spe DETROIT

TRENDS & TOPICS

DETROIT SECTION - SPE INSPIRING PLASTICS PROFESSIONALS - "THE CHARTER CHAPTER"

VOLUME 62 NUMBER 05 • MAY 2018

NEXT GEN HOPCAT EVENT A SUCCESS!

SEE PAGE 7 FOR DETAILS

PRESIDENT'S MESSAGE

Wayne M. Hertlein, Letica Corporation

Hello, SPE Detroit Section Members:

I find it hard to believe that this will be my very last President's message to the Detroit Section. Wow! The time certainly flew by fast! Even though my last day as President is June 30, I still have a lot of news to bring to you in the meantime.

To begin, on February 23, the Detroit Section hosted the 24th annual Materials Auction at the MGM Grand Hotel and Casino. The amount of donations increased this year, and everyone had a wonderful time. I want to thank Dawn Cooper, Laura Shereda, and their committee for making this event happen.

Then, on February 26, the Detroit Section held a Technical Dinner meeting and tour at KraussMaffei Corporation in Brighton. Many SPE members attended, in addition to the representation from five (5) schools: Oakland University, Kettering University, Ferris State University, Schoolcraft College, and Mid-Michigan Community College. A total of 44 people attended this event.

On March 5, the Detroit Section held its Technical Dinner meeting at the ACC. The topic for the evening focused on "The Future of Carbon Fiber Composites in the Automotive Marketplace," which Jim DeVries, Senior Consultant at IACMI, presented. This event was well-attended with 34 people.

Then, on March 15, the Detroit Section sponsored a Next Gen March Madness at HopCat in Royal Oak, Michigan. This inaugural event had about 25 young plastics professionals in attendance. Thank you to Chelsea Barriga and Jason Merkle of Chase Plastic Services for spearheading this event and Paula Kruger from DSM Engineering Plastics for her help.

On March 21, the ESD Gold Awards were held at the American Polish Cultural Center in Troy, Michigan. Edward P. Becker, P.E., Ph.D., was recognized as the 2018 Award Recipient, upon receiving a nomination from the Society of Tribologists and Lubrication Engineers for this very prestigious award. The Detroit Section also recognized Dr. Adrian Merrington as the Detroit Section 2017 Outstanding Member. In addition, representatives from 13 other ESD Affiliate Societies presented 28 other awards at that banquet.

Then, from March 27-March 29, SPE International, along with the support of the Detroit Section, hosted the 3rd annual TPO Conference at the Marriott City Center in Shanghai, China. We had a great turnout for that conference, which included 220 attendees, 31 Technical Presentations, and 3 Keynote speakers. I would like to congratulate Dr. Sassan Tarahomi, Dr. Norm Kakarala, and their team from the Detroit Section Board of Directors for their tireless effort in making this conference a success.

Next, please note that, on April 23, the Detroit Section will host a Technical Dinner Meeting on "Plastics Education in Beaverton, Michigan." This event will show off the substantial plastics heritage that has evolved in Thermoforming over the years. Please make plans to attend this event.

Make sure to place the AutoEPCON conference on your calendars as well. This conference will take place on April 30 and May 1 at the Troy Marriott in conjunction with the SPE Automotive Division. I would like to recognize and thank Dr. Gary Kogowski, Sandra McClelland, and their committee for coordinating this event with the Automotive Division.

Also, note that ANTEC® will be held in conjunction with NPE from May 7-May 11 at the Orange County Convention Center in Orlando, Florida. This conference has taken place annually since 1942 and showcases all of the innovative papers on plastics from around the world. I am proud to announce that the Detroit Section will be receiving both the Gold Pinnacle award and the Communications award at this event. Congratulations to Irv Poston, Eve Vitale, and their committee for the Communications award.

Then, on May 14, the Detroit Section will host a Technical Dinner meeting on the "Applications of Polymer Material in Orthopedic Surgery." This Technical Dinner meeting will take place at the Michigan State University Management Education Center in Troy, Michigan. Dr. Baker, Director of Orthopedic Research at William Beaumont Hospital in Royal Oak, Michigan, will be the featured speaker.

May 21 will mark my last Detroit Section BOD meeting as President. This meeting will take place at the American Chemistry Council in Troy, Michigan. So, be sure to come on out and get involved.

On June 11, the Detroit Section will host a Technical Dinner meeting on "3D Printing for Medical Applications" at the Michigan State University Management Education Center in Troy, Michigan. Thomas W. Hughes, CEO of FibreTuff Medical Biopolymers LLC, will be presenting.

Then, on June 25, the Detroit Section Planning meeting will take place, with Eve Vitale beginning her term as the 76th president of the Detroit Section at this meeting. Congratulations, Eve, and good luck! You could not ask for a better group of volunteers to lead.

Finally, the Detroit Section Golf Outing will occur on June 26. This is always a great time to get out and network with all of the plastics people in Detroit.

We hope that you will be able to attend each of our upcoming events.

As my two-year tenure of serving as the 74th and 75th President of the Detroit Section of the Society of Plastics Engineers draws to a close, I find myself reflecting on the multitude of events and activities that this wonderful organization has experienced during this time. I think of the many fine and well-deserving award recipients of each of our annual SPE Detroit Section Awards, Student Scholarship Awards, Automotive Innovations Awards, and ESD Gold Awards. I am also amazed by the wonderful demonstration of support and dedication from all of the speakers, sponsors, and attendees alike at each of our Technical Dinners, Tours, Materials Auctions, Christmas Parties, and Golf Outings and at each of the annual TPO, AutoEPCON, and ANTEC® Conferences.

I am privileged to have been part of the 1,000,000th Christmas Toy Distribution in 2016 as well. I am also very glad to see the organization reaching out to the up and coming generation of Plastics Engineers, particularly with the kickoff of the inaugural NextGen March Madness event, which took place earlier this year.

Overall, I am astounded by everything this organization has been able to accomplish during these past two years. Yet, I also realize that none of these events would have turned out as well as they did without everyone's renewed and consistent effort, determination, and willingness to come together to make each of these experiences so special and so memorable for everyone.

I am honored to have had the opportunity to serve as President of the Detroit Section for the past two years and would like to extend a heartfelt thank you to all of the Board of Directors, volunteers, and members of the Detroit Section for your generous assistance and commitment to this organization during my time as President. I look forward to even more fabulous things happening within this organization in the future.

PRESIDENT ELECT'S MESSAGE

Eve Vitale, Series One LLC

Dear SPE Detroit Section Members:

I'm excited to begin my year as Detroit SPE's President on July 1st. There've been many good leaders before me, and I want to continue the tradition of helping us make a difference – in our industry and to our industry – with plastics education, excellent conferences, and driving membership growth.

