



Automotive Plastics NEWS

JUNE/JULY 2018
VOL 47, ISSUE 4



SPE® ANNOUNCES CALL FOR NOMINATIONS FOR 48TH-ANNUAL AUTOMOTIVE INNOVATION AWARDS COMPETITION & GALA

The Automotive Division of the Society of Plastics Engineers (SPE®) is announcing a “Call for Nominations” for its 48th-annual **Automotive Innovation Awards Gala**, the oldest and largest recognition event in the automotive and plastics industries, and due dates for the event’s annual Parts Competition and Hall of Fame Award nominations. This year’s Awards Gala will be held **Wednesday, November 7, 2018** at the Burton Manor in Livonia, Mich. Winning part nominations (due by **September 15, 2018**) in 10 different categories, and the teams that developed them, will be honored with a **“Most Innovative Use of Plastics”** award. A **“Grand Award”** will be presented to the winning team from all category award winners. An application that has been in continuous use for 15 years or more, and has made a significant and lasting contribution to the application of plastics in automotive vehicles, will be honored with a **“Hall of Fame”** award.



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NOVEMBER 7, 2018

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AUTOMOTIVE DIVISION MEETING SCHEDULE & SPECIAL EVENTS CALENDAR



SPE Auto. Div. Board Meeting

American Chemistry Council - Auto. Ctr. 5:30 - 7:30 p.m.
5750 New King Drive, Troy, MI, USA June 11, 2018

ACCE Abstracts Deadline

June 15, 2018

TPO Paper/Presentation Deadline

July 27, 2018

SPE Auto. Div. Board Meeting

American Chemistry Council - Auto. Ctr. 5:30 - 7:30 p.m.
5750 New King Drive, Troy, MI, USA August 20, 2018

SPE Auto. Div. Golf Outing

Fieldstone Golf Club, Auburn Hills, MI USA ALL DAY
September 4, 2018

18th-Annual SPE Automotive Composites Conference & Exhibition (ACCE)

The Diamond Banquet & Conference Center
at the Suburban Collection Showplace ALL DAY
Novi, MI USA September 5-7, 2018

IAG Parts Nomination Deadline

September 15, 2018

First Round - Automotive Innovation Awards Judging

Celanese Corp. 8:00 a.m.- 5:00 p.m.
Auburn Hills, MI USA September 27-28, 2018

Second Round / Blue Ribbon - Automotive Innovation Awards Judging

Celanese Corp., Auburn Hills, MI USA 8:00 a.m.- 5:00 p.m.
October 5 2018

20th-Annual SPE TPO Automotive Engineered Polyolefins Conference (TPO)

Detroit-Troy Marriott, Troy, MI USA ALL DAY
October 7-10, 2018

SPE Auto. Div. Board Meeting

American Chemistry Council - Auto. Ctr. 5:30 - 7:30 p.m.
Troy, MI USA October 15, 2018

48th-Annual SPE Automotive Innovation Awards Gala

Burton Manor 5:00-11:00 p.m.
Livonia, MI USA November 7, 2018

SPE Auto. Div. Board Meeting

American Chemistry Council - Auto. Ctr. 5:30 - 7:30 p.m.
Troy, MI USA December 10, 2018

Automotive Division Board of Directors meetings are open to
all SPE members. All events are listed on our website at

<http://speautomotive.com>

Email Dave Helmer at

auto-div-chair@speautomotive.com for more information.

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Spring has been a busy time for the SPE Automotive Division. Our April Board Meeting was well-attended and the team agreed on a new Board of Directors for the upcoming fiscal year (July 1st – June 30th). Special welcome to first-time board members Neil Fuenmayor of LBI and Paula Kruger of DSM, and fond adieu to long-time board members Mike Whitens, Ford, Monica Prokopyshen, Chrysler Retiree, and Jay Raison, Delphi Retiree. Also, Steve Van Loozen of Celanese agreed to become our newsletter editor, replacing incoming chairman Dave Helmer in that role. A backfill for Steve's membership chair role is now needed. Please see the back cover for the latest list of volunteer board and committee members.

Another important item from the April Board meeting was the team decision to support next year's TPO Conference in Shanghai. Norm Kakarala and Sassan Tarahomi have run this event for the last three years and will continue to lead the team. Expenses have averaged \$86K while income has averaged \$106K so the risk appears low and, after all, Automotive Division is a global entity. It makes sense to keep the momentum going with this outreach in Shanghai.

The 13th Annual Auto EPCON Engineered Polymers Conference, co-sponsored by Detroit Section, Automotive Division and the Injection Molding Division, was once again a success with Co-Chairs Dr. Gary Kogowski and Sandra McClelland providing much of the "heavy lifting". Along with the main sessions held on May 1st at the Troy, MI Marriott, two new sustainability workshops were held on April 30th in the afternoon.

The following week was all about the 76th Annual SPE Annual Technical Conference (ANTEC 2018) and the "triennial," (once every three years) National Plastics

Exposition (NPE) in Orlando, Florida. Starting on Sunday, May 6th, Suresh Shah attended a council meeting and I "manned" a table at the NextGen Advisory Board (NGAB) "Meet and Greet" session for students and young professionals. Later that evening, we attended the SPE Honors and Awards Reception in the Orange County Convention Center where I am pleased to report that the Automotive Division was once again selected as a **Gold Pinnacle** recipient, SPE's highest honor for Divisions.



Continuing another Automotive Division tradition, we gave \$2,500 towards the awards managed by the SPE Foundation and given out at ANTEC:

- the Fred Schwab Education Award went to John Beaumont, President and CEO of American Injection Molding Institute & Beaumont Technologies and
- the SPE International Award went to Professor Phil Coates, Polymer Interdisciplinary Research Centre (IRC) at Bradford University (UK).

Furthermore, while last year we gave an added \$2,500 to Student Activities at ANTEC, this year we increased

Welcome



our Student Activities funding to \$5,000. Way to go team! As a bonus, five of us enjoyed the Student Luncheon on Wednesday, May 9th, which was a sold-out event and a good chance to network with the young folks.

We finished the trip on a high note when the nylon clevis bracket from our Innovation Awards Gala won both the **Protecting Life** category and the **People's Choice Award** in the ANTEC Parts Competition. Jeff Helms shepherded selected parts to the ANTEC competition so many thanks to Jeff. Look for an upcoming Press Release from SPE on the winners. Congrats team!



The Automotive Division also had a strong performance at the Technical Conference itself with three sessions and a total of 23 talks and papers. Many thanks to all of our speakers along with Tom Pickett and Norm Kakarala who served as our Technical Program Co-chairs or TPCs for these Automotive Sessions, which were held on Wednesday morning, May 9th, and then all day on Thursday. Attendance was excellent this year and many sessions, including our Thursday afternoon session, lasted until 6 pm. Hopefully, next year **in March in Detroit for the ANTEC 2019**, there will be no shortage of rooms so that the talks can end at a more reasonable hour. Following our late Thursday session, we held a small Board "Business" Meeting and did our best to recruit new members.

Finally, SPE promoted the new logo (seen here) at ANTEC which received good reviews from the young people. Rather than using the words "Society of Plastics Engineers", the direction is now to refer to ourselves as SPE with the words "inspiring Plastics Professionals" in the logo. Patrick Farrey, our SPE CEO, has also led a revamp of the SPE website so please check it out. Be aware that a new password is required for first time users though.

Teri Chouinard also attended NPE/ANTEC to promote SPE Automotive Division events and conferences. Teri traded assistance in "manning" a booth to Brenda Clark, Engineering Manager at Hasco and Chair of the SPE Mold Technologies Division, for "free" booth space in the West Hall and handed out newsletters and other materials. Nice job Teri!

Now that my term as Automotive Division Chairman is coming to an end and I am handing the reins over to the very capable Dave Helmer and Vice Chair Alper Kiziltas, I would like to thank everyone for making the last two years so enjoyable and successful. The Division has a solid financial footing thanks to all the volunteer's efforts, along with Bonnie Bennyhoff's great bookkeeping and Teri Chouinard's fine marketing. Thanks Again, Enjoy the Summer and see you in September at ACCE!!

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**PLASTICS:
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NOVEMBER 7, 2018



by Teri Chouinard,
SPE Automotive Div. Communications Chair

IAG continued from Cover / Page 1

“As the auto industry advances with intelligent vehicle technologies with global platforms for design and manufacturing, while meeting 2025 CAFE (corporate average fuel economy) and regional emissions standards, plastics are the leading material for enabling innovative design,” explains Jeffrey Helms, global automotive director, Celanese Corp. who returns as the 2018 **SPE Automotive Innovation Awards** chair. “As new technologies advance the industry, including the rise of additive manufacturing and autonomous vehicles, plastics and composites continue to be a leading material solution for rapid manufacturing worldwide including lightweighting, comfort, performance and compact design. The intelligent use of the right plastics and robust design will assist automakers and their suppliers in delivering the technologies and features that customers want while meeting regulatory or affordability targets worldwide. This led to the selection of **Plastics – Enabling Global Automotive Design** as our 2018 program theme. Last year, our program attracted the largest attendance in recent history, with over 800 attendees, and with increasing interest in additive manufacturing and global platforms, including autonomous vehicles, we expect this year’s attendance to be that or higher.

