

Engineering Properties and Structure Division Newsletter

March 2018

CHAIRPERSON'S REPORT



Dear EPSDIV Members,

I hope this note finds you doing well!

It is election time for EPSDIV! Please vote for the open Board of Director positions as well as the Division Councilor. The ballot is on page 2 and candidate biographies are on pages 3 through 5. Voting is simple; just click on my email link on the ballot page and let me know your vote.

Please consider getting involved in the Engineering Properties and Structure Division. Wherever you are in your career, from recent graduate to retiree, **WE NEED YOU!**

If you are interested in volunteering, or know of someone who would benefit from SPE leadership experience, send me an email and I will get back and answer a n y questions. (paul.hans@polyone.com)

As always, I would like to hear from you if you have any concerns, any ideas on how to make EPSDIV better, or just to say hello!

Best wishes, Paul Hans ELECTION BALLOT— Pg.2

INSIDE THIS ISSUE

Chairpersons Report	
Election Ballot	2
Candidate Biographies	3-5
Corporate Sponsor Program	6
Board of Directors	8



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BALLOT—Board of Directors & Division Councilor



EMAIL your choices for Board members & Councilor to Paul Hans at paul.hans@polyone.com by March 30, 2018.

Dr. Sadhan C. Jana

Dr. Sadhan C. Jana is currently professor and chair of Department of Polymer Engineering at The University of Akron. He received Ph.D. degree in chemical engineering from Northwestern University in 1993, worked at General Electric Corporate Research Center for four years, and joined the University of Akron in 1998. Dr. Jana is the recipient of National Science Foundation Faculty Early CAREER Award, Chemcon Distinguished Speaker Award, Society of Plastics Engineers (SPE) Fred E. Schwab Award for outstanding achievements in education, George Stafford Whitby Award for distinguished research and education from the American Chemical Society (ACS) Rubber Division, SR Palit Memorial Lectureship award from Society of Polymer Science India, Kamath Memorial Lectureship award from the Indian Institute of Chemical Engineers, and Honorary Professorship from National University of Colombia, Bogota. He is a Fellow and Honored Service Member of SPE and currently serves in the board of Engineering Properties and Structure of SPE. In addition, he serves as a board member of Polymeric Materials: Science & Engineering (PMSE) division of American Chemical Society (ACS) and as an international representative and executive member of Polymer Processing Society. Dr. Jana is chair of two society award committees - SPE Education Award and ACS PMSE Co-operative Research Award. He is an associate editor of Polymer Engineering & Science journal. In addition, he serves in the editorial boards of a number of peer-reviewed journals.

<u>Mr. Manish Khedkar</u>

Manish Khedkar received his Bachelors and Masters degrees in Polymer Technology and an MBA/PGDBA in Operations Management from Symbiosis-Pune. Mr. Khedkar has over 17 years experience in industry working for several global companies including Basell Polyolefine, DuPont Performance Polymers, InterWrap and Owens Corning. During this tenure he has had extensive product exposure in several market segments such as automotive, rigid & flexible packaging, polymer compounding, technical membranes & textiles, extrusion coating, anti-corrosion coating, wood and metal packaging, roofing and house wrap and has developed expertise in polyolefins, polyesters, polyamides, polyacetal, polycarbonate & polyolefin elastomers & plastomers. Mr. Khedkar is a certified Lean Six Sigma Green belt and certified Lean Champion and has functional areas of expertise as Plant Head, Business & Product Development Application Development Lead, Strategy, Setting up new processes & system, Lean Manufacturing, Change management, Process Safety Management, QMS & EMS.

Dr. Domasius Nwabunma

Dr. Domasius Nwabunma graduated with a Bachelor of Science (1st Class) Honors Degree in Chemical Engineering (1990), and Master of Science (1996) and Doctor of Philosophy (1999) Degrees in Polymer Engineering. Since earning his PhD, he has had over 17 years of professional experience working in senior engineering roles for companies in USA (3M Company, Spartech Corporation, Greene Tweed, and Medtronic) and in Middle East (Saudi Aramco). In these companies, he was the leader and owner of several projects of major technical significance. In these projects, he leveraged internal and external technologies relative to materials, process, and design to develop high performance polymeric materials for various applications. One major accomplishment was the research, development, and testing of polymers/functional additives hybrid systems for applications in transportation, oil & gas, automotive, and construction. This work involved careful materials selection (polymers and functional additives such glass bubbles, flame retardants, glass fibers, etc.), formulation design, processing, characterization and performance testing, technical risk assessment, manufacturability, optimization, life cycle management, and quality control. Dr. Nwabunma was the president of Upper Midwest (S22) Section of the Society of Plastics Engineers (2005-2007). He was spotlighted on the Section's Newsletter "The SPEcialist" in the September 2009 edition. He was a member Advisory Board, Center for Nanocomposites and Multi-Functional Materials, Pittsburg State University, Pittsburg, Kansas (2006-2008). Dr. Nwabunma is a senior member of the Society of Plastics Engineers (SPE) and a member of the American Chemical Society (ACS). Dr. Nwabunma is the co-editor of Wiley's Series on Polymer Engineering & Technology

Dr. Hoang T. Pham

Dr. Hoang T. Pham received his Ph.D in Polymer Science at The University of Akron. He is currently working at Avery Dennison with research interest in films for specialty packaging and labels applications. Current research interest includes special barrier, shrinkable, and sustainable films for packaging and labeling. Prior to that, Dr. Pham spent over 22 years at The Dow Chemical Company with research and development focus on new materials and processing developments. Several key areas of focus were structure property relationship modeling of polycarbonates and blends, acrylonitrile butadiene styrene copolymers, polyolefin and their blends leading to new products introduced to the market place for automotive, building construction, IT and communication housing, and packaging applications. Dr. Pham is also an active Fellow member of the Society of Plastic Engineers, an Honored Society Member, and has been serving on the Engineering Properties and Structure Division Board.