First and foremost, my tenure will focus on showcasing Detroit SPE's prominence and excellence at ANTEC® 2019 which is being held at the Renaissance Center in downtown Detroit March 18–20, 2019. SPE International will be looking to us for collaboration and our proven expertise to make the "Detroit" ANTEC® a well-attended and amazing experience for everyone. As SPE's first Section, let's shine for all of SPE and the City of Detroit.

To accomplish this we will need a committee that is willing and able to work closely with Pat Farrey, SPE CEO, and Scott Marko, SPE Event Manager. I'll be sending out a call for volunteers with specific details on what we hope to accomplish and what types of skills we'll need to make it happen. Please consider answering the call to volunteer.

Secondly, I'd like to continue our focus to engage students and Next Gen individuals. Our future is in those who follow us in our beloved plastics industry and the Section's support of younger members is critically important. SPE Detroit is fortunate to have three active Next Gen members (Chelsea Barriga, Jason Merkle, and Paula Kruger) who have already shown a great ability and drive to engage Next Gen prospects in the plastics industry. I don't want to lose the momentum.

Lastly, I want to find a way to improve our communication strategy. We have been without a Communications Chair for quite a while and I hope to recruit someone who has a passion and aptitude for making sure all of our stakeholders are giving and getting the information they need. This will require us to make some changes in our own habits, but we can do it.

I look forward to being your leader – I hear the year flies by, but that's nothing new. Life seems to go by faster every year – I hope to make it a good one with your help.

IN THIS ISSUE

SPE DETROIT SECTION PLANNING MEETING

JUNE 25, 2018

TOPIC:

SPE DETROIT SECTION PLANNING MEETING

LOCATION:

Crowne Plaza Hotels & Resorts Auburn Hills
1500 North Opdyke Road, Auburn Hills, MI 48612

DATE:

June 25, 2018

TIME:

5:00–8:00 PM

AGENDA:

5:00 PM	Networking and Socializing (Appetizer) 5:30 PM Dinner
6:00 PM	2018–2019 SPE Detroit Section Planning Presentation by Eve Vitale
7:30 PM	New Business
8:00 PM	Event End

COST:

FREE for SPE Detroit Section Board Members

RSVP:

Ms. Karen Rhodes-Parker
karen@spedetroit.com
(248) 244-8920

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Julie Proctor
PlastiVan® Program Coordinator
jproctor@4spe.org

Tom Miller
thomas.miller@basf.com

NEXT GEN HOPCAT EVENT A SUCCESS

The Next Gen HOPCat Event held in Royal Oak on March 15 was a huge success with 25 plastics professionals in attendance. Chelsea Barriga, Chase Plastics, was instrumental in organizing the event. “Everyone seemed to enjoy themselves and is interested in coming to another event,” she said. Chelsea, Jason Merkle, also of Chase Plastics, and Paula Kruger, DSM, will be planning another event for late summer. If you have any suggestions for that event you can contact Chelsea at cbarriga@chaseplastics.com or at 773.899.1725.

Jason, Chelsea, and Paula with Sponsor Posters.

Our plastics professionals Next Gen!

COUNCILOR'S REPORT

SPE Council Meeting - Friday, March 9, 2018 - Remote Teleconference
Sandra McClelland, Solvay Speciality Polymers

Conor Carlin, VP of Marketing and Communications, puts together official minutes which are now available for the council meetings. I have updated his minutes and you see those below. If you have any questions, please contact me.

1. COUNCIL SUMMARY

The March Council meeting provided the forum for the "Meet the Candidates" portion of SPE Executive Board elections. The following candidates were presented to Council:

- VP Divisions: Jason Lyons & Scott Steele
- VP Sections: Monika Verheij & Scott Eastman
- VP Technology & Education: Raj Krishnaswamy & Ray Pearson
- President-Elect: Brian Landes

The candidates were offered time to present themselves to a live audience.

The elections were scheduled for March 19 and 26 and the following people won:

- VP Divisions: Jason Lyons
- VP Sections: Scott Eastman
- VP Technology & Education: Ray Pearson
- President-Elect: Brian Landes

2. FINANCIAL REPORT

New expense items include IT upgrades, staff hires and branding improvements. Staff Chief Executive Farrey continues to focus on cost control while issuing conservative forward-looking guidance, including the area of investment returns.

3. STRATEGIC COMMENTARY

CEO Farrey provided commentary on three distinct areas: ANTEC®, Technology, and Staffing.

2018 is a challenging year for ANTEC® given unique circumstances associated with co-locating with PLASTICS at NPE. Due to space constraints, SPE cannot accommodate all papers. The Plastics Race (TPR) will not be held due to co-location challenges.

An exciting new technology platform for all SPE will be launched officially at ANTEC®. The new platform will completely overhaul the membership experience and provide an opportunity to upgrade the SPE logo and brand. A phased approach will allow affiliate groups the chance to adopt the new look & feel for their own websites with full support from HQ.

Several new hires and promotions at SPE (including the Foundation) will result in better alignment between resources and organizational needs.

4. EXECUTIVE BOARD REPORTS

In keeping with the 3-Year Operating Plan that created the functional roles for EB Vice Presidents, several board members provided insight into their discrete areas of focus.

The Sections Committee successfully reinstated the Ohio Valley Section (formerly Miami Valley).

The VP of Divisions, Jason Lyons, completed a Best Practices document for all volunteer leaders to share.

In Technology & Education, VP Brian Landes announced a new partnership with Virginia Tech on Additive Manufacturing coursework. VT will provide course content, instructors and facilities; SPE will provide event promotion and planning, marketing and technical content review.
With ANTEC® on the horizon, VP of Events, Jaime Gomez, reported that the financial model for the new ANTEC® experience will be presented to the EB at the next board meeting, March 14-15.

The official SPE meeting minutes are posted to The Chain in Leadership Lane.

NOMINATIONS & ELECTIONS

Three-Year Term Directors Elected
Irv Poston, General Motors (retired)

Thanks to everyone who voted in March for electing five Directors to serve on our Board with those previously elected. Special thanks to the members that volunteered to be more active in the SPE Detroit Section by offering to serve on a committee, present a technical talk at a meeting or conference, or write an article for the newsletter. Our Board meetings include Committee Chairpersons and are open to all SPE members. Join us if you want to be more involved.

The newly elected Directors for the term ending 6/2021 are:

- Lyle Beadle
- Peter Grelle
- Dr. Adrian Merrington
- Sandra McClelland
- Tom Pickett

Their photos and bios are shown on the next page.