Since 1970, the **SPE Automotive Innovation Awards Competition** has highlighted the positive changes that polymeric materials have brought to automotive and ground-transportation industries, such as weight and cost reduction, parts consolidation, increased safety, and enhanced aesthetics and design freedom. At the time the competition started, in 1970, many OEM designers and engineers thought of plastics as inexpensive replacements for more “traditional” materials. To help communicate that plastics were capable of far more functionality than their typical use as decorative knobs and ashtrays indicated, members of the board of directors of SPE’s Automotive Division created the competition to recognize successful and innovative plastics applications and to communicate their benefits to OEMs, media, and the public.

Over the years, the competition drew attention to plastics as an underutilized design tool and made industry aware of more progressive ways of designing, engineering, and manufacturing automotive components. From its humble beginnings, the competition has grown to be one of the

most fiercely contested recognition events in the automotive and plastics industries. Today, polymeric materials are no longer substitutes for more expensive materials, but rather are the materials of choice in hundreds of different applications throughout the vehicle. Without plastics, many of the auto industry’s most common comfort, control, and safety applications would not be possible.

During the competition phase of the event, dozens of teams made up of OEMs and suppliers work for months to hone submission forms and presentations describing their part, system, or complete vehicle module to support claims that it is the year’s **“Most Innovative Use of Plastics.”** To win, teams must survive a pre-competition review and two rounds of presentations before industry and media judges.

There is no cost to nominate parts, however, nominations that are accepted into the competition need to be presented (in person or via webinar) by their nominating teams during the first round of **Automotive Innovation Awards Competition** judging, September 27-28, 2018 in Auburn Hills, Michigan. Finalists from that round advance to a second presentation before a panel of Blue Ribbon judges made up of media, retired chief engineers, and other industry experts on October 5, 2018 (also in Auburn Hills, Mich.) Winners of each part category, the Grand Award, Hall of Fame, and Lifetime Achievement winner will all be honored during the Automotive Innovation Awards Gala on November 7, 2018. This annual event currently draws over 800 OEM engineers, automotive and plastics industry executives, and media. Funds raised from the event are used to support SPE educational programs including technical seminars and conferences, which help educate and secure the role of plastics in the advancement of the automobile. Current competition categories include:

- Additive Manufacturing
- Aftermarket
- Body Exterior
- Body Interior
- Chassis/Hardware
- Electrical Systems
- Environmental
- Hall of Fame
- Materials
- Process, Assembly & Enabling Technologies
- Powertrain
- Safety



The mission of SPE is to promote scientific and engineering knowledge relating to plastics worldwide and to educate industry, academia, and the public about these advances. SPE's Automotive Division is active in educating, promoting, recognizing, and communicating technical accomplishments in all phases of plastics and plastic-based composite developments in the global transportation industry. Topic areas include applications, materials, processing, equipment, tooling, design, and development.

For more information about the SPE Automotive Innovation Awards Competition and Gala see www.speautomotive.com.

For more information on the Society of Plastics Engineers, see www.4spe.org.

Attn: Editors: A large collection of SPE Automotive Division digital photography is available for download at: <https://www.flickr.com/photos/speautomotive/albums>



Shown above are members of the team that developed last year's Grand Award and Body Exterior category winner – the Structural AGS with Integrated Loose Layer Construction on the 2018 Ford Motor Company Expedition luxury SUV.

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Attention SPE Innovation Award Winners



AUTOMOTIVE

**INNOVATION AWARDS
COMPETITION & GALA**

*2017 Award
Winner*

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We have a new logo to promote your pride in winning an award for your innovative technology in automotive plastics. All category award winning OEMs and suppliers are encouraged to include this logo in their marketing communications. Together, we are educating the industry to the benefits of plastics in automotive applications.

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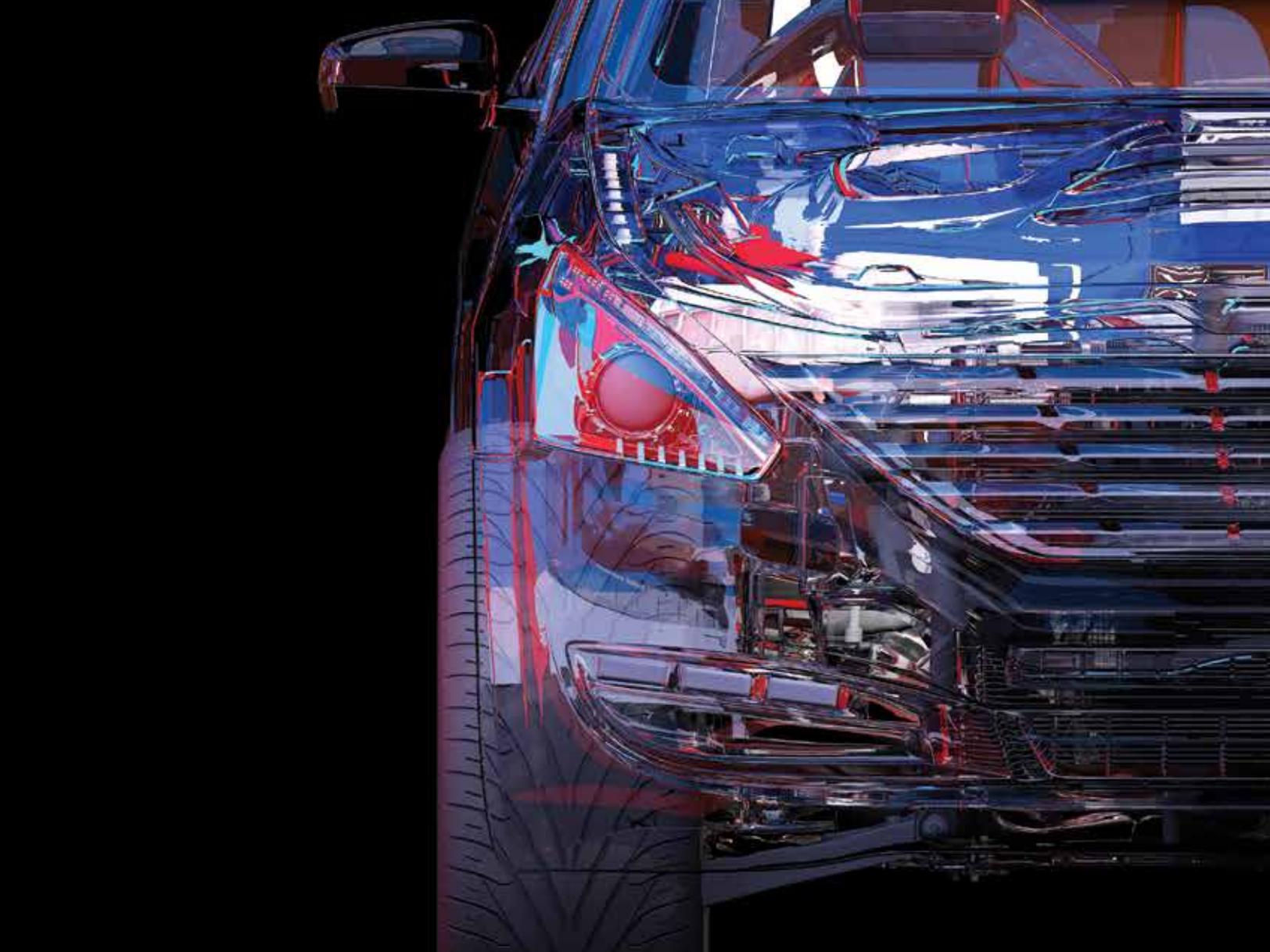
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2018 Auto EPCON Conference Recap By Dr. Gary J. Kogowski

The thirteenth annual SPE Auto EPCON for 2018 was a success even though we experienced sponsorship competition from the NPE event in Orlando, Florida. One hundred and eighty persons registered for the one day conference brought to you by the SPE Detroit Section, Automotive Division, and Injection Molding Division. The SPE Auto EPCON attendees included 47 members from automotive OEM staffs, 85 SPE members, 89 non-members, 11 SPE student members, and four media attendees. With almost 300 attendees including registered persons, speakers, and SPE Auto EPCON committee members, this was another well attended SPE conference with 22 exhibit sponsors, three advertisement sponsors, and one break sponsor. Proceeds from the conference will be used for the education scholarship budget, Plastivan, as well as special events such as the “Kids Christmas Toys Program”.

Dr. Dale Gerard (Senior Manager of Materials Engineering for General Motors Global Propulsion Systems) was the conference OEM Executive Chairperson and introduced the conference theme for 2018; “Plastics On The Move 2”. Dale brought an OEM perspective to the conference theme and provided a summary that focused on future trends in light weighting, injection molding processes, and other advances.

Jay Langley (Associate Director, IHS Markit) and Edwin Pope (Principle Analyst, IHS Markit) presented the first and second keynote addresses in tandem. Jay’s keynote presentation was entitled “Automotive Vehicle Outlook: Challenges and Transformation.” Edwin’s keynote presentation was entitled “Automotive Additive Manufacturing: Integration of Industry 4.0”. Both presentations provided a detailed examination of future automotive trends and additive manufacturing.

Sarah (Ollila) Kleinbaum (Technology Development Manager, U.S. Department of Energy) was our third keynote speaker.

Sarah’s keynote presentation was entitled “Department of Energy LightMat Consortium.” Sarah’s presentation described the Lightweight Materials National Laboratory Consortium or LightMAT. LightMAT is a network of ten national laboratories with technical capabilities highly relevant to lightweight materials development. LightMAT provides access to resources and capabilities in this network via a single point-of-contact and works to match industry research teams with expertise and equipment found only at national laboratories.