Dr. Duane Simonson

Dr. Duane Simonson received his Ph.D. in Organic Chemistry in 2004 from the University of Virginia. He currently works as a Chemistry Consultant at Research Support Instruments, Inc. near Washington, DC. He is on contracts to support NASA and the US Navy. From 2006 to 2014 he was a Research Chemist at the US Naval Research Laboratory. His experience includes the design and synthesis of polymers and nanocomposite materials for Navy and aerospace, sensors for CBRNE detection, decontamination, optics and railgun longevity, and fabrication and testing of lightweight body armor and structural composites.

Dr. Sean Teller

Dr. Sean Teller is a Senior Engineer at Veryst Engineering. Dr. Teller has extensive experience in the mechanical behavior of materials at low and high strain rates, including viscoelasticity, viscoplasticity, nonlinear materials, and fracture mechanics. His work has spanned many disciplines, including tissue engineering, biomaterials, polymer characterization, aerospace applications, and semiconductor manufacturing. His interests include designing, performing, and interpreting experimental data to characterize materials and industrial processes over wide ranges of conditions to accurately understand their behavior. His experience includes experimental methods, building and designing test fixtures, hydrogels, animal dissections, sample preservation, clean room use, and composite materials. Prior to joining Veryst, Dr. Teller was a Yield Engineer at Intel in defect metrology supporting high-volume semiconductor manufacturing. He participated in both sustaining defect activities as well as defect reduction in leading edge technologies, including new technology startup and legacy processes.

Dr. Mridula (Babli) Kapur

Babli Kapur is a Fellow in the Packaging and Specialty Plastics Business Unit of the Dow Chemical Company. She is also a Fellow of the Society of Plastics Engineers (SPE). Her research work at Dow spans various areas including a novel multifunctional analyzer approach for product quality control; the design and development of enhanced performance polymers for applications ranging from food packaging, industrial and consumer films, to rigid packaging and pipe, and intellectual property protection. She is also involved in defining University-Industry collaborations as a means to leverage and accelerate research. She has 20 granted US patents, and over 35 external publications and presentations. Babli is a certified Six Sigma green belt project leader. A member of the Society of Plastics Engineers since 2001, Babli is a past board member of the Blow Molding Division, and current Councilor of the Engineering Properties and Structure Division. She is actively involved to enable the success of the next generation of plastics industry professionals through mentoring, sharing technical knowledge, and organizing career development events. During her 26 years at Dow, and volunteer work at SPE, Babli has experienced firsthand the diversity of innovation in the plastics industry, the power of networking, and how essential it is to engage and create opportunities for professionals throughout their careers. Regarding her candidacy for a second term as Councilor, Babli intends to use her experiences to continue to build on the strong foundation of the Engineering Properties and Structure Division, and take it to the next level in collaboration with the Divisional Board members and the SPE Executive Board.

2018 EPSDIV ANTEC Technical Program Sponsorships

Sponsorships Available for the 2018 ANTEC Program!





- Your Company name on podium posters!
- Your Company logo on screen between talks!
- 1/2 page ad space (single issue) in Newsletter a \$300 value!!

<u>Click</u> here to reserve your spot today!

Funds from the program are used to support the EPSDIV mission in two key areas:

Technical conference program quality

Such as, sponsorship of awards for outstanding papers, expenses and honoraria for invited speakers, and seed money for RETECs and other EPSDIV sponsored symposia.

Plastics education

Such as, sponsorship of awards for outstanding student papers, student travel grants, scholarships and short courses.

Please ask your company or organization to sponsor the

2018 ANTEC Technical Program—Thanks!



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Paul Hans PolyOne Corp. paul.hans@polyone.com

SECRETARY Stephen Driscoll U. Mass-Lowell Stephen_Driscoll@uml.edu CHAIR ELECT Kaan Gunes Klockner Pentaplast k.gunes@kpfilms.com

TREASURER

Emmett Crawford

Eastman Chemical Co.

ecrawford@eastman.com

PAST CHAIR Daniel Liu Apple

Apple danieljliu@gmail.com

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COUNCILOR

Mridula (Babli) Kapur The Dow Chemical Co. mkapur@dow.com

NEWSLETTER Paul Hans PolyOne Corp. paul.hans@polyone.com

Richard Bopp RC Bopp Associates, LLC rcbopp@mhcable.com

Sadhan C. Jana (Sr. Sen.) University of Akron janas@uakron.edu

Brian Landes The Dow Chemical Company BGLandes@dow.com

Hoang Pham (Sr. Sen.) Avery Dennison Corp. Hoang.Pham@averydennison.com

Duane Simonson US Naval Research Laboratory d3podd@gmail.com

Board Members

Jason Lyons (Sr. Sen.) Arkema Inc. jason.lyons@arkema.com

Mohammad Hossain Texas A&M University-Kingsville Mohammad.Hossain@tamuk.edu

Rajen Patel The Dow Chemical Company rmpatel@dow.com

Murali Rajagopalan Acushnet murali_rajagopalan@acushnetgolf.com

Paul Rothweiler Rothweiler Consulting pjrothweiler@gmail.com Luyi Sun (Sr. Sen.) University of Connecticut luyi.sun@uconn.edu

Josh Shing-Chung Wong (Sr. Sen.) University of Akron swong@uakron.edu

Ying Shi A. Schulman Ying.Shi@aschulman.com

Hsinjin (Edwin) Yang Pioneer Scientific Solutions yang.pioneerss@gmail.com

John Trent (Sr. Sen.) S.C. Johnson & Son, Inc jstrent@scj.com