The continuing elected directors are:
Term ending 6/2019

- Dr. Sassan Tarahomi
- Suresh Shah
- Tom Miller
- Dawn Cooper
- Dave Okonski

Term ending 6/2020:

- Marc Bahm
- Neil Fuenmayor
- Todd Hogan
- Armando Sardanopoli
- Keith Siopes

The Directors Emeritus are:

- Irv Poston
- Nippani Rao
- Tom Powers
- Norm Kakarala
- Ron Price

The Detroit Section Elected Officers for next year 2018–2019 (beginning 7/1/18 and ending 6/30/19) are:

- President – Eve Vitale
- Past President – Wayne Hertlein
- President-Elect – Dr. Laura Shereda
- 1st Vice-President – Dawn Cooper
- 2nd Vice-President – Bill Windscheif
- Secretary – Bob Petrach
- Treasurer – Tom Powers

The Detroit Section Elected Councilor for 2018–2021 is:

- Dr. Sassan Tarahomi

DETROIT SECTION BOARD OF DIRECTORS & COUNCILOR

Term Ending 6/2021

Lyle Beadle began his plastics career at General Electric Plastics in 1974. After 6 years he joined the GEP automotive sales/marketing team in Detroit, holding sales, marketing, and market development positions. Recognizing the need for specialized technical training in the molder processor community he is credited as the originator and team coordinator for the GE Plastics Polymer Training Program "Sharing the Knowledge."

He joined the Geon Vinyl Division of B.F. Goodrich in 1991 as the Automotive Marketing Manager. In 1996, he began a 10-year work experience with Montell Polyolefins and in 2008 he worked with Mills Sales Company. In 2015 he joined Advanced Innovative Solutions (AIS) working with automotive marketing projects.

Mr. Beadle graduated with Associate and Bachelor of Arts (Education) degrees from the University of Toledo, attended GE Advanced Marketing programs, took classes in Polymer Characterization and Polymer Processing instructed by UMass Lowell, and participated with Case Western Reserve Geon 2000 Organizational Change.

Peter F. Grelle has been employed in the plastics industry for over 45 years and is owner/president of Plastics Fundamentals Group LLC and is also an adjunct instructor at Schoolcraft College. He has worked for the Dow Chemical Company, the Monsanto Company, the Winchester Group of Olin Corporation, and Wellman Inc. Plastics Division. Peter received his B.S. in Plastics Technology from Lowell Technological Institute, and his M.S. in Plastics Engineering from the UMass Lowell. He holds 4 U.S. and international patents in plastics product design and has authored and co-authored 40 publications.

He received the 2000 Engineer of the Year Award from the Injection Molding Division, the 2006 SPE Honored Service Award, and the 2015 SPE Detroit Section Lifetime Achievement Award.

Since 2009 he has been a member of the SPE Detroit Section, serving as president from 2013-2014 and currently is on the Board. Peter was also a Director on the SPE Rochester, New York Section BOD from 1993 to 1996. Since 1991, Peter has served on the SPE Injection Molding Division Board of Directors and is a past Chairperson.

Dr. Adrian Merrington, B.Sc., Ph.D., M.R.S.C., C.Chem., C.Sci., has been an active member of SPE since 1994. He is the past-President of both Detroit Section and the former mid-Michigan Section, being amongst those members instrumental in the merger of the Sections. He is Technical Chair and interim-councilor for the Sustainability Division. He also serves at the International level on the Sections Committee.

Adrian has a passion for education and research, particularly in the areas of plastics, plastics recycling, and plastics sustainability. The majority of his employment has been with the former Michigan Molecular Institute where he was Senior Associate Scientist and Assistant Professor. He held several positions after leaving MMI before he joined Trinseo, a global materials company and manufacturer of plastics, latex, and rubber.

Sandra McClelland is a marketing manager specializing in high performance materials for Solvay Specialty Polymers. With over 25 years of plastics industry experience, Sandra works with major automotive OEMs and global Tier One companies on metal-to-plastic conversions for automotive applications. She has 5 patents and numerous publications

Sandra is the Chair of the American Chemistry Council (ACC) Plastics Division Auto Team and sits on the Institute for Advanced Composites Manufacturing and Innovation (IACMI) Board of Directors for ACC.

Sandra, a Society of Plastics Engineers (SPE) Honored Service Member, is on the SPE Detroit Section Board of Directors and served as Councilor for the Section for the last 6 years.

Tom Pickett has provided 30 years of continuous service to the SPE Detroit Section and the SPE Automotive Division.

He has served in several key positions for the SPE Detroit Section: President, President Elect, 1st Vice President, 2nd Vice President, Secretary, Treasurer, Technical Committee Chair, and Inter-Society Chair. He has served on several Detroit Section Committees: Education, Auto EPCON, TPO Conference, Material Auction, and Program Committee. He has chaired and organized several Topical Conferences and has received the SPE Detroit Section Lifetime Achievement Award.

Tom has worked for 31 years at General Motors in plastic materials & processing, publishing numerous technical papers on plastics. He holds 4 patents, 2 trade secrets, and 3 defensive publications.

Tom has an MBA from the University of Detroit Mercy, an MS in Plastics Engineering at the University of Massachusetts at Lowell, and a BA in Chemistry from the College of the Holy Cross.

Dr. Sassan Tarahomi is an SPE Fellow and has been a member for 28 years. He was the 2014-2015 president of the SPE Detroit Section, became the Technical Program Chair in 2011, is the current TPO Conference Co-chair and the co-chair of the Sponsorship Committee. In March of 2016, Dr. Tarahomi and Dr. Kakarala started the SPE TPO Shanghai conference.

Dr. Tarahomi has a B.S. in Mechanical Engineering from the Florida Institute of Technology, an M.S. in CAD/CAM from Eastern Michigan University and a Doctor of Engineering in Plastics Engineering from UMass Lowell. He has held numerous positions in the plastics industry over the last 30 years, has 15 U.S. patents, and is currently the Chief Technology Officer at Alterra Holdings.

In 2012, Dr. Tarahomi volunteered to start a new plastics program at Schoolcraft College and was heavily involved in developing a plastics certificate program and a two-year associate degree program in Plastics Technology.

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ISRI Agenda

SPE Sustainability Division and Institute for the Scrap Recycling Industry Circular Economy in the Automotive Industry Workshop

Workshop is scheduled for April 30th from 2:00-5:00PM at the Troy Marriott Conference Center. There will be 2 sessions; one 90 minutes and one 75 minutes with a brief discussion at the end.

Session I - Workshop: Embracing Design for Recycling Concepts and How to Make Your Products Environmentally Sustainable

Developing a strategy for handling a product once it reaches its end of life is often overlooked when the product is designed and manufactured. Unfortunately, this lack of foresight is having immense consequences on the environment and the ability to properly recycle the billions of goods and products manufactured around the world. In this session, you'll hear about success stories from brand owners and others on why implementing an end of life recycling strategy at the concept and design stage is not only good for a company's bottom line but for the environment as well!