Our fourth conference keynote speaker was C. David Warren (Senior Research Scientist, Oak Ridge National Laboratory). Dave’s presentation was entitled “Carbon Fiber Affordability and the Potential for Faster Automotive Adoption of Carbon Fiber Composites in the Future.” Carbon fibers are very important to the automotive industry for their light weight and strength characteristics. However, they are said to be expensive and difficult to produce. Dave’s keynote address presented the current status of carbon fiber composites focusing on drivers for vehicle mass reduction, how composites effectively address challenges, major obstacles to future composites growth, likely early entrant applications, and material classes for high volume vehicles.

Carla Bailo (President and CEO, Center for Automotive Research (CAR)) was our final keynote speaker. Carla’s presentation was entitled “Engineered Plastics and Composites in Future Mobility Applications.” Carla’s keynote address presented a fresh look into the future of mobility and the potential impacts of automated, connected, electrified and shared mobility services on the traditional and emerging automotive industry.

This year the SPE Auto EPCON conference had six great student moderators: Sean Robinson, Ayaz Khan, Daniel Pisarski, Mallori McCulloch, Kaitlyn Money, and Ken Haines.

Sean Robinson was the Material Session I student moderator. Sean attends Mid-Michigan Community College with a major in plastics engineering. Sean plans to attend Michigan Technological University to complete his degree in finance. Sean is planning to work in the manufacturing field after graduation.

AUTO EPCON 2018

Ayaz Khan was the Material 2 Session student moderator. Ayaz will enter his senior year at Michigan State University with a major in Chemical Engineering. Ayaz serves on the student board of the American Institute of Chemical Engineers and Society of Plastic Engineers at MSU. Ayaz's interests are in the optimization of chemical processes and design of new polymer technologies. He is also an avid soccer player.

Daniel Pisarski was the student moderator of the Session III Additive Manufacturing and Air Management. This is the second consecutive year that Daniel moderated an Auto EPCON conference session. Daniel will be entering his junior year at The University of Michigan (Go Blue!). Daniel is a Mechanical Engineering major and Electrical Engineering minor. Daniel is a member of the Michigan Autonomous Aerial Vehicle Student Design Team. Daniel is interested in 3D Printing. He is also an avid golfer and tennis player.

Mallori McCulloch was the student moderator of the IV Materials Session. Mallori is a senior studying Chemical Engineering at Kettering University and will graduate in the fall. She currently works for Asahi Kasei Plastics in Fowlerville, Michigan as an Application Development Engineer Co-Op. After graduation Mallori plans to continue her career in plastics. She enjoys working with customers and developing material for specific applications.

Kaitlyn Money was the moderator of the Materials and Sustainable Products Session. Kaitlyn has an associate's degree in Plastic Engineering Technologies and liberal arts from Mid-Michigan Community College. Kaitlyn is the secretary and treasurer of MMCC's SPE student chapter. Kaitlyn is currently attending Bellevue University online to achieve her bachelor's degree in Sustainability Management while working as a lab technician for the advanced integrated manufacturing program at MMCC. Kaitlyn's career goals are to become an occupational education professor or a career and technical education professor.

Ken Haines was the student moderator for the Analysis Session of the Auto EPCON conference. Ken is a student at Mid-Michigan Community College in the Plastics Engineering Technology program. Ken worked as a service technician for Brown Machine and Lyle Industries. Ken will be graduating from Mid-Michigan Community College in the class 2018. Ken would like to work in the plastics industry.

With twenty-seven sponsors, the 2018 Auto EPCON remains a key conference for networking, communicating new product development, and OEM attendance. We are grateful for the support of our premier sponsors, DSM Engineering Plastics, DuPont Performance Materials, Jenoptik, Lotte Advanced Materials, and Polyplastics. The Associate sponsors for the

2018 Auto EPCON were Ascend Performance Materials, BASF Engineering Plastics, Lanxess, and Entec Polymers (a Ravago Company). This year we had fifteen exhibit sponsors, A. Schulman, Arkema, Asahi Kasei Plastics, CAR, EMS-Grivory, Formosa, IHS Markit, IMERYS, JM Polymers, KEP Americas, LG Chen America, LyondellBasell, Nexeo Solutions, Niche Polymers, and Toray. Our advertising sponsor was Ineos-Styrolution. Our Break sponsor was Channel Prime Alliance. Our Reception sponsor was the American Chemistry Council.

Many thanks to our committee members who worked very hard and long to make the 2018 SPE Auto EPCON a success:

- Dr. Gary J. Kogowski – Ravago Holdings Americas – Co-Chair – exhibits, Marriott, program brochure.
- Sandra McClelland – Solvay Specialty Polymers – Co-Chair, technical program, brochure, keynote speakers, and student mentor
- Ed Luibrand – Fiat-Chrysler – sponsorship chair
- Pete Grelle – Dow Retired – Injection Molding Division, technical program
- Glenn Cannavo – DSM – Marriott, A/V, exhibits
- Scott Marko – SPE National – Auto EPCON Mobile App.
- Sue Wojnicki – SPE National – marketing
- David Okonski – GM / SPE Injection Molding Division, student mentor
- Bill Windschief – technical program, Marriott
- Suresh Shaw – Delphi Retired – committee, ISRI committee
- Chris Surbrook – Midland Compounding – sponsorship liaison, ISRI committee, advertising and media
- Sameer Mehta – Asahi Kasei – sponsorship liaison, advertising and media
- Nihir Bhuna – Asahi Kasei – sponsorship liaison, advertising and media
- Karen Rhodes Parker – SPE Detroit Section – brochure, registration
- Omar Faruk – Ford Motor Company – technical program
- Steve Van Loozen – SPE Automotive Division – registration
- Matt Carroll – General Motors – OEM Executive Chair coordinator
- Keith Siopes – Siopes Plastic Consulting – ISRI Committee
- Ryan Tracht – M. Holland – Auto EPCON Mobile App.
- Nippani Rao – Emeritus member

The 2019 Auto EPCON is tentatively scheduled for Tuesday, May 7, 2019, at the Detroit-Troy Marriott located at 200 W. Big Beaver Rd, Troy, MI 48084. Please mark your calendars.

AUTO EPCON 2018



Ken Haines (left) Student moderator Analysis session presents Ryan Hall (right) from the University of Michigan with his SPE speaker certificate. Ryan's presentation was entitled "Using Experimental Rheological Approaches to Develop Predictive Theory for Polymer Processing Applications."



Auto EPCON conference, a view down exhibit hall

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2018 TPO Shanghai Conference Recap By Dr. Sassan Tarahomi

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

Conference program started on March 27 with the welcome speech by Conference Chair Dr. Sassan Tarahomi and followed by greetings from SPE International CEO, Patrick Farrey and President, Dr. Raed Alzubi. Next was the Key note 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 deadline as well as translated several documents to Mandarin and he was one of the session moderators.

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

The Second day of conference started by a short welcome speech by Dr. Tarahomi and recognizing the volunteer students from East China Science and Technology University and presented them with a SPE pin and a certificate of appreciation. Next was the presentation 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 the Process Development session until lunch. Lunch was sponsored by our 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 Dinner reception at 5:00 PM.

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

Dr. Tarahomi started the 3rd day of the conference by thanking all attendees, keynote speakers, presenters, sponsors and student volunteers. He announced SPE gift to all who attended the conference with two years for 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 final four presenters. The 3rd SPE Shanghai TPO Conference concluded at 12:00 PM on March 29th successfully with lots of learning, new knowledge, networking and good memories.



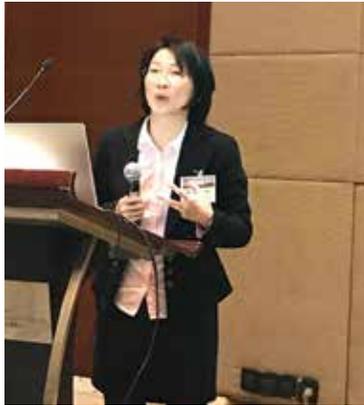
HIGHLIGHTS FROM TPO SHANGHAI



Dr. Yunqing Zhang, Kingfa



One of the speakers presenting his paper during technical session



A conference presenter



Jack Zhang, Inteva presenting



One of the session moderators presenting certificate to presenters



One of the speakers presenting his paper during technical session



Dr. Kakarala and Dr. Tarahomi presenting volunteer students with certificate of appreciation



