Organizing Committee

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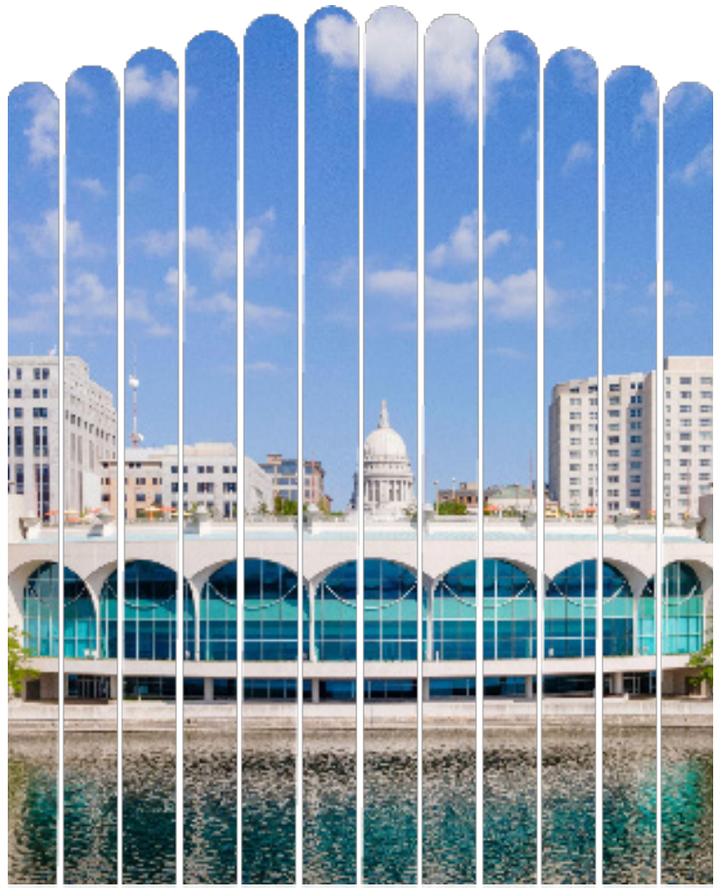
Prof. em. Dr.-Ing. Dr. h. c.
Gottfried W. Ehrenstein
(1937 – 2021)

Prof. Gottfried W. Ehrenstein was a highly respected scientist and engineer with 138 works in 315 publications in 4 languages, and 3,944 library holdings.

He was not only an accomplished researcher, but also an exceptional teacher and mentor. Throughout his career, Prof. Ehrenstein guided numerous doctoral students on their path to earning their degrees.

Prof. Ehrenstein left a lasting impact in the field of polymer technology, helping drive its growth and advancement now and into the future.

Polymer Engineering Center
University of Wisconsin - Madison



THE GOTTFRIED EHRENSTEIN POLYMER COLLOQUIUM

Friday, March 31, 2023

PROGRAM

About

The Polymer Engineering Center (PEC) at the University of Wisconsin-Madison has held the International Polymer Colloquium since 2001. On this occasion, internationally renowned scholars and experts who attend the Society of Plastic Engineers (SPE) Annual Technical Conference (ANTEC) are invited to visit our campus and present their work. A broad range of topics in the areas of polymer processing and engineering will be presented in a relaxed academic atmosphere. The presentations and poster sessions provide the opportunity for technical discussions and exchanges, which sometimes result in fruitful collaborations.

Agenda

08:00 am **Registration & Breakfast**

08:35 am Opening Remarks - Professor Tim Osswald

08:50 am **Keynote: Architected Syntactic Foam Composites: Additive Manufacturing and Reinforcement-Driven Matrix Segregation**

Prof. Pavana Prabhakar, University of Wisconsin - Madison

09:20 am **Automated Geometry Optimization for Melt Flow Systems – The Full Potential of Additive Manufacturing for Injection Molding Hot Runner Manifolds**

Dr.-Ing Stefan Kruppa, Molding Solutions

Prof. Dr.-Ing Reinhard Schiffers, IPE, The University of Duisburg-Essen, Germany

09:50 am **Morning Break 1 & Poster Session**

10:10 am **Keynote: Real-Time Sensor Data and AI: Enabling Dynamic Process Optimization**