Presenters:

- Mr. Dean Miller, Program Manager – Recycling Innovation, Hewlett Packard
- David Wagger, ISRI
- John Standish, Association of Plastics Recyclers

Moderator: Jonathan Levy

Time: 90 minutes

Session II - Workshop: Reducing Your Costs by Using Recycled Resins

The cost pressures designers are under to develop new parts and not inflate the overall cost of a project are enormous. These pressures cause designers to find innovative ways to come in under budget while not sacrificing performance. Using recycled resins may be one way to help satisfy cost and performance requirements. Accepting recycled resins as a feedstock may spur competition among feedstock suppliers and at the same time make the product more environmentally friendly. In this session, attendees will hear from experts that will explain how to go about using recycled resins in their products. The workshop will present a case on why recycled resins should be allowed to compete on a level playing field with virgin resins. They will explain the hurdles many procurement professionals often impose on recycled resins and how these additional requirements can impose unnecessary testing delays and costs that virgin resins do not have to conform to. Attending this workshop will open your eyes to the world of recycled resins and how you can go about accepting recycled resins in your feedstock mix!

Presenters:

- Paul Dellock, Ford Motor Company
- Richard Broo, Lavergne Group
- Sassan Tarahomi, CTO, Alterra Holdings

Moderator: Bill Schreiber, Consultant

Time: 75 minutes

Agenda

7:00-8:10 **Registration & Continental Breakfast**

8:10-8:15 **Opening Remarks(Auditorium):** Dr. Gary J. Kogowski, Ravago Holdings Americas, Conference Chair

8:15-8:30 **Conference Executive Chair:** Dale Gerard, Senior Manager of Materials Engineering, General Motors Global Propulsion Systems

8:30-8:35 **Technical Program Overview:** Sandra McClelland, Solvay Specialty Polymers, Conference Technical Chair

8:35-9:05 **KEYNOTE: Automotive Vehicle Outlook: Challenges and Transformation**
SPEAKER: Joe Langley , I H S Markit

KEYNOTE: Automotive Additive Manufacturing: Integration of Industry 4.0
SPEAKER: Edwin Pope, I H S Markit

	Salon ABC	Salon D	Dennison Salon
	I. Materials	II. Materials 2	III. Additive Manufacturing and Air Management
	Moderator: Sean Robison Mid Michigan Community College	*Moderator: Ayaz Kahn* Michigan State University	*Moderator: Daniel Pisarski* University of Michigan
9:30 - 10:00	Next Generation PPA is a Powertrain Game Changer	Ultrasonic Welding Study - Nissan Spoiler Assembly	Material Innovation for Additive Manufacturing
	Bill Burnham, DSM Engineering Plastics, Business Development Manager Powertrain	Jeff Woos, Nissan-USA, Polymer Engineer, Brian Haggart, INEOS Styrolution, Application Engineer	Brandon Bouchard, Dupont, Application Development
10:00 - 10:30	Clear and Metallic PU/PUR, Class A Out of Mold	Characteristics and Applications of Flame Retardant Polyolefin/ Polyphenylene Ether Composite Alloy	3D Printing Industrialised by Virtual Engineering Simulation
	Dan Rozelman, Hennecke, CAA Senior Technical Sales Specialist	Nozomi Inagaki, Asahi Kasei Plastics, Manager Performance Plastics SBU	Kara Noack, BASF, Senior Business Development Manager
10:30 - 10:50	**Break - Sponsored by Channel Prime Alliance**		
10:50 - 11:20	Mineral Reinforcements in Polyamide 6. Latest Product Offerings in Talc, Mica & Wollastonite	New ASA Alloys for High Gloss Deep Color Exterior Applications with Enhanced Weathering Performance	New High Performance Charge Air Duct Materials
	Maz Bolourchi, Imerys, Sr. Manager, Polymer Applications	Samar Teli, Lotte Advanced Materials, Sr. Manager Technical Sevice and Application	Russell Bloomfield, DSM Engineering Plastics, General Technical Services
11:20 - 11:50	High Modulus Durethan® Polyamide 6 for Metal Replacement in Cross-Car Beam Applications	New High Heat ABS with Low Odor/Emissions for Auto Interiors	Meeting Future Trends and Challenges of Air Management Systems
	Joe Aiello, Lanxess Corporation Application Development Engineer, Structural	Tom Chu, Elix-Polymers, Business Development & Technical Support Manager-US	John Huber, Dow Dupont, Market Development Manager
11:50 - 12:55	**Lunch**		

1:00 - 1:30 **KEYNOTE: Department of Energy LightMat Consortium**
SPEAKER: Sarah (Ollila) Kleinbaum, Technology Development Manager, US Department of Energy

	Salon ABC	Salon D	Dennison Salon
	IV. Materials	V. Materials and Sustainable Products	VI. Analysis
	Mallori McCulloch Kettering University	*Moderator: Kaitlyn Money* Bellevue University	*Moderator: Ken Haines* Mid Michigan Community College
1:30 - 2:00	DURACON H140 Series ESD POM	Plastic Material Considerations for Electrified Propulsion Systems	Random Vibration Fatigue Analysis Including Structural Interaction Effects
	Ted Largent, Polyplastics, Sales Development Manager	Xiaoling Jin, General Motors, Senior Materials Engineer	Patrick Granowicz, Dupont, Polymer Consultant
2:00 - 2:30	KEP Americas Introduces KEPITAL H100 Homo Polymer	High Performance Thermoplastic Foams for Automotive Industry	Three Dimensional Warpage, Shrinkage Anaylsis for Injection Molding
	James J. DiVita, KEP Americas, Applications Business Development Manager	Dr. Javad Sameni, University of Toronto, Post-doctoral	Srikar Vallury, Moldex3D, Engineering Manager
2:30 - 2:50	**Break**		

2:50 - 3:10 **KEYNOTE: Carbon Fiber Affordability and the Potential for Faster Automotive Adoption of Carbon Fiber Composites in the Future**
SPEAKER: C. David Warren, Oak Ridge National Laboratory, Senior Research Scientist

3:10 - 3:40 **KEYNOTE: Engineered Plastics and Composites in Future Mobility Applications**
SPEAKER: Carla Bailo, President and CEO, Center for Automotive Research (CAR)

3:45 - 4:15	New Generation of Coolant Resistant High Performance Materials	Sustainable Polyphenylene Sulfide Alloys for High Temperature Applications	Using Experimental Rheological Approaches to Develop Predictive Theory for Polymer Processing Applications
	Volker Plehn, Toray Resins Company, Director Business Development	Dr. Alper Kizaltas, Ford Motor Company, Lead Research Scientist, Research and Innovation Center	Ryan Hall, University of Michigan PhD student
4:15 - 4:45	Recycled Carbon Fiber Filled-Engineering Compound for Automotive Applications	No Compromise: Post Industrial & Post Consumer Plastic for Automotive & Consumer - Electronics Applications	Statistical Data Analysis of Weathering of Thermoset Unsaturated Polyester
	Dr. Bo Sun, University of Toronto, Post-doctoral	Richard Broo, Lavergne Groupe, Inc., Growth Guru Leader	Daniel Kim, Global Materials Research, Business Development Manager
4:50 - 6:30	**Networking Reception: Sponsored by SPE Detroit Section, Automotive Division, & Injection Molding Division**		

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We need sponsors for the ***Trends & Topics*** Newsletter!