Dr. Shiyao presenting a certificate to a presenter



Audience intently listening to one of the presenters



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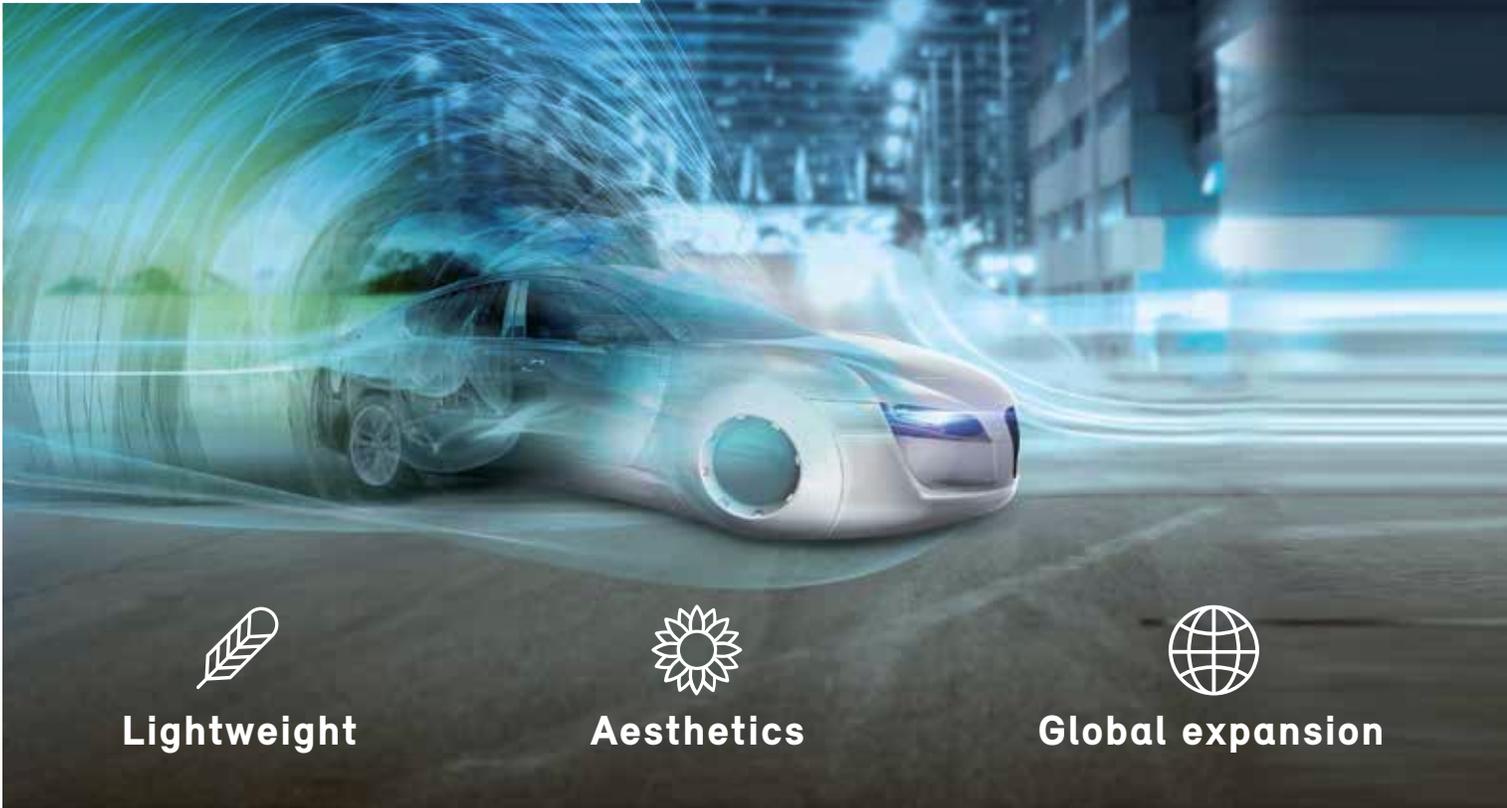
OEM approvals:

Our Automotive grades are listed at GM (GMW15572 and GMW15581), Ford (MATS), BMW (GS93016), Renault-Nissan (PMR2018), Daimler (DBL5404), FCA, PSA.



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body panels, trims, dashboard, door cladding, climate control units, air intake manifolds as well as battery cases.

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ACCE 2018 COMPOSITES | Driving Innovation

by Teri Chouinard,
SPE Automotive Div. Communications Chair



SECOND KEYNOTE SPEAKER ANNOUNCED FOR SPE® ACCE 2018

MARK VOSS – *Engineering Group Manager,
Body Structures Advanced Composites and
Pickup Boxes, General Motors Company*



MARK VOSS will present a keynote on ***“The World’s First Carbon Fiber Pickup Box”***. This presentation will highlight the innovative and cost-effective material change enabling the development of a 62- pound (28 kilogram) weight savings, 40 percent mass reduction and improved performance with their new “CarbonPro Box” on the 2019 MY GMC Sierra Denali.

Planning is in full swing for the **2018 SPE Automotive Composites Conference & Exhibition (ACCE)**. This year’s show returns **September 5-7, 2018** to The Suburban Collection Showplace in Novi, Mich. in the Detroit area. Now in its eighteenth year, the ACCE is the world’s leading forum for automotive composites and draws over 900 exhibitors, speakers, and attendees from 15 countries on five continents to the Detroit area.

This year’s ACCE is co-chaired by Dr. Alper Kiziltas, Lead Research Scientist, Ford Motor Company and SPE Automotive Div. Education Committee Chair and Matthew E. Carroll, Materials Engineering, General Motors Company and SPE Automotive Div. Chair. Having two OEMs chair the event is a testament to the increased interest OEMs have in ACCE.

Voss is responsible for leading the team for the engineering execution of all new structural composites applications as well as all global pickup box executions. Prior to his current assignment, he has held a variety of automotive engineering and quality positions. He has successfully led teams responsible for numerous composite panels implemented at GM, starting with the 2004 Anniversary Edition Corvette Z06 hood, the first OEM original equipment carbon fiber painted exterior panel. He led the 2009 Corvette ZR1 carbon fiber panel development and execution, as well as the development of the 2014 Corvette Stingray composite body panels. Voss has received numerous patents related to the execution of carbon fiber and other mass savings technologies. He received a 2008 SPE Award for the ZR1 hood and the 2009 Boss Kettering Award from GM, the highest technical honor bestowed by the company. He received his BSME from the University of Michigan in 1994 and an MSME from Purdue University in 2004.

SPE® ACCE 2018 KEY MEMBERS OF THE ROUNDTABLE DISCUSSIONS

SEPTEMBER 5: HOW CAN THE PLASTICS INDUSTRY PROFIT FROM THE NEXT GENERATION OF VEHICLES?



JUD GIBSON, Vice President, Commercial Americas, DSM

Jud Gibson joined DSM Engineering Plastics (DEP) in February 2016 from SABIC Innovative Plastics which was founded in September 2007 with the acquisition of GE Plastics.

During his 15-year career at GE/SABIC, Jud held several commercial roles with increasing responsibility and was Director of SABIC Innovative Plastics America's Automotive prior to joining DSM.

Jud started his career in Marketing with Textron's Randall Division in Cincinnati. Shortly after joining Textron, Jud was transferred to Textron's Automotive headquarters in Troy, MI where he continued his seven-year span with roles in product management, sales, and program finance.

Given Jud's passion for sales, he has been fortunate to lead teams responsible for launching advanced material technologies for weight savings, environmental compatibility and award-winning design innovation.

Gibson earned a Bachelor's degree in Business Administration from the University of Cincinnati.



PAUL PLATTE, Manager, Automotive & Transportation, Covestro

Paul Platte is a Mechanical Engineer turned marketing lead with the Industrial Marketing organization in the Polycarbonates business unit at Covestro LLC. He is

responsible for leading the marketing strategy for the automotive sector for polycarbonate-based material applications in North America.

Paul has over 30 years of automotive experience, working in multiple positions along the automotive supply chain - OEM, Tier 1 and now Tier 2+ at Covestro. He has held several strategic positions across three functional areas including new business, and the polycarbonate and polyurethane business units. During his time with the polyurethane business, Paul was responsible for growing the polyurethane RIM & composites business with emphasis on key market segments and technologies, including: RIM, pultrusion, filament winding, long fiber injection, and resin transfer molding. This combined diversity provides Paul insights into how Covestro can serve its customers through added-value solutions.

Platte holds a B.S. in Mechanical Engineering from Kettering University.

SEPTEMBER 6: HOW 3D PRINTING IS CHANGING AUTOMOTIVE COMPOSITES BUSINESS



ELLEN LEE, Additive Manufacturing/3D Printing Technical Leader, Ford Motor Co.

Ellen Lee, Ph.D., is the Additive Manufacturing Research Technical Leader responsible for development and implementation of novel materials, processes, and applications of 3D printing for the automotive sector.

Dr. Lee leads a research program dedicated to developing new technologies in additive manufacturing/3D printing that are faster and stronger, in a wider range of durable and robust materials. Dr. Lee has a vast knowledge of automotive materials and durability requirements, as well as intimate knowledge of conventional mass production processes, from her previous role as the Plastics Research Team Leader at Ford. She holds several patents on additive manufacturing, bio-based materials and processing, and nanocomposite technologies.



Dr. Lee received her Bachelor of Science (B.S.) degree in Chemical Engineering from Northwestern University and a Doctorate (Ph.D.) degree in Chemical Engineering from the University of California at Berkeley.



JEFF DEGRANGE,
Chief Commercial Officer,
Impossible Objects Incorporated

Current Chief Commercial Officer of Impossible Objects Incorporated, a 3D Composites company responsible for product and business development, former Stratasy's VP of Production

Application Engineering and Boeing Research and Technology Leader for Advanced Manufacturing Materials and Technologies.

Jeff serves as current Chairman of Society of Manufacturing Engineering (SME) Additive Committee, former Chairman of the Germany's Direct Manufacturing Research Center (DMRC), Advisor to National Science Foundation, Chicago Museum of Science and Industry, University of Iowa College of Engineering and Board Member to Precision ADM in Winnipeg, Canada. Jeff holds multiple patents and has a Master's in Mechanical Engineering from Washington University and Bachelor's in Industrial Engineering from the University of Iowa.



