-Ply TPO Roofing Systems Tianyi Luo, Lehigh University
11:00 am - 11:30 am	Flexible Acrylic Resin Technology

	Hailan Guo, Research Scientist , Dow Chemical Company
8:00 am - 11:00 am	**Composites- NDI and Processing**
	White River G
	Moderator: Ray Boeman
8:00 am - 9:00 am	Recent Efforts on the Use of Focused Ultrasound to Identify Lamina/Laminate Information for Carbon Fiber Reinforced Laminated Composites
	David Jack
9:00 am - 9:30 am	NON-DESTRUCTIVE TESTING OF COMPOSITES BY ROBOT SUPPORTED AIR-COUPLED ULTRASOUND
	Yannick Bernhardt, University of Stuttgart, Germany
9:30 am - 10:00 am	NON-DESTRUCTIVE TESTING OF CFR-TAPES WITH THERMOPLASTIC MATRIX USING AIR-COUPLED ULTRASOUND
10:00 am - 10:30 am	Morphology and strength of die-drawn porous sheets from filled polypropylenes
	Krishnamurthy Jayaraman, Professor, Michigan State University
10:30 am -11:00 am	IMPROVING ADHESION BETWEEN KEVLAR®129 FIBERS AND NATURAL RUBBER MATRIX USING MORPHOLOGICAL TREATMENTS AND COUPLING AGENTS
	Nihal Kanbargi, University of Massachusetts
8:30 am - 11:30 am	**Engineering Properties and Structure: Recycling and Scratch**
	Room 103/104
	Moderator: Steve Driscoll
	Moderator: Luyi Sun
8:30 am - 9:00 am	Probing the Assembly, Conformation, and Thermodynamics of Thermoresponsive Poly(N-isopropylacrylamide) (PNIPAM) by Small-Angle Neutron Scattering
	Michael J. A. Hore, Assistant Professor, Case Western Reserve University
9:00 am - 9:30 am	Quantification of Branching and Network Structure
	Gregory Beaucage, University of Cincinnati
9:30 am - 10:00 am	Comparison of Non-Isothermal Crystallization Kinetics for Semi-Linear and Linear Polyphenylene Sulfide (PPS) and Effect on Simulated Crystallinity Gradient
	Jayson Humble, A. Schulman
10:00 am - 10:30 am	Use of Conductive AFM for Composites of PP Modified with Carbon Nanofillers
	Vicki Flaris, Bronx Community College
10:30 am - 11:00 am	RUBBER TOUGHENED POLYLACTIDE (PLA) VIA CATALYZED EPOXY-ACID

INTERFACIAL REACTION

Chistopher Thurber, Senior Engineer, Dow Chemical Company
11:00 am - 11:30 am Effect of anhydride type on structure and thermal properties of poly(propylene carbonate) composites produced by reactive extrusion

Guo Jiang, South China University of Technology
8:00 am - 11:30 am **Thermoplastic Materials and Foams- Foaming Fundamentals and Processes**
White River J
Moderator: Arron Guan
8:00 am - 8:30 am Determination of CO2 Solubility and Volume Swelling in PMMA in Light of Retrograde Vitirification
No location
Syed Mahmood, Ph.D Student, University of Toronto
8:30 am - 9:00 am Critical Parameters of Generating PMMA Nanocellular Foam

Shu-Kai Yeh, Assistant Professor, National Taiwan University of Science and Technology
9:00 am - 9:30 am ENHANCED PROPERTIES OF ORIENTED MULTILAYER POLYPROPYLENE FILM/FOAMS

Andy Olah, Case Western Reserve University
9:30 am - 10:00 am EXTRUSION FOAMING OF LLDPE/WOOD FIBER COMPOSITES

Gangjian Guo, Bradley University
10:00 am - 10:30 am APPLICATION OF AIR GAP TO ENHANCE ACOUSTIC PERFORMANCE OF BIO-BASED PLA FOAMS

Shahrzad Ghaffari, University of Toronto
10:30 am - 11:00 am DYNAMIC SOLUBILITY OF CARBON DIOXIDE IN POLYPROPYLENE MELT

Alireza Tabatabaei, Ph.D Student, University of Toronto
11:00 am - 11:30 am MODELING OF THE FIBER ORIENTATION IN POLYMER/FIBER COMPOSITE FOAMS

Vahid Shaayegan, University of Toronto
8:00 am - 10:00 am **Polymer Analysis Session: Spectroscopy**
Room 302/303
Moderator: Joel Lischefski
8:00 am - 8:30 am Determination of the compositions of fully biodegradable ternary blends with near-infrared spectroscopy

Ruhuang Chen, South China University of Technology
8:30 am - 9:00 am RAPID SPECTRAL MEASUREMENT OF THE MECHANICAL PROPERTIES OF

POLYPROPYLENE RECOVERED FROM SHREDDED END-OF-LIFE VEHICLES

Brian Riise, Director of Research and Development, MBA Polymers Inc.

9:00 am - 9:30 am — Molecular weight analysis of polyethylenimine using dynamic light scattering and gel permeation chromatography with multi-angle light scattering detector

Wen-Shiue Young, Dow Chemical

9:30 am - 10:00 am — Surface mechanicals and microscopy methodologies for coating characterization

Subhransu Mohapatra, Lead Scientist, SABIC

8:30 am - 11:00 am — **Bioplastics Session**

White River I

8:30 am - 9:00 am — Production of In Situ Microfibrillar Composites as a Novel Approach Towards Improved Bio-Based Polymeric Products

Chul Park, Distinguished Professor, University of Toronto

9:00 am - 9:30 am — Fabrication and Characterization of Bio-based PCM Microcapsules for Thermal Energy Storage

Maryam Fashandi, York University

9:30 am - 10:00 am — EFFECT OF MINERALS ON RHEOLOGICAL AND THERMAL BEHAVIOR OF PLA/PMMA BLENDS

Mauricio Gonzalez, Ph.D Student, Université de Sherbrooke

10:00 am - 10:30 am — MECHANICAL PROPERTY AND FRACTRUE ANALYSIS OF WOOD POWDER/PP COMPOSITE MOLDED BY INJECTION MOLDING

Zhiyuan Zhang, Researcher, Daiwa Itagami

10:30 am - 11:00 am — MODERN FABRICATION OF POLY(LACTIC ACID) NANOFIBERS BY COTTON CANDY METHOD

Supaphorn Thumsorn, Researcher, Kyoto Institute of Technology

8:30 am - 11:00 am — **Automotive Division Session I**

Room 101

Moderator: Suresh Shah

8:30 am - 9:30 am — Keynote: Recent Plastics Innovative Awards in Automotive Industry

Suresh Shah, Retired, Delphi

9:30 am - 10:00 am — Fabrication of Glass mat Thermoplastic composite by Needling Punching Process

Yuying Dong, Student, Donghua University

10:00 am - 10:30 am — Vehicle Lightweighting and Improved Crashworthiness – Plastic/Metal Hybrid Solutions for

BIW

10:30 am - 11:00 am

Amit Kulkarni, Sr. Manager, Technology & Innovation, Automotive , Sabic
Automotive glazing-Polymeric systems providing enhanced design freedom & functionlity

Harindranath Sharma, SABIC