To reach our members, SPE Detroit Section distributes an electronic Newsletter 6 times a year. All ads are full color and copies of the newsletter are posted on the Detroit Section website. A limited minber of copies will only be printed to promote the section at various shows.

Acceptable to size file formats for advertising include:

- Portable Document Files (PDF) *preferred*:
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- Photoshop .tif Files:
  300 dpi resolution, RGB color model.
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  300 dpi resolution, RGB color model.

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Advertising rates are based on a 6 time run starting in September.

Please email or call for information on other Sponsorship oppotunities or less than full year rates after October 1st.

2018 PLANNED EVENTS

SPE Detroit

DATE	EVENT	LOCATION
April 30 – May 1, 2018	Auto EPCON	Detroit Marriott –Troy
May 14, 2018	Applications of Polymer Material in Orthopedic Surgery Technical Dinner Meeting	Michigan State University Management Education Center 811 W. Square Lake Rd. Troy
May 21, 2018	SPE Detroit Section Board Meeting	ACC 5750 New King Dr. Suite 120, Troy
June 11, 2018	23D Printing for Medical Applications Technical Dinner Meeting	Michigan State University Management Education Center 811 W. Square Lake Rd. Troy
June 25, 2018	SPE Detroit Section Planning Meeting	Crowne Plaza Hotel 1500 N. Opdyke Auburn Hills
June 26, 2018	SPE Detroit Section Golf Outing	Bay Pointe Golf Club 4001 Haggerty Rd. West Bloomfield

SPE DETROIT TECHNICAL PROGRAM

May 14, 2018

TOPIC:

APPLICATIONS OF POLYMER MATERIALS IN ORTHOPEDIC SURGERY - DR. KEVIN BAKER

LOCATION:

Michigan State University Management Education Center
811 W. Square Lake Rd. Troy, MI 48098

DATE: TIME:

May 14, 2018 5:00–8:00 PM

AGENDA:

5:00 PM	Networking
6:00 PM	Dinner
6:30 PM	Presentation by Dr. Kevin Baker, Director of Orthopedic Research, Department of Orthopedic Surgery Beaumont Hospital–Research Institute
7:30 PM	Q & A
8:00 PM	Program Closing

COST:

$75/Individuals
$500/table of 8
FREE for SPE Detroit Section Board, Students & Faculty

RSVP:

Ms. Karen Rhodes-Parker
karen@spedetroit.com
(248) 244-8993 x3

Dr. Baker is the Director of Orthopedic Research at William Beaumont Hospital in Royal Oak Michigan and also an Associate Professor of Orthopedic Surgery at the Oakland University William Beaumont School of Medicine. Dr. Baker has a B.S. degree in Biomedical Engineering and M.Sc. degree in Materials Science & Engineering from Michigan Technological University and a Ph.D. degree in Biomedical Engineering from Wayne State University. Dr. Baker oversees a multi-disciplinary research program within the Department of Orthopedic Surgery at William Beaumont Hospital.

Dr. Baker's research spans characterizing degenerative diseases, such as post-traumatic osteoarthritis and degenerative disc disease, as well as tissue engineering and regenerative medicine strategies to enhance the healing of bone, cartilage, intervertebral disc, and tendons/ligaments. With respect to polymers, his research program has involved performing wear and failure analysis on retrieved orthopedic implants comprised of ultra- high molecular weight polyethylene, poly-ether-ether-ketone, and poly-d-lactide. He has also been active in the development of resorbable polymer matrix nanocomposites for tissue engineering applications, and polymeric nanoparticles for drug delivery. Dr. Baker believes that polymers will play an increasingly important role in the future of orthopedic surgery.

SPE DETROIT TECHNICAL PROGRAM

June 11, 2018

TOPIC:

3D PRINTING FOR MEDICAL APPLICATIONS - TOM HUGHES, CEO

LOCATION:

Michigan State University Management Education Center
811 W. Square Lake Rd. Troy, MI 48098

DATE:

June 11, 2018

TIME:

5:00–8:00 PM

AGENDA:

5:00 PM	Networking
6:00 PM	Dinner
6:30 PM	Presentation by Tom Hughes
7:30 PM	Q & A
8:00 PM	Program Closing

COST:

$75/Individuals
$500/table of 8
FREE for SPE Detroit Section Board, Students & Faculty

RSVP:

Ms. Karen Rhodes-Parker
karen@spedetroit.com
(248) 244-8993 x3

Thomas W. Hughes CEO, FibreTuff Medical Biopolymers LLC will be presenting 3D Printing for Medical Applications. Thomas Hughes is a seasoned business leader having previously grown two startup companies in the plastics and polymers industry to profitability. Tom is a results-oriented leader with a distinguished career in building organizations, developing management teams and significantly improving operational performance. Tom has demonstrated exceptional leadership abilities with the capacity to build, train, and mentor highly productive top management, marketing, and operational management teams.

JUNE
26

spe DETROIT

SPE DETROIT ANNUAL GOLF OUTING

JUNE 26, 2018

BAY POINTE GOLF CLUB

4001 Haggerty Rd. West Bloomfield, MI

WHEN: Tuesday, June 26, 2018
TIME: 11:00am – Shot Gun Start!
FORMAT: Four person scramble & best ball.
INCLUDES: 18 Holes & Cart, Door Prize, Grilled Lunch & Dinner (Full Service Sit Down), Prizes and More!

COST:
$110/Person
$525/Foursome, includes Hole Sponsor
$100 Optional Hole Sponsor Only

Reserve Your Spot:
Karen Rhodes-Parker
karen@spedetroit.org
248-244-8993 ext: 3

www.SPEdetroit.org

DETROIT SPE ESSAY WINNERS
2018

SPE sponsors an essay contest every year for local middle school and high school students. Most students find out about the contest through a PlastiVan® visit.

The entries are divided between the northern and southern regions of our reach. This year we had 70 entries – 61 were from high school students and 9 were from middle school students. Warren Mott and Warren Cousino High Schools submitted the most essays in the south and Harrison High School submitted the most essays in the north.

Todd Hogan, Dow Chemical, handles the northern essays and Tom Miller, BASF, handles the mostly metro Detroit essays. The top five essays in each region are awarded a cash prize. Elizabeth Egan, PlastiVan® Educator and President of the Clarkston School Board, developed a rubric to "grade" the essays a few years ago. This has helped the judges make the tough decision of determining a winner.

Our southern winner is Lauren Champlain, a senior at Cousino High School in Warren. Her essay is titled *"Planning for Plastic-Free Oceans."* Our northern winner is Jenna Williams, a senior at Freeland High School. Her essay is titled *"How Plastics Save Lives in the Automobile Industry."* Both essays are included in this newsletter for your enjoyment. Both winners will receive $500 from Detroit SPE for their efforts.