**KARA NOACK, Regional
Business Director, BASF 3D
Printing Solutions NA**

Kara Noack is the Regional Business Director for BASF 3D Printing Solutions NA and is located in the greater Detroit, MI area. Detroit is

being developed as the NA 3DP hub for BASF, capitalizing on synergies with BASF's Performance Materials, Ink, and Coating divisions also located in this metro area. Having a B.S. in Chemical Engineering from Michigan Technological University, she has spent most of her career in commercial roles in a variety of industries. She entered the Additive Manufacturing business at BASF in January 2015 and has become a true believer in the potential of 3D-Printing to be disruptive in manufacturing. Her charter is to connect BASF's material and service solutions with end users across markets in NA.

SEPTEMBER 7: SUSTAINABLE MATERIALS MANAGEMENT AND THE CIRCULAR ECONOMY IN AUTOMOTIVE APPLICATIONS



DEBBIE MIELEWSKI,
Senior Technical Leader,
Sustainable Materials
and Advanced Materials,
Ford Motor Co.

Dr. Deborah Mielewski received her B.S.E. ('86),

M.S.E. ('93) and PhD ('98) degrees in Chemical Engineering, from the University of Michigan in Ann Arbor, and has been with Ford Motor Company for 31 years. Dr. Mielewski has worked at Ford Research in automotive paint durability, polymer processing and materials development. She initiated the biomaterials program at Ford Research in 2001, and her team was the first to demonstrate soy-based foam that met all the requirements for automotive seating. Ford launched soy-based foam on the 2008 Mustang, and soy seat cushions, backs and headrests have found their way into every Ford North American built vehicle. Bio-based foams currently reduce greenhouse gas emissions by over 25 million pounds and reduce petroleum dependence by over 5 million pounds annually.

The group continues to pioneer the development of sustainable plastic materials that meet stringent automotive requirements, including natural fiber reinforced plastics and polymer resins made from renewable feed stocks. Another success has been the development and implementation of wheat straw filled poly(propylene), that was launched on the 2010 Ford Flex storage bins. This material utilizes a waste stream, is lighter in weight than either talc or glass filled materials, and reduces CO2 emissions. In 2013, the first automotive application of cellulose reinforced poly(propylene) was introduced in the armrests of the Lincoln MKX. The cellulose reinforced composite, developed with Weyerhaeuser, replaces a glass-filled component, and is lighter in weight. Ford currently has 8 plant-based materials in production vehicles, establishing a reputation as a leader in this space.

Dr. Mielewski is passionate about the work she does to reduce Ford's environmental footprint and believes that these new materials are going to dominate the market in the future. She has appeared in a Ford national commercial, the NOVA "Making Things" series, and has been interviewed by countless media outlets, including Wall Street Journal, Time Inc. and CNN. She has over 60 referred journal publications and 10 U. S. patents. Her work has been acknowledged with awards such as the Henry Ford Technology Award, the R&D100 award, the Free Press Automotive Leadership Award, the Environmental Management Association Award and the American Chemical Society's Industrial Innovation Award. She has spoken at prestigious outlets such as TED and the Smithsonian.

LAUREN SMITH, Project Manager, Renewable Energy & Sustainability Metrics, General Motors Company

Not available at press time.

JAY OLSON, Global Manager, Materials Engineering & Technology, John Deere Technology Innovation Center

Mr. Olson has 36 years' experience in positions including Polymers Technology Manager, Project Engineer, Senior Engineer and Design Engineer in Product Design, Manufacturing and Materials Engineering with Agricultural, Construction and Consumer Products. Mr. Olson is currently Brand Owners Council Chair and a member of the executive board of directors of the Plastics Industry Association, the 3rd largest mfg. industry in North America. He has also served as Chairman of the Product Design & Development Division of the Society of Plastics Engineers. Formal education includes B.S.M.E from University of Illinois and Executive MBA from University of Iowa. He holds over 20 U.S. patents, is a licensed Professional Engineer and a member of ASABE, the Society of Plastics Engineers and SAE. Mr. Olson was named the 2010 Quad City Engineering & Science Council Senior Engineer of the Year and the 2011 Quad City Agricultural & Biological Engineers Outstanding Engineering Achievement Award.



**CHARLENE WALL,
Director of Sustainability,
BASF Corporation**

As Sustainability Director for BASF in North America, Charlene Wall-Warren leads a team working across the organization to bring BASF's corporate purpose "We create chemistry for a sustainable future" to life: by further integrating sustainability in business strategies, engaging employees, and collaborating with customers, value chain partners and other external stakeholders. Charlene's roles over the last 25 years include project engineering, safety and process design, business and strategy development, marketing, communications, packaging, and life cycle assessment – touching industries as diverse as petrochemicals, construction, automotive, food, electronics and personal care. She has been a Board member for the American Institute of Chemical Engineers and The Sustainability Consortium. She serves in advisory roles for Sustainable Brands, USBCSD, CERES and the Green Sports Alliance, and has been recognized by Environmental Leader and Corporate Responsibility publications. Charlene holds a B.S. in Chemical Engineering from Drexel University in Philadelphia, Pennsylvania.



**DON WINGARD,
Senior Research Scientist,
Wellman Advanced Materials**

Don Wingard has served as Senior R&D Engineer at Wellman Advanced Materials for the past 20 years. His primary responsibilities include new product development/management and product optimization, raw material development, phase III process, mentoring less experienced engineers. Previously employed at Albemarle Corp. as Chemical Engineer, Wingard was responsible for process development in Ibuprofen area, start-up of new processes, process design, as well as experimental, pilot plant, and manufacturing trials.

He holds a PhD, Chemical Engineering, University of South Carolina, 1996, a Master of Science, Chemical Engineering, University of South Carolina, 1991, as well as a Bachelor of Science, Chemical Engineering, University of South Carolina, 1984.



MIKE SALTZBERG,
Global Business Director,
Biomaterials, DuPont

Michael A. Saltzberg is the Global Business Director for Biomaterials at DuPont Industrial BioSciences. There he leads a portfolio of commercial and emerging businesses which utilize renewable feedstocks to make

industrially important chemicals and materials, including DuPont Sorona® polymer and Bio-PDO™ propanediol. Through the development of renewable biochemicals and biomaterials, Mike and his team are solving critical issues for industries as varied as packaging, cosmetics, apparel and carpeting, all facing the challenges of offering high performance choices to their downstream customers while making their supply chains more sustainable.

Mike is a veteran of the industry with over thirty years of experience at DuPont including R&D management, sales & marketing, and business development. He has led DuPont's efforts in Biomaterials business development since 2006.

Mike is a native of Philadelphia, PA with a strong technical and business background. He holds a B.A. with Honors in Chemistry.

ABOUT THE SPE ACCE

The ACCE is supported by 100 sponsors with close to 80 exhibits highlighting advances in materials, processes, and equipment for both thermoset and thermoplastic composites in a wide variety of transportation applications. Networking breakfasts, lunches and receptions enhance the value of the event that attracts over 900 attendees worldwide. The Automotive and Composites Division of the Society of Plastics Engineers (SPE®) jointly produce the ACCE to educate the automotive industry about the benefits of composites in automotive applications.

CALL FOR PAPERS

In addition to keynote presentations and round table discussions, The ACCE features approximately 80 technical presentations. The Technical Program Co-Chairmen this year are Dr. David Jack, Associate Professor, Department of Mechanical Engineering, Baylor University and Leonardo Simon, University of Waterloo and they already have close to 50 speakers with their abstracts confirmed and final presentations in process. Those interested in speaking at this year's event should go to <http://SubmitACCEpapers.com> and upload abstracts ASAP and full papers or non-commercial presentations by **July 15, 2018**. Authors who submit full papers (not presentations) in the proper format will be considered for the conference's Dr. Jackie Rehkopf Best Paper Awards, which are presented during the event's opening ceremony. Questions for the peer review committee may be addressed to ACCEpapers@speautomotive.com.

CALL FOR NOMINATIONS FOR CONFERENCE PARTS COMPETITION

The committee also issued a call for nominations for its seventh-annual ACCE parts competition. Prizes for the Most Innovative Composites Application will be awarded in three categories — Materials Innovation, Process Innovation (selected by media and members of the SPE ACCE planning committee), and People's Choice (selected by conference attendees) — with winning teams receiving recognition and a trophy after lunch on the last day of the show.

There is no cost to enter the competition. Any registered conference participant (speaker, sponsor/exhibitor, or attendee) may nominate original equipment or aftermarket composite parts on or in development for passenger cars, light trucks or heavy trucks from any geography. Nominations including descriptions and photos about the application's innovations are due **August 31, 2018** and should be eMailed to teri@intuitgroup.com. Physical parts must be brought to the SPE ACCE formal review by judges during a formal walk-through at the show.

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NOVEMBER 7, 2018

CALL FOR NOMINATIONS

- MOST INNOVATIVE USE OF PLASTICS AWARDS

For more info and to submit nominations, go to: www.speautomotive.com/innovation-awards-gala.



The Automotive Division of the Society of Plastics Engineers (SPE®) is announcing a "Call for Nominations" for its 48th-annual **Automotive Innovation Awards Gala**, the oldest and largest recognition event in the automotive and plastics industries. This year's Awards Gala will be held Wednesday, **November 7, 2018** at the Burton Manor in Livonia, Mich. Winning part nominations (**due by September 15, 2018**) in 10 different categories, and the teams that developed them, will be honored with a **Most Innovative Use of Plastics** award. A **Grand Award** will be presented to the winning team from all category award winners.

