



# Engineering Properties and Structure Division Newsletter

Oct 2017

## EPSDIV—Election Edition

### CHAIRPERSON'S REPORT

#### Dear EPSDIV Members,

I hope this newsletter finds you doing well. During a review of documents I discovered that we missed having an election of board members earlier this year. Typically, elections happen in the Feb/Mar time frame and the newly elected board members begin their 3-year term at the ANTEC in Apr/May. So, this is a special edition of the newsletter with only two topics: (1) Elections and (2) call for papers for ANTEC 2018!

If you are interested in learning more about how you can serve on the Board send me an email ([paul.hans@polyone.com](mailto:paul.hans@polyone.com)). I'd love to talk with you.

Thanks!

Paul Hans, EPSDIV Chair, 2017-2018

### EPSDIV Purpose

- Stimulate investigation and understanding of engineering properties of plastics and their relationship to composition, structure, and processing variables.
- Foster technical activities on uniform testing and reporting of plastic properties.
- Encourage proper application of plastic data.

For more information about ANTEC 2018:

[Click here to submit paper/presentation](#)  
or to learn more about ANTEC (hotels, etc.)

### TPC REPORT

#### **ANTEC 2018—Orlando Florida May 7-10**

#### **>> CALL FOR PAPERS <<**

We encourage you to present your work at the EPSDIV sessions of ANTEC 2018!

We are soliciting speakers for the following areas:

Topical Areas
Multi-layered Materials
Surfaces and Interfaces
Innovations in Packaging
Polymer Mechanical Properties
Structure Property Relationships in Foam
Textiles, Nonwovens, Fibers
Training Sessions

Deadline for submission: Dec. 15, 2017

Questions? Contact EPSDIV TPC Co-chairs

Pavan Valavala ([PValavala@dow.com](mailto:PValavala@dow.com))

Rajen Patel ([RMPatel@dow.com](mailto:RMPatel@dow.com))

# BALLOT—Board of Directors

***Please vote for 7 of the following 8 candidates.***

***EMAIL your choices for Board members to Paul Hans at [paul.hans@polyone.com](mailto:paul.hans@polyone.com) by Nov. 8, 2017.***

## **Dr. Mohammad Motaher Hossain**

Dr. Hossain earned his B.S. degree in Mechanical Engineering from Chittagong University of Engineering & Technology, Bangladesh, in 2004, M.S. degree in Mechanical Engineering from North Carolina A&T State University in 2009 and a PhD from Texas A&M University in 2013. Presently, he is an Assistant Professor in the Department of Mechanical & Industrial Engineering, Texas A&M University-Kingsville. His research interests include structure-property relationship in polymers, polymer tribology, scratch and wear behavior of polymers, contact mechanics, and fracture mechanics.

## **Dr. Rajen M. Patel**

Rajen Patel joined Polyolefins R&D of the Dow chemical company in June 1991 in the Materials Science group and transferred to Polyolefins TS&D of the Dow chemical company in November 2007. He has worked in various research and applications development areas including polyolefins

characterization (thermal & rheological), structure-processing-properties relationships in polyolefins, and product development in variety of applications such as hygiene & medical, oriented shrink films, collation shrink film, sealants, cast stretch films, blown films, extrusion coating, tie-layers, barrier, elastic films and fibers.

He has co-authored 22 technical peer reviewed journal publications and 9 book chapters. He is also a co-inventor of 51 granted US patents. In 2009, he was elected as Fellow of Society of Plastics Engineers (SPE) in recognition of his technical and commercial accomplishments in Polyolefins and especially in single-site catalyzed (metallocene) Polyolefins. He is currently an Associate Research Fellow in the Packaging and Specialty Plastics technical service and development (TS&D) group in the Dow Chemical Company leading packaging applications development.

## **Dr. Murali Rajagopalan**

Dr. Murali Rajagopalan was a recipient of SPE's Society's 2010 Research and Engineering Technology Award. He was elected a Fellow of the Society of Plastics Engineers in 2006 and has been with the EPSDIV Board since 1995 in numerous leadership capacities as past Board Chair, Co-TCP chair, Treasurer, newsletter committee and current Society Award Committee Chair, just to name a few. Murali's role as Society Award Committee Chair has been instrumental in the society's recognition of at least fourteen Fellows and four (HSM's) Honor Society Member's. He was the Director of Materials Research and is currently the Director of Quality Assurance for Raw Materials at Acushnet – Titleist's Golf Ball Research and Development. Murali is either a solo or co-inventor of over 250 U.S. Patents in the area of golf ball materials processing and the use of vinyl alloys in HVAC, computer housing and medical devices. He was an active board member of National Textile Committee and was a past Chair for ACS's New England Rubber & Plastics Group.