DETROIT SPE 2018 ESSAY CONTEST WINNERS

North

First Place – $500
How Plastics Save Live in the Automobile Industry by Jenna Williams, senior at Freeland High School

Second Place – $300
Recycled Plastics & How They Can Provide Society with Energy by Heather Miller, senior at Freeland High School

Third Place – $200
Advantages of Plastics in the Medical Field by Sophia Welles, junior at Freeland High School

Fourth Place – $100
How Has Plastic Revolutionized the Medical Industry by Elizabeth Robishaw, senior at Freeland High School

Fifth Place – $50
Plastics Usefulness in Society by Michael Dudewicz, sophomore at Freeland High School

South

First Place – $500
Planning for Plastic-Free Oceans by Lauren Champlin, senior at Warren Cousino High School

Second Place – $300
Survive by Fawzia Alom, sophomore at Warren Mott High School

Third Place – $200
Plastics Effect of Medicine by grace Noechel, sophomore at Warren Cousino High School

Fourth Place – $100
Plastics – The Greatest Material We've Ever Synthesized by Srivatsav Bendi, a 7th grader at Baker Middle School

Fifth Place – $50
Plastic the Perfect by Arpita Chowdhury, a sophomore at Warren Mott High School

HOW PLASTICS SAVE LIVES IN THE AUTOMOBILE INDUSTRY

Jenna Williams

Freeland High School

It's a Saturday night and you're driving home from your friend's house. You come up to a crossroad. There weren't any stop signs on your road, but you still made sure to look both ways just to be sure. What you didn't notice was a car in front of you swerving into your lane until it was too late. You meet head on. It starts at the front bumper of your car crushing in like someone took a can of pop and crushed it in both hands. Even though you don't know it at the time, that action alone, with the addition of your seatbelt and airbag, has saved your life.

New plastic technology has helped increased safety for all. Everyday scientists are coming up with new ways for plastics to be used that can make other existing inventions even better. It all began in 1869, when John Wesley Hyatt discovered the first synthetic plastic. This new invention revolutionized the world.

According to Statista (2016), about 268 million vehicles are registered in the U.S. The makes the risk of accidents very high. Luckily, the use of plastic has made cars safer. One example of innovation in car safety is the addition of the "crumple zone". This necessitates the use of plastic in the front bumper. They use carbon fiber reinforced plastic that can "absorb 6 to 12 times the energy of steel and absorb energy as they crush" (Car Safety and Features). When you meet head on with a car, the bumper will crumple, absorbing energy from the impact. These crumple zones are proven to be very successful leading to some vehicles including them in the rear.

Filling hollow structures with plastic foams is another safety mechanism. These structures include the pillars, cowls, and rocker panels. This adds to the overall strength of the car. According to Plastics Make It Possible (2015), "Of 9.1 million passenger car accidents in 2010, only 2.1 percent involved a rollover, but they accounted for nearly 35 percent of the deaths". By adding plastic to those structures, it lowers the risk of fatal injuries from rollover crashes.

Another benefit from plastic in cars is laminated glass. The glass on the windshield and windows is composed of two layers of glass with a thin layer of plastic in the middle. This makes the glass slightly flexible. In an accident, the glass won't shatter as easily as it would if it was traditional glass. This reduces the risk of injuries while in an accident.

Cars have changed weight drastically over the years by cutting out heavy metals that could be easily replaced with plastic. While cars were first being made many people believed that the heavier the car, the safer it was. This theory ended up being false. According to Morris (2011), a good designed vehicle that is lighter can have the same, or even better crash safety compared to a heavy vehicle that has a similar size.

Driveshafts are another part of the car that could be made with plastic. A driveshaft is a rotating shaft that transmits torque into an engine. These are usually made of steel, which is the main threat of injury. According to the American Chemistry Council (2006), if a driveshaft made of steel were to break it could project shrapnel everywhere, and even into the ground which could catapult the vehicle in the air. This is especially dangerous to race car drivers. It could cause a rollover crash which are one of the most dangerous accidents. A driveshaft that is composed of carbon and polymer fiber is far safer than one made of steel. If the composite driveshaft were to break it would cause minimal danger. The reason for this is behind the design. According to the American Chemistry Council (2006), if it were to malfunction it would only break into small fiber fragments.

The automobile industry has come a far way with the help of plastic. Without it vehicles wouldn't be as safe as they are now, and there would be far more injuries during car accidents. Plastic has helped create the crumple zone which has become very successful in the car industry. Plastic has also reduced the risk of fatal injuries from rollover crashes. Laminated glass has been very beneficial not only to cars, but buildings and other structures. Overall plastic plays a key role in our society. Without it many inventions would be lacking. The impact of plastic can make many inventions, new and old, reach their full potential.

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PLANNING FOR PLASTIC-FREE OCEANS

Lauren Champlin
Cousino High School

Midway Atoll, a tiny island in middle of the North Pacific Ocean, is home to the world's largest albatross colony. Only about forty people live on the island, and as a national wildlife refuge, it is one of the most protected areas on the planet. Although it may seem remote and unaffected by people, being almost 1300 miles from the nearest city, the tide leaves a line of trash from the modern world along the beach as far as the eye can see. Since 1999, the National Oceanic and Atmospheric Administration has removed 125 tons of debris from Midway Atoll, and the dangers of this litter can be most clearly seen by examining the well-being of the island's inhabitants: the albatross (Hill). In 2017, Matt Brown, a superintendent at the U.S. Fish and Wildlife Service, studied the bodies of recently deceased birds on the island. Much to his surprise, he found that inside these albatrosses were colorful traces of familiar objects and brands such as the bright red caps of Coca-Cola bottles and small plastic lighters.

Albatrosses spend most of their time flying above the ocean, retrieving food to bring back to the island to feed their chicks. Unfortunately, most of the garbage that pollutes their waters mimics the same colors of the fish and squid they are searching for, and in an effort to nourish their young, they are feeding them plastic trash remnants. Brown's studies concluded that even once the carcasses and feathers of albatrosses dissolved, the plastic trash stays intact. In fact, you can pick up a handful of dirt virtually anywhere on the island and you'll find bits of plastic. Every year albatross adults bring 5 tons of plastic back to Midway, and these plastics take the place of valuable food they need to survive (Hill).

If recent trends continue, the ocean could become more parts plastic than fish by weight, but how is this happening and what actions are people taking to fix this? Globally, there are five ocean gyres where circulating ocean currents accumulate high concentrations of plastic. The most famous of these is the North Pacific Gyre swirling between California and Hawaii, near where Midway Atoll is. As the garbage circulates in the ocean currents, the island acts like a comb collecting trash. For marine scientist Marcus Eriksen, the closer to the source you can get plastics removed, the better off all living matter is. A five-year study he coauthored found there was "sufficient plastic in the five gyres to construct enough two-liter bottles that-if stacked end on end-they could make it to the moon and back, twice" (Sutter).