SPONSORSHIP OPPORTUNITIES

This annual event currently draws over 800 OEM engineers, automotive and plastics industry executives, and media. A variety of sponsorship packages - including tables at the banquet, networking receptions, advertising in the program book, signage at the event and more are available. Contact Teri Chouinard of Intuit Group at teri@intuitgroup.com.



INNOVATIVE PART COMPETITION CATEGORIES:

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TREASURER'S REPORT

Bonnie Bennyhoff,
SPE Automotive Division Treasurer

Final report for this fiscal year is a good one! Educational programs were enriched through the generous support of our sponsors, spending is under control and Accounts Receivable are in line. If you would like the details to back up these claims, please email me – we aim to provide transparency for all of our transactions.

SPE Automotive Division would love to have your input for planning the next fiscal year (July 1, 2018 thru June 30, 2019). Consider this your personal invitation to attend our Board of Directors planning meeting at 5:30 pm on June 11, 2018; location is 5750 New King Drive, Suite 120 Troy, MI 48098.

AS OF MAY 23, 2018, THE DIVISION'S ACCOUNT BALANCES WERE:

Checking:	\$519,537.14
Savings:	\$ 27,466.37
Total:	\$547,003.51

MEMBERSHIP REPORT

Steven VanLoozen,
SPE Automotive Division Membership Chair

I would like to first thank everyone reading this for their ongoing support for SPE. Membership in the Automotive Division as of April 30 stands at 894. This has ticked up a bit from the start of 2018 but still falls short of our goals. Membership is critical to our success and directly supports our ability to provide the educational outreach and support for young professionals that will help ensure the next generation of leaders in our industry are prepared to inspire the automotive innovations only plastics and composites can provide.

The Automotive Division is truly global with nearly 40 members in Europe and over 40 in India. Interestingly we have only 1 member in China and 1 in Mexico. These are two of the highest growth markets for the automotive industry and we will be focusing our efforts to bring the message of society membership to these important automotive markets. The Automotive Division hopes we can change this and add members in both of these important countries and the process was started this year through our sponsorship of the 2019 Shanghai TPO Conference. We will look for similar opportunities in Mexico in the coming months. For all of our members interfacing with international colleagues please take a moment to share the value you have derived from membership and encourage them to visit <http://speautomotive.com/> and look into some of the benefits of membership in the SPE Automotive Division.

SPE AUTOMOTIVE DIV. GOLF OUTING PROCEEDS BENEFIT SPE STUDENT CHAPTERS

The SPE Automotive Div. has ramped up their support for SPE Student Chapters by contributing generous funding to help the students grow their chapters. Fred Deans, SPE Golf Chairman for Life, long time SPE Automotive Div. Board member, and 2015 SPE Lifetime Achievement Award winner (Principal, Allied Composites Technologies) – has been an advocate for supporting students in the plastics industry for many years. He originally proposed \$500 - \$600 to each of 10 local chapters, based on golf outing proceeds. The award was raised to an even \$1,000 for each with support from Matt Carroll, SPE Automotive Div. Chair (Materials Engineering, General Motors Company) and full support from the SPE Automotive Div. Board of Directors. “Our generous sponsors, who support the Automotive Div. Golf Outing, and our other educational events and conferences, are the ones to thank for this,” notes Deans and Carroll. “We are very grateful for their support that helps to grow our industry.”

SCHOOLCRAFT SPE STUDENT CHAPTER Receives \$1,000 Donation from SPE Automotive Division

On April 12, 2018, students of the Plastics Processing class at Schoolcraft College were pleasantly surprised by Ms. Paula Kruger, an SPE Automotive Division board member and a DSM employee, who presented them with a \$1,000 check from the SPE Automotive Division. Four of the chapter officers and one regular member were present during this event. This SPE student chapter has 15 members at the present. They are recruiting and hoping to get every student in the plastics technology program to join their SPE student chapter.

Members of this chapter are very active. Many of them frequently participate at various STEM activities. Several of these students have attended the local SPE conferences and events such as the Automotive Awards Gala and the TPO conference. SPE Automotive and SPE Detroit Section have made it easy for Michigan college students to attend many local SPE events by eliminating the fees for them.

After the check presentation and photo op, several students suggested to use some of the donated money to purchase shirts with Schoolcraft College SPE student chapter logo on it. They planned to give a shirt to every member of the chapter and use the rest of the shirts for recruitment purposes.



Pictured from left to right, Paula Kruger, an SPE Automotive Division board member and a DSM employee, Kyle Elliston Chapter V.P. Luz Gonzalez, Chapter Treasurer holding the check, Charmayne Taylor, Chapter President, Justina Kaye, Chapter Liaison with SPE board and David Hountras, chapter member. Chapter Advisor Sassan Tarahomi is taking the picture.

KETTERING SPE STUDENT CHAPTER Receives a \$1,000 Donation from SPE Automotive Division

David Reed, SPE Automotive Div. Director Emeritus, retired – General Motors Company and 2011 SPE Lifetime Achievement Award winner and Bonnie Bennyhoff, SPE Automotive Div. Treasurer delivered a \$1,000 check to Kettering University A-Section SPE Student Chapter. Plans are in process to deliver another \$1,000 check to the B-Section.

“Thank you so much for taking the time to visit Kettering yesterday to share the information with the students. We are so grateful for your support and hope to use this donation to help support chapter activities and outreach in the next couple semesters. Current goals for the SPE student chapter are to complete a PlastiVan outreach program locally in Flint where educators come in and educate young students about plastics chemistry, history, processing, manufacturing, sustainability and applications. Additionally, the chapter will hopefully participate in the SPE RC Car Thermoforming Challenge where entrants must design, manufacture and decorate the car body to be mounted on the chassis. As always, student members will seek to attend local conferences, to educate new students about plastics equipment in our polymer processing lab, to host industry guest speakers, and to visit local plants for student tours. Overall SPE is a great organization for students interested in plastics and would enjoy being a part of the communities that surround it.”

— Susan Farhat, Associate Professor, Chemical Engineering, Kettering University

Bonnie Bennyhoff presented the \$1,000 check to Kettering B-Section SPE Student Section President Jordan Howell. Jordan came from Jamaica for a 5 week STEM pre-college program, AIM (Academically Interested Minds), at Kettering in 2015, after which he was granted a 4 year scholarship to attend Kettering. He is currently a junior pursuing a dual degree in Actuarial Science and Industrial Engineering. During his co-op experience at Lear Corporation, his interest in plastics grew after visiting one of Lear’s plants, where the operations were centered around injection molding. This was what first got him interested in plastics, and ever since, he has been channeling his passion for the multifaceted use of plastics within the automotive industry.



Bonnie Bennyhoff presenting the \$1,000 check to Kettering A-Section SPE Student Section President Jordan Howell.



Dave Reed delivered an educational presentation on Automotive Plastics Innovations during his visit to the SPE Student Chapter at Kettering University.



Pictured in the front from left to right is Teri Chouinard and Alice Kilvington, MSU Student Chapter President (receiving the check). In the second row is Fred Deans and Ayaz Khan, MSU Student Chapter Secretary (President next year) and Nippani Rao and Dr. Jay MSU SPE Student Chapter Advisor. In the third row from left to right is Jacob Archer, MSU Student Chapter Treasurer and Vincent Rogers, MSU Student Chapter Vice President next year. Angela DeMarco, MSU Student Chapter Vice President is taking the picture.

Other donations made to date to support automotive plastics education and SPE student chapters include:

- **\$1,000 to the University of Michigan** presented by SPE Automotive Div. Board Member Dr. Gary J. Kogowski, Ravago Holdings Americas.
- **\$1,000 to Ferris State University** presented by SPE Automotive Div. Secretary Crystal VanHouten, Grupo Antolin
- **\$1,000 to Michigan State University** presented by Fred Deans, Nippani Rao & Teri Chouinard.

The next SPE Automotive Div. Golf Outing is planned for Tuesday, Sept. 4, 2018 (the day before SPE ACCE) at the award-winning Fieldstone Golf Club in Auburn Hills, Michigan. Now in its 24th year, the golf outing attracts over 100 automotive plastics-industry professionals. A variety of sponsorships including company recognition at the event and foursomes are available. Come and enjoy a beautiful day of fun, fresh air and industry camaraderie and support SPE Student Chapters.



Kettering Students showing elementary school kids some fun with plastics during their PlastiVan event on May 16th, 2018.



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ANTEC 2018 RECAP

Dr. Norm Kakarala, Tom Pickett



An estimated 1,500 attended the SPE Annual Technical Conference (ANTEC) in Orlando, Florida **May 6–10, 2018**. The SPE Automotive Division was well represented with three sessions of technical papers (most ever) organized by Co-Technical Chairs, Norm Kakarala and Tom Pickett.

On Sunday, May 6, the SPE Automotive Division was awarded the SPE Pinnacle Award. This is the highest award that SPE National bestows on a division. Matt Carroll, Chair of SPE Automotive Division, accepted the award on behalf of the division.

Thanks to Jeff Helms, the Automotive Division was well represented at the ANTEC Parts Competition. Jeff entered several of the winners from the SPE Automotive Innovations Awards Competition and arranged to have the parts on display for judging at ANTEC.