## **Paul Rothweiler**

Paul Rothweiler is a previous EPSDIV Board Member and proud of the accomplishments of EPSDIV. He received a Bachelors degree in Chemistry from Univ. of Minnesota and started his career at HB Fuller Company as a research Chemist. He started his career by synthesizing polymers using vinyl and acrylic-based monomers. In the year 2000, Paul joined an innovative technical service company based in Minnesota, serving hundreds of clients over thousands of projects, with an extensive plastic compounding and analytical capabilities. This fall Paul will be performing work for a well-known bio-plastics company focused on developing new market opportunities.

## **Dr. Ying Shi**

Dr. Ying Shi is an R&D Engineer at A. Schulman Inc., where she currently specializes in high performance engineered plastics formulation development and their fabrication into various applications. Dr. Shi has worked on numerous projects related to the automotive and consumer electronics industries. She has given annual technical talks at ANTEC and has also presented at other Automotive topical conferences. She received her PhD in polymer engineering in 2013 from the University of Akron under the guidance of Dr. Robert Weiss.

## **Dr. Shing-Chung Josh Wong**

Dr. Wong began his graduate training in 1993 in mechanics and mechanisms of fracture of polymer blends with and without glass fiber reinforcements at UMass Amherst, working with Shanti V. Nair and Lloyd A. Goettler. Later he joined the group of Yiu-Wing Mai, FRS, at University of Sydney on identifying the roles of maleated block copolymers as a sequence of events in toughening nylon polypropylene blends. He later pursued an academic career in Singapore, teaching in the School of Materials Science and Engineering in Nanyang Technological University. He has since graduated numerous graduate students and many postdocs. In addition to pursuing bio-inspired materials research, he has worked on mechanical behavior and functional properties of polymers, electrospinning, processing-structure-property relationships, composite and adhesion sciences. Dr. Wong has authored and coauthored over 70 research articles in books, journals and patents, with additional papers in conference proceedings and refereed abstracts. There were over 3800 citations to his work. Two papers on graphite nanocomposites and electrospinning, respectively, were each cited >400 times. In 2007 he was selected for an NSF Faculty Early CAREER Award entitled "Electrospinning-Enabled Bio-Inspired Materials Research and Education" from the Program of Materials Processing and Manufacturing. He is an elected Fellow of American Society of Mechanical Engineers (F.ASME) in 2014 and an elected Fellow of the Society of Plastics Engineers (F.SPE) in 2015. Prior to this, he served as the Chair of the Engineering Properties and Structures Division (EPSDIV) of the Society of Plastics Engineers (SPE) in 2012-2013 and Chair of Polymer Technical Committee of the American Society of Mechanical Engineers (ASME) in 2014. He was promoted to full professor (2013 -) with tenure (2009 -) at the University of Akron. In this capacity, he is the Co-founder and Chief Technology Officer of Akron Ascent Innovations.

## **Dr. Xiaosong (Sharon) Wu**

Dr. Xiaosong (Sharon) Wu is currently a research scientist of Dow Elastomers Product Research group at the Dow Chemical Company. She received her B.E. in Polymer Materials and Engineering from Beijing Institute of Petrochemical Technology and her Ph.D. also in Polymer Materials and Engineering from Georgia Institute of Technology in 2008. Dr. Wu has developed an expertise both in her academic and industrial career in polymer structure properties, polymer blends and composite, polymer reactive extrusion and polymer MEMS multidisciplinary research. Her current research interests are focused on 1) Structure-property relationships of polyolefin elastomer products, 2) New processes and methods to produce unique elastomer products with differentiated properties, 3) Polyolefin elastomer based formulated compound solutions for infrastructure and automotive applications, and 4) Fundamental understanding of polymer blend morphology development and other physical-chemical phenomena along the extruder. Dr. Wu is a board member of the Society of Plastics Engineers and the American Chemical Society. She is author and co-author of 13 refereed journal publications, 18 patent applications, and 18 conference proceedings.

## **Dr. Hsinjin (Edwin) Yang**

Dr. Yang has a Ph.D. in Physical Chemistry/Polymer Science and Engineering from the University of Massachusetts, Amherst. He is the President of Pioneer Scientific Solutions, LLC, a consultancy focused on research for polymers and materials, esp. for Biomedical, Renewable Energy, Flammability and Specialty/Performance Applications. Dr. Yang started his career at Eastman Chemical Co., as a Research Associate and later Group leader of imaging materials followed by a move into the role of Project Manager and Technical Leader in polymers for biomedical applications. His interest in biomaterials continued during roles at Essilor and Baxter Healthcare. At Baxter Healthcare he received a Technology and Team Award for a Specialty Therapy Product—Medication Delivery. Dr. Yang has been an adjunct professor in the Dept. of Chemistry, Univ. of Missouri at Kansas City since 1995. He has also been a Distinguished Member of Technical Staff, Global Tech. Leader for Polymers/Materials, Corporate Research, UL LLC, Northbrook IL, where he worked on Micro-Combustion Calorimetry. Dr. Yang has been active in the SPE, being the EPSDIV Technical Program Chair for ANTEC 2016, and is on the Board of Directors / Vice Chair, Plastics in Building and Infrastructure division.

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