Louis Pazos, a native of Newport Beach, California and a life-long surfer, has had a close-up look at the world's plastics problem and has spent years contemplating a way to solve it. Over the next decade, Pazos worked on perfecting the Marina Trash Skimmer-a floating container that's fastened to the side of a dock and equipped

with a pump that circulates water through its filter system, gently sucking in and trapping debris inside. "'It's trash that we previously just ignored,' Pazos said. 'But instead of sinking to the bottom of the ocean or floating far out to sea, we're able to get it out of the water and stop the environmental damage'" (Sutter). Since Pazos invented this machine, he's installed 49 Marina Trash Skimmers in states along the coast of the Pacific Ocean, and so far, the skimmers have collected over one million pounds of mostly plastic-based debris.

Pazos' skimmer is only one of the many contraptions designed to solve this world-wide plastic pandemic plaguing our oceans. In fact, CEO of RT, Adrian Griffiths, has managed to create a refinery machine for dealing with all types of waste plastic. You put plastic in one end and three types of oil can be produced out the other (Humphries). Many inventors around the world dedicate their lives to exploring big ideas to save not only aquatic life, but all life on earth by using creative methods to take care of discarded plastic waste. It is because of innovative creators like Pazos and Griffiths that the future of our oceans doesn't seem as bleak as current studies make it out to be. Plastic is the common threat that is bringing hard-working dreamers together, and the only thing holding us back from achieving plastic-free oceans is the limit of our imaginations and our desire to help.

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VOLUNTEER REPORT

Keith Siopes
SPE Detroit Section Volunteer Coordinator

Thank you to the SPE Volunteers who devoted their time and talents to help make two events at Schoolcraft College successful.

On Saturday, March 10, the American Association of University Women and Schoolcraft College hosted Girls in STEM to provide girls in grades 5-8 and their parents information on STEM career and college options, as well as guided lab tours, demonstrations and hands-on experiments.

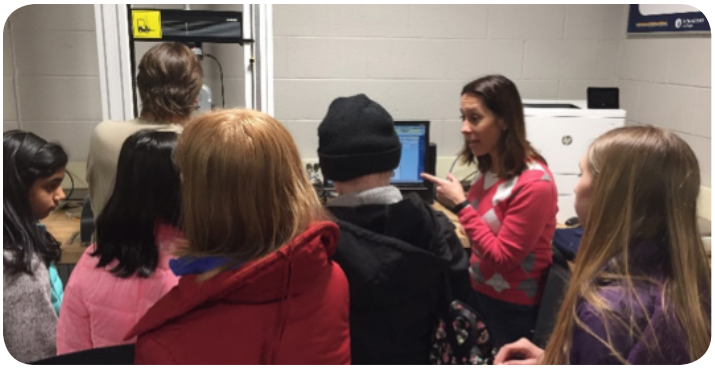
On Saturday, April 14, Schoolcraft College hosted a Technology & Engineering Career Pathways Open House, with a focus on middle and high school students, and their parents.

For both events, SPE volunteers guided the students through thermoforming, injection molding, tensile testing, gardner impact testing, and plastics applications demonstrations with hands-on student participation.

Volunteers (L to R): Dan Walker- PolyFlex Products, Lonny Sumpter - Plastic Omnium, David Okonski - General Motors, Paula Kruger - DSM, Peter Grelle - Schoolcraft College, Armando Sardanopoli- Schoolcraft College, Dr. Sassan Tarahomi - Alterra Holdings (not shown)

Peter Grelle and Lyle Beadle describing how various plastic material properties determine which type and grade of plastic is utilized for an application.

Armando Sardanopoli demonstrated thermoforming and David Okonski demonstrated injection molding.



Dan Walker and Paula Kruger demonstrated tensile testing.

Dr. Sassan Tarahomi, Alterra Holdings

The 3rd SPE Shanghai TPO Conference successfully came to a close on March 29, 2018 at the Shanghai Marriott Hotel City Center Hotel in Shanghai China.

The program started on March 27 with a welcome speech by Conference Chair Dr. Sassan Tarahomi and was followed by greetings from SPE International CEO, Patrick Farrey and President, Dr. Raed AlZubi. Next was the keynote speech on "Automotive Material Integrated Solution of Kingfa" by Dr. Yunqing Zhang, Chief Engineer of Application Development, Auto Div. Kingfa Sci. & Tech. Co., Ltd.

Next, Dr. Norm Kakarala, Technical Program Co-chair introduced Dr. Shiyao Huang, Ford R& D (Nanjing), the Technical Program Co-chair to present the technical program highlights. At this time, Dr. Tarahomi and Dr. Kakarala awarded Dr. Shiyao with a special award for the recognition of his dedication and efforts for the 2018 Shanghai TPO Conference. Dr. Shiyao, recruited several papers and worked with many authors to meet their submission deadlines as well as translated several documents to Mandarin; he was also one of the session moderators.

Session presentations started with Interior Applications until lunch time. Lunch was sponsored by Platinum Sponsor Advanced Composites. Concurrent technical sessions continued in the afternoon with Interior Applications and Modeling and Simulations until the dinner reception at 5:00 PM.

The second day of conference started with a short welcome speech by Dr. Tarahomi who recognized the volunteer students from East China Science and Technology University by presenting them with an SPE pin and a certificate of appreciation. Next were the presentations by two keynote speakers, Dr. Honglan Lu, Sr. Dir. of Polyolefins Technology, Formosa Plastics Corporation, U.S.A. and Mr. Saquib Toor, Beaconhouse Capital Managing Partner. Dr. Honglan Lu presented, "Polypropylene, Automotive Design and Manufacturing Challenges from a Producer's Perspective" and Mr. Toor presented "EPDM Global Market and How It Impacts the New Development of TPO, TPE and TPV for the Automotive and Other Industries".

Technical sessions continued the second day with a Process Development session until lunch. Lunch was sponsored by Platinum Sponsor Formosa Plastics Corporation. After lunch concurrent sessions continued with several great papers in the Surface Enhancement session and Light Weighting of Parts until the Dinner reception at 5:00 PM.

All morning and afternoon breaks were sponsored by SPE and offered ample time for everyone to visit the sponsor booths, network with other conference attendees, get a chance to eat some of the delicious local delicatessen, and get refreshed for the upcoming sessions.

Dr. Tarahomi started day 3 of the conference by thanking all attendees, keynote speakers, presenters, sponsors, and student volunteers. He announced an SPE gift for all who attended the

Conference–two years of free SPE membership. Dr. Tarahomi also informed everyone that SPE has approved the conference executive team to proceed with the planning for the 2019 SPE Shanghai TPO Conference.

The last session of the conference "Materials Development" was packed with attendees to listen to the exciting presentation by four final presenters. The 3rd SPE Shanghai TPO Conference successfully concluded at noon March 29 with lots of learning, new knowledge, networking, and good memories.