On Wednesday morning, May 9th the Automotive session had seven presentations on material development. Matt Carroll was the moderator for the session. The talks were well received with standing room only for several talks. Suresh Shah started the session with highlights on the SPE Innovations Awards nominations in the Materials and Processing categories. Mark Barrera talked on the evolution and growth of TPO. Laura Weaver spoke on low birefringent cellulose acetate for plastic display lens coverage. Paula Kruger presented on the use of thermally conductive compounds in automotive lighting. Rudy Gorny gave a presentation on new resin for liquid cooled modules in electric vehicle battery packs. Josh McIlvaine talked on improving long term corrosion resistance in electronic applications. Dave Spritzer presented advances in hydrolysis resistance in PBT resins for electronic applications.

The Automotive Division with other division and sections sponsored the Student Luncheon held on Wednesday. Matt Carroll, Norm Kakarala, Paula Kruger, Tom Pickett and Dave Reed represented the automotive division at the luncheon and interacted with the students.

Thursday morning, May 10, Norm Kakarala moderated seven presentations on design and automotive applications. Invited guest speaker, Jeff Helms delivered the key note address on intelligent automotive design with plastics. Suresh Shah highlighted innovations on applications from the SPE Innovations Awards. Tom Pickett talked on chemical resistance of PMMA, ASA and ASA+PC for automotive exterior trim applications. Karnik Tarverdi spoke on recycled materials in automotive applications. Pavan Puranik talked on hybrid pedestrian safe solution for the automotive industry. Carlos Pereira presented on aerodynamic optimization of a day-cab fairing. Vasudev Nilajkar talked on computational modeling of impedance tube and validation for tuning the acoustic transmission loss of polymeric materials.

Thursday afternoon, May 10, Tom Pickett moderated eight talks on process and simulation. Jeff Munro spoke on connecting rheology of polyolefin elastomers to dispersion in a polypropylene matrix via modeling and experiments with simple flow fields. Steve McClintock presented on Core Back technology for automotive interior applications. Vinny Hsu spoke on the water penetration prediction for push back process in water assisted injection molding. Werner Posch spoke on how plastics is helping to conquer the new challenges of vehicle electrification. Tanmay Pathak talked on the development of low emission polyolefin composites for automotive interiors. Shuoran Du spoke on the effect of grain pattern and talc on scratch and mar of TPO. Fred Chang presented on plastic and hybrid solutions for vehicle light weighting and improved crash worthiness. For the last presentation of the session, Steve Wilson talked on using dry ice as a way to clean molded plastic parts prior to painting.

At the end of the Automotive Session, we held our Automotive Business Meeting. Matt Carroll and Tom Pickett discussed the different events the Automotive Division offer. With it being the last day of ANTEC, there were only a few attendees. However the attendees were eager to learn about the events the Automotive Division offers. They expressed interest in attending our future events.



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Ph: +1.248.701.8003 or e-mail: teri@intuitgroup.com

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USA

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3:30 pm – Buffet Dinner

4:00 pm – Awards & Prizes



Thanks to our sponsors for making our 23rd golf outing a big success!

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COUNCILOR'S REPORT

May 7, 2018 Council Meeting Minutes Orlando, FL

by Suresh Shah, SPE Automotive Div. Councilor

The SPE Council meetings were held prior to ANTEC 2018 in Orlando, Florida.

The new SPE President, Dr. Brian Grady, introduced himself to Council and presented his thoughts on the state of the Society and the role of the SPE Foundation. He shared his list of priorities which include enhancing the ANTEC experience, committing to SPE's global presence and working on membership retention. He also restated the Executive Board's commitment to full transparency. In addition, this meeting marked the arrival of newly elected Executive Board members who were seated between Council I and II:

- Dr. Raymond Pearson (VP Technology & Education)
- Mr. Scott Eastman (VP Sections)
- Dr. Brian Landes (President-Elect)

Clear and relevant governance is the foundation of a well-run society and SPE continues to refine its policies and by-laws. Several items were amended and approved during Council thanks to the diligent leadership of Councilor Bruce Mulholland. At the Council Committee of the Whole (CCOW), Councilor Babli Kapur was re-elected as Chair.

All presentations and data discussed during Council meetings are available on The Chain on Leadership Lane.

FINANCIAL UPDATE

The 2017 audit process is complete and there were no findings. The payment of \$1.5MM from Wiley Publishing was re-booked as deferred income over a 10-year period following advice from the auditors.

The 2018 budget was presented to Council. This budget was approved by the Finance Committee and the Executive Board in March 2018. SPE is projecting a small loss for the year. CSE Farrey reviewed the cost control measures implemented to-date, including the new technology platform and the winding down of earlier contracts. Stephanie Clark continues

to generate new non-dues revenue through corporate sponsorships and other programs.

At the time of writing, ANTEC registrations were at 1500. Chief Staff Executive Pat Farrey noted that there were changes to the ANTEC pricing model in 2018 and that 180 volunteer members will attend at no charge. Farrey stated that ANTEC was projected to generate \$140k in profit.

SPE FOUNDATION

SPE Foundation Director, Eve Vitale, reviewed the mission and board structure of the organization. She presented the new Impact Report which illustrates the good works provided by the Foundation. She reviewed the PlastiVan successes in 2017 which included the addition of several new educators. The Foundation is looking for assistance in the Western US and with more corporate sponsors. The value of scholarships and grants YTD is \$54k.

STRATEGIC COMMENTARY

CSE Farrey outlined his 4 priorities for the Society: - Technology, ANTEC, Staffing and Profitability.

Farrey presented the new SPE organizational chart and reviewed future activities and strategic actions which include establishing the Plastics For Life™ event as a major international industry award. He echoed President Grady's commitment to SPE's global members and volunteers after having spent time in Europe, Middle East and East Asia. He stressed the importance of SPE as a people-centric organization.

Farrey outlined the chapter support model as it exists today. He directly addressed the conflict and differences of opinion between what SPE HQ offers, what it charges for services, and what chapters perceive as valuable. Farrey presented detailed slides on all service offerings from SPE which can be viewed on The Chain. Farrey challenged councilors to review ANTEC programming and the new website as examples of improved functionality and new capabilities delivered by SPE staff.

Councilor

From a business perspective, SPE currently spends \$600k on servicing small events for a return of \$300k. This is not sustainable and is a primary cause of negative operational results for the society.

Related to technology implementation, proposed changes to the member dues model were hotly debated on the Council floor. Several Section councilors objected to a proposed variable pricing dues model that would allow individual chapters to assign a dollar value to their membership. The previous model automatically included 2 group affiliations, including a geography-based Section assignment. A majority of councilors ultimately voted to revert to the previous model.

EXECUTIVE BOARD REPORTS

The Executive Board members continue to work in functional roles as outlined by the new governance model. As such, individual members provided detailed updates on their respective portfolios. Notably, the VP of Technology & Education presented new and exciting details on a partnership with Virginia Tech on Additive Manufacturing coursework. The technical review will take place in the 2nd half of 2018 with an initial course offering scheduled for 2019. This is an excellent opportunity for SPE to create real value for members while providing important technical oversight in a dynamic area for plastics professionals. After several rounds of fireside chats and continued dialog, Sections and Divisions still have room to maximize the value they can deliver to SPE members. The EB and Council recognize that many members do not crosspollinate and more can be done to ensure vibrant TopCons and networking opportunities. Section and Division leaders can do more to connect with each other and learn about each other's events.

The next Council meeting will be held in Charleston, SC on September 21-22.



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INTERSOCIETY REPORT

Dhanendra Nagwanshi,
SPE Automotive Division Intersociety Chair

They say it takes a village to raise a child. Well, in the same vein, it takes a community to advance new technologies.

In that spirit, let me highlight some recent events that speak to this point, while putting it in the context of challenges faced today in the automotive industry.

Today, we see automakers worldwide grappling with increasingly stringent fuel economy requirements. Two strategies that we see employed to close the gap between today's performance and tomorrow's targets are engine efficiency improvement and lightweighting.

On engine efficiency, we are seeing greater recognition of the importance that the science of friction, wear, and lubrication have in the drive to build ever-more efficient vehicles. In fact, this science has become one of the cornerstones of engineering's quest for efficiency and conservation of resources for engines and powertrains in automotive.

As a reflection of this, the Engineering Society of Detroit (ESD) and its Affiliate Council presented its most prestigious tribute, The Gold Award, to Dr. Edward P Becker for his distinguished work in the field – which includes over 40 years of experience in material science with specialization in friction and wear reduction solutions. Nominated by the Society of Tribologists and Lubrication Engineers, he received the award at a special ESD banquet in March. That event is unique in that it brings together hundreds of professionals representing more than 100 ESD Affiliated technical societies to honor leading engineers, scientists, and technical professional for outstanding achievements and service within their respective societies.

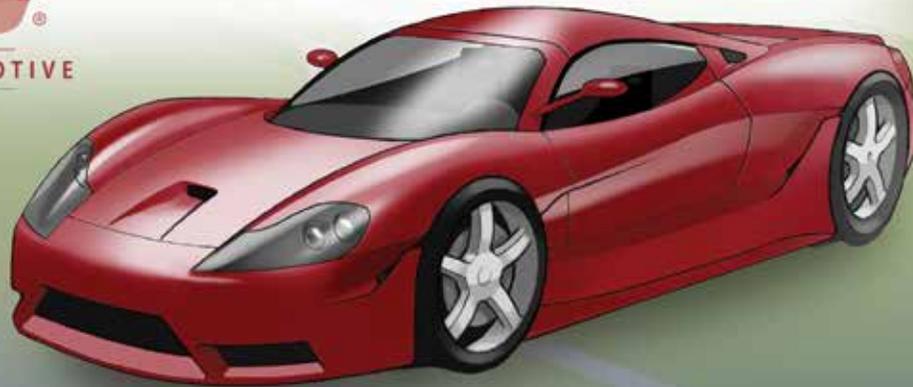
In case you did not know, our society (SPE Automotive Division) is one of 100+ ESD Affiliate Council member societies. A primary goal of this group is to encourage cross-society cooperation and communication, and to promote peer recognition.