Dr. Alec Redmann, NETZSCH-Gerätebau GmbH/ SensXPERT

10:40 am **Process Variations for Thermosets Data Collection and Usage of AI Results for Simulation**

Ing. Ingo Schwarz, Schwarz Plastic Solutions GmbH

11:00 am **Morning Break 2 & Poster Session**

11:20 am **Keynote: A Toolbox Towards First-Time-Right and Novel Applications Fields in Laser-Based Additive Manufacturing of Plastics**

Prof. Katrin Wudy, LBAM at Technical University of Munich (TUM), Germany

11:50 am **Comparison of the Anisotropic Mechanical Properties of Injection Molded and Additively Manufactured Parts**

Johannes Austermann, IKV at Rwth Aachen University, Germany

12:10 pm **Lunch & Poster Session**

01:10 pm **Keynote: We Don't Just Open Doors, We Lightweight Them: The Journey of Ultra-Lightweight Carbon Fiber Reinforced Thermoplastics Composite Door Assembly**

Prof. Srikanth Pilla, Clemson University

01:40 pm **A Review on LCA Studies on Grocery Plastic Bags and Their Substitutes**

Dr. Iván D. López, Society of Plastic Engineers (SPE)

02:00 pm **Green Chemistry, the Biorefinery Concept and the Extrusion Process**

Dr. Maria Del Pilar Noriega, Daabon Group

02:20 pm **The Use of Biocidal Materials in Plastics Technology**

Dr. Ruben Schlutter

02:40 pm **Afternoon Break & Poster Session**

03:10 pm **Keynote: Machine Learning-Accelerated Molecular Design of Innovative Polymers: Advanced Manufacturing, Extreme Conditions, Sustainable Energy Solutions**

Prof. Ying Li, University of Wisconsin - Madison

03:40 pm **The Latest Simulation Technology for Injection Molding and Composite Manufacturing**

Dr. Anthony Yang, Moldex3D

04:00 pm **Simultaneous Processing of Thermosets and Thermoplastics in Additive Manufacturing of Multi-Material Polymer Parts**

Robert Setter, LBAM at Technical University of Munich (TUM), Germany

04:20 pm **Integrative Simulation of a CF-SMC Structural Component Using a Multiscale Simulation Approach and the Osswald-Osswald Failure Indicator**

Jan Teuwsen, Volkswagen AG

04:40 pm Closing Remarks - Professor Lih-Sheng Turng

07:00 pm **Evening Reception**

Registration

Online registration and more information is available at: https://pec.engr.wisc.edu/ipc_general_information/

On-site registration will also be available.
(Credit Card Only)

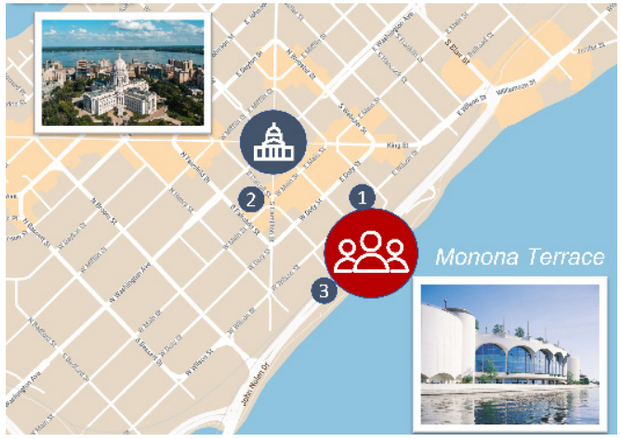
Cost

$200 for Guests

The registration fee includes admission to the colloquium as well as meals through the event.

Location & Parking

Conference
Hall of Ideas - Monona Terrace
1 John Nolen Dr, Madison, WI 53703



Hotel Accommodations
1. Hilton Madison Monona Terrace
2. Best Western Premier Park Hotel

Parking Information
3.The Monona Terrace Parking Garage, available here

Event Booklet

Scan QR code for the booklet.