Dr. Shiyao and Dr. Tarahomi

Conference Speaker

Conference atendees

Attendees enjoying break time at the Exhibit Hall

Dr. Kakarala recruiting volunteer

Conference attendees during break time

TPO HIGHLIGHTS

The 20th Annual TPO Automotive Engineered Polyolefins Conference will be held at the Marriott-Troy October 7-10, 2018. The line up of speakers is engaging and exciting.
Dr. Sassan Tarahomi, Alterra Holdings

Topic Title:

A Look Back and a Look Forward
TPO Executive Chair
Lon Offenbacher,
Inteva Products

It's hard to believe that it's been two decades since the SPE TPO Automotive Engineered Polyolefins Conference began. Mr. Offenbacher will open this 20th anniversary conference with a focus on how far TPO technologies have come since their origin to today, as well as a look forward to the opportunities the industry offers for further evolution. As the company Lon founded, Inteva Products, celebrates its 10th anniversary this year, Lon will offer real-life examples of how innovations in TPO not only provide competitive advantages but allow for the development and launch of entirely new product lines. He will provide guidance and advice to set the stage for exceptional solution-based dialogue throughout the conference.

Topic Title: *What Impact Will the North American Free Trade Agreement (NAFTA) Have on the Plastics Industry?*

Suzanne Cole, CEO Miller Cole, LLC

Ms. Cole will discuss NAFTA's status and the potential trade/market implications for the plastics and automotive industries.

When the North American Free Trade Agreement (NAFTA) was signed by President Clinton and went into effect on Jan. 1, 1994, the three countries involved-Canada, the

United States and Mexico–probably had little idea of what the net result would be 25 years later. It seemed logical for these three North American countries to enact NAFTA, particularly since they were already trading with each other. Many U.S. companies, specifically in the automotive industry, were manufacturing in Mexico and had been for nearly two decades.

The goal of NAFTA was to eliminate barriers to trade and investment between the U.S., Canada and Mexico. The implementation of NAFTA brought the immediate elimination of tariffs on more than one-half of Mexico's exports to the U.S. and more than one-third of U.S. exports to Mexico. Within 10 years of the implementation of the agreement, all U.S.–Mexico tariffs were to be eliminated except for some U.S. agricultural exports to Mexico to be phased out within 15 years. Most U.S.–Canada trade was already duty-free. NAFTA also sought to eliminate non-tariff trade barriers and to protect the intellectual property rights on traded products.

Recently, President Trump threatened to withdraw from the trade agreement among the United States, Canada and Mexico, which is heavily utilized by automakers that have production and supply chains spread across the three countries. The automotive industry formed a coalition to convey its stance on NAFTA, with public campaigns telling Trump not to change the game in the middle of an industry comeback. The auto sector is winning with NAFTA and wants to continue.

The plastics industry is a key component of trade with Mexico, which is why it's important that NAFTA be renegotiated correctly. The U.S. plastics industry exports far more resins than it imports. When you examine the overall trade deficit with Mexico–$18 billion a year– assessing tariffs on resins will likely increase prices for U.S. consumers.

Resin tariffs would be a negative for the plastics industry. In addition to reducing plastics trade, disruption in some supply chains would likely occur, particularly automotive, which is the most integrated between the three countries. The end result likely would be higher vehicle costs to consumers and a less efficient/integrated supply chain.

Stay tuned and attend this keynote to hear the latest on NAFTA negotiations and how it will impact the plastics industry and your business.

Topic Title: *LyondellBasell – the Future of Polyolefins*

Richard Roudeix, LyondellBasell Senior Vice President for Olefins & Polyolefins – Europe, Asia, and International

LyondellBasell is the global leader in PP and PP Compounds. Mr. Roudeix will examine how the industry has changed over the last 20 years and what the future holds for polyolefins in the global automotive market. LyondellBasell has led innovation over the years, with a legacy of benchmark–

setting product designs that expanded the performance envelope of thermoplastic olefins. The company's commitment to continue to lead innovation is reflected in the investments made in process technology, polypropylene, recycling, and new compounding assets.

While the near future is demanding, with dynamic growth of alternative powertrains such as EVs, and more significantly, the emergence of autonomous vehicles, the market also remains unpredictable. Richard Roudeix will explore the challenges facing the polypropylene and compounding market, what the automotive industry expects, and how suppliers can best prepare and respond to these challenges. LyondellBasell is advancing what is possible for a successful future in the automotive industry.

Other Speakers Include:
Joel Morales, Director, Polyolefins North America, HIS

The purpose of the Society of Plastics Engineers Detroit Section Scholarship is to provide funding for students attending an eligible Michigan college or university while demonstrating a high level of career interest in the Plastics Industry.

Eligibility Criteria:

1. Students enrolled at either a four-year college/university or two-year community college degree program (minimum requirements of six credit hours per semester) pursuing a career directly related to plastics (i.e. Plastics Engineering, Polymer Engineering/Science, Packaging Engineering, Material Engineering/Science, Composite Materials and Structures, Chemical Engineering, Chemistry or Mechanical Engineering).
2. Active SPE student member including active membership in your schools SPE Student Chapter if applicable.
3. Applicant has not received or anticipates receiving any other scholarship from the SPE during the current award year.
4. Applicants must maintain a minimum cumulative grade point average (GPA) of 2.8 (4.0 scale) from the prior school year.
5. Applicants must demonstrate a high degree of intent to pursue a career in the Plastics Industry.

Eligible Colleges/Universities:

College for Creative Studies
Delta College
Eastern Michigan University
Ferris State University
Focus Hope University
Kettering University
Lawrence Tech University
Macomb Community College
Michigan State University
Michigan Technological University
Mid-Michigan Community College
Oakland Community College
Oakland University
Saginaw Valley State University
Schoolcraft College
St. Clair County Community College
University of Detroit Mercy
University of Michigan
Wayne State University
Central Michigan University

Application Procedure:
To be considered for a SPE Detroit Section Scholarship, applicants must submit a complete application package (**electronic copy preferred**) by August 6th, 2018 as outlined in the application checklist. Application and all checklist documents must be sent together via hard copy or email to the 2018 Scholarship Committee Chairperson (Tom Miller).

Awards:
Scholarship awards will range from $500 to $4,000 annually at the discretion of the SPE Detroit Section Scholarship Committee. SPE Student Chapter officer participation can increase the amount of funds awarded. Scholarships are valid for 1-year and recipients must submit a new application each year to be considered for future scholarship awards. All scholarships will be reimbursed once registered transcripts have been received from the university/college showing that all requirements have been fulfilled.

All Society of Plastics Engineers Detroit Section scholarships are awarded without regard to race, sex, religion, age, or national origin. The Society of Plastics Engineers Detroit Section will not award scholarships to applicants whom they deem are not qualified and reserve the right to not award scholarships in any given year as it so chooses.

Please don't hesitate to contact me if you have questions or need additional information.

Tom Miller – SPE Detroit Section Scholarship Committee Chairperson
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