On vehicle lightweighting, the material industries – plastics and composites, steel, aluminum and magnesium – are working to respond to the vehicle manufacturers' need for solutions. No one material will serve as a panacea; however, one material class in particular continues to trend upward and present major weight reduction opportunities across each application segment – plastics and composites. Yet, despite this upward trend, OEM acceptance is slower than desired.

Groups like the American Composites Manufacturers Association (ACMA) are doing what they can to help accelerate acceptance with initiatives like its' No Limits Composites event, designed to connect its members with major OEMs and foster a deeper connection with the design and supply chain communities. First held in 2016, ACMA hosted another in March. This second event took OEM engagement to new heights, exposing more than 500 engineers to 70+ composite components from ACMA members.

These two events are examples of communities coming together. Ultimately, the act of doing so help take all of us to a new level and ensure we continue advancing forward in our respective fields. Tackling the challenges in front of us is not a solo mission. We may see stellar individual contributors, but the group as a whole will take us where we want to go. So let us go, together.

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Learn why polymer composites are crucial resources for transportation OEMs trying to meet emissions and fuel-efficiency mandates.



SECRETARY'S REPORT

SPE Automotive Division Board
April 16th, 2018 Meeting Minutes
by Tom Pickett



ATTENDEES

Matt Carroll,
Dave Helmer,
Tom Pickett,
Norm Kakarala,
Brian Grosser,
Marc Bahm,

Fred Deans,
Kevin Pageau,
Jay Qizilbasa,
Samar Teli,
Paula Kruger,
Alper Kiziltas,

Gary Kogowski,
Rose Petrella,
Dhanendra Nagwanshi,
Neil Fuenmayor,
Mark Lapain,
Chuck Jarett,

Nippani Rao,
Umesh Gandhi,
Suresh Shah,
Teri Chouinard,
Ed Luibrand,
Dave Reed,

Keith Siopes,
Bonny Bennyhoff
*Ph: Cynthia Flanigan,
Steve Van Loozen,
Rae Howard,
Rick Hamilton*

Meeting was held at the ACC (American Chemistry Council) in Troy, 5:39 pm

17 exhibitors. Have 67 registered. 24 presentations. The conference agenda is posted online. OEM registration is complimentary.

OPENING – Matt Carroll

Chairman Matt Carroll called meeting to order. Matt welcomed everyone and reviewed the agenda.

FINANCIAL – Bonnie Bennyhoff

Investigation of a savings plan to invest in higher interest account is ongoing. Auto EPCON expects to have lower income this year due to competition with ANTEC / NPE. Total assets \$551,216.27. Year to Date Revenue is \$705K and total expenditures to date is \$675K. Need to stay prudent on expenses. Balance sheet reviewed. Everything is on track and we are in good financial position. For the June 11th BOD meeting, the Committee Chairs were asked to have their budget proposals ready.

COUNCILOR REPORT – Suresh Shah

Highlights of the March 9 teleconference Councilor meeting were reviewed by Suresh. Meet the candidates for the elections was held on March 19 and 26. SPE International lost money last year. Looking to reduce cost. New logo for SPE. Next Councilor meeting is May 6 at ANTEC.

AUTO EPCON REPORT – Gary Kogowski

1.5 day conference begins Monday, April 30 at 2:00 PM until 5:00 PM with the Institute of Scrap Recycling Industries (ISRI) Session. On May 1 the conference has several talks. Dale Gerard, GM is the OEM Chair and the keynote speakers are:

- Joe Langley / Edwin Pope – IHS Industry Update / Additive Mfg.
- Sarah Kleinbaum, Dept. of Energy – Light Materials
- Dave Warren, ORNL Carbon Fiber.
- Carla Bailo, CAR, End of Day Automation, connected, EV.

ACCE REPORT – Alper Kiziltas, Matt Carroll, Teri Chouinard, Bonnie Bennyhoff

The team has regular meetings. Sponsorship is \$281,600. 52 Exhibitors. 39 papers so far. Abstracts due April 30, 2018. Papers due on June 15. Send to SubmitACCEpapers.com. The Jackie Rehkopf Scholarship has a balance of \$54,825. Looking for additional funding.

DESIGN IN PLASTICS / The MAIN Event – Matt Carroll

Next year Matt would like to see more SPE board members attend.

IAG PLANNING – Jeff Helms, Teri Chouinard

October 5, 2018 is the Blue Ribbon judging so no conflict with the SPE Global Automotive TPO Conference. Suzanne Cole is recruiting Nissan to participate in the event.

EDUCATION – Matt Carroll, Alper Kiziltas

Donating a \$1000 per student chapter.

- Ferris State – Crystal Van Houten picked up the check to present to Ferris.
- MSU – Fred and Nippani visited. Alice Kilvington, MSU Student Chapter President, requested an additional \$1000 for a 3D printer purchase on top of the \$1000 donated by the SPE Detroit Section. Motion to give \$1000 to MSU with required feedback on the use for the device and that they enter the 3D Printer contest at our SPE ACCE this September. Motion passed.
- Kettering – Dave Reed, Bonny Bennyhoff presented them with a check.
- Mid-Michigan CC – Steve Van Loozen to follow up.
- Schoolcraft – Paula Kruger delivered check. They inquired about internship opportunities. Alper plans to write a

Minutes

one pager on available internships at companies along with their deadlines. Marc Bahm will put the list on the website.

- UM – Gary Kogowski visited the Materials Engineering; Macromolecular Science and Technology group.
- WMU – Alper to follow up.
- Oakland U – Fred Deans with Samar Teli to follow up.

TPO CONFERENCE IN SHANGHAI – Norm Kakarala

Third year of the conference. Request by Norm to have SPE Automotive Division sponsor the TPO Shanghai Conference. Norm and Sassan to co-chair the conference. Motion passed for SPE Automotive Division to sponsor the 2019 SPE TPO Shanghai Conference.

ANTEC – Norm Kakarala, Tom Pickett

ANTEC Automotive sessions have 23 papers. Matt has five tickets for Board Members that would like to attend the Wednesday Student Luncheon. Jeff Helms is submitting the top IAG award winners for the ANTEC Parts competition. Alper plans to send the TPO Award winner for the ANTEC Parts Competition. Several Board Members plan to attend ANTEC – Matt Carroll, Tom Pickett, Norm Kakarala, Suresh Shah, Paula Kruger, Dave Reed, Teri Chouinard, and Dhanendra Nagwanshi. Matt will accept the Gold Award at ANTEC. Matt, Norm and Tom will be moderators for the Automotive Sessions. Paula, Suresh and Tom to speak. Board members have complimentary ANTEC registration. The Automotive Division will hold their Business Meeting on Thursday, May 10 at 6:00 PM in the conference room of the Automotive Session talks.

INTERSOCIETY REPORT – Dhanendra Nagwanshi

Edward Becker ESD Gold Award winner held on March 21. ACMA Trade Show held at Ford Motor Company on March 27, 28 at Ford Dearborn.

NEWSLETTER – Dave Helmer

Planned to print 1100 newsletters. Target due date for articles in newsletter is May 15. Technical papers needed for articles. Steven Van Loozen agreed to be the new newsletter chair starting with the September 2018 edition.

BOARD OF DIRECTORS

Matt reviewed and showed the update of the Board. Dave Helmer is new Chair. Need a new membership person. Matt to write a one pager on the responsibilities of the Membership Chair. Board Members leaving are Mike Whitens, Monica Prokopysheh and Jay Raisoni. Matt thanked them for their service. Incoming board members are Neil Fuenmayor, Paula Kruger along with re-enlistment from Tom Pickett, Ron Price, Steve Van Loozen and Brian Grosser..

WEBSITE – Mark Bahm

No password required to view newsletter on the web. The website had 10,729 visitors from 3-9-14 to 4-8-18.

NEW BUSINESS / OPEN ISSUES / CONCLUSION

No new business.

The BOD planning meeting is June 11, 2018 at ACCE in Troy.

Meeting Adjourned.



We are pleased to have two new board members join us, Neil Fuenmayor, with Lynondell Bassell, and Paula Kruger, with DSM.

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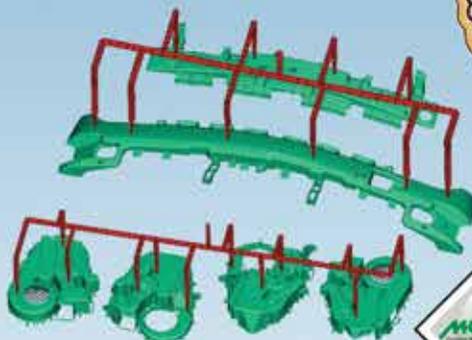
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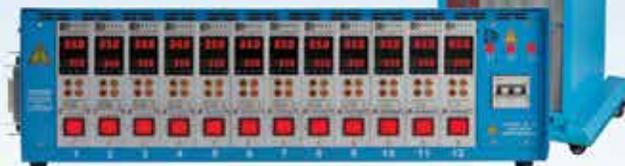
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