



2017 SECTION AWARDS

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MEETING LOCATION:

Olde Mill Inn

225 Morristown Rd. (Rt. 202)

Basking Ridge, NJ 07920

THURSDAY FEBRUARY 15, 2018

4:00 PM Board Meeting, [Fieldstone Room](#)

5:30 PM Networking

6:00 PM Dinner, [Passaic Room](#)

Members and Guests \$45

Non-Member \$50

Students/Unemployed \$15

RSVP by Feb.14 to Pete Hayles

peterhayles11@gmail.com 732-569-2368

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MEDICAL MATERIALS

FEBRUARY 15, 2018

PEDIATRIC EXOSKELETONS AND RELATED DEVICES

DR. TARIQ RAHMAN

This talk will describe the research and development of biomedical devices for children, in particular the development and use of a 3D printed plastic exoskeleton. The talk will highlight collaborations with clinicians, engineers, and companies that lead to successful technology transfer. Other devices being developed include a non-invasive respiratory monitor, orthopedic compliance sensors and 3D printed retractors.

MATERIALS FOR MEDICAL APPLICATIONS

DR. VIPUL DAVÉ

Development of novel polymer systems has led to several innovations that have profoundly influenced the future of medicine. Polymers are widely used in many medical devices for short-term and long-term applications and the properties of these materials must be tailored for the intended use. There is always a need to modify existing materials or develop new materials to meet the challenging demands of new medical devices. The presentation will provide an overview of the selection criteria of materials that are used for medical applications, and examples will include materials that are used in cardiovascular, orthopedic, surgical and drug delivery devices.

Speaker biography

Dr. Rahman holds a PhD in Mechanical Engineering from Drexel University. He has over 25 years experience in rehabilitation engineering, robotics, orthopedics and exoskeletal design and research, mainly in upper extremity rehabilitation. He is currently Principal Research Engineer at Nemours/A.I. duPont Hospital for Children and Director of the Center for Orthopedics Research and Development. He holds research faculty positions at Drexel University and the University of Delaware. He has 10 patents and has successfully translated 2 products to industry. He is recipient of numerous grants including from the NIH and Department of Education. He has over 75 scientific publications. His passion is developing technology to help children with movement disorders.

continued on page 2

PRESIDENT'S MESSAGE



Reflecting on the many memorable, past Palisades–New Jersey Section meetings and SPE conferences, I realize how important these events and presentations have always been for me personally. Many new products for my firm and client's firms have incorporated technologies discovered at SPE events.

Advances in molding, polymer science, additives, compounding, tooling and digital manufacturing, and the networking these events offer, directly relate to how well new products score in innovation. Our Section sponsors provide timely information on emerging technologies, new materials and processes, digital manufacturing and changing business models while supporting the Section's newsletter, technical exchanges, education and our monthly meetings.

Recent presentations have included such great topics as Additive Manufacturing / 3D printing, High Performance UV Stabilizers, Specialty Flame Retardants, Micronized Rubber Powder in Elastomers for Automotive Applications, Piece Part Quality, Effective Use of Social Media and Functionalizing Materials for Ultra-High Strength Thermoplastic Composites to name a few.

Our February local section meeting will cover plastics, processes and additive manufacture of advanced exoskeletons and other orthopedic applications. Our 'Medical Night' will update attendees on many innovations in the medical and health-care space.

Hopefully many of our members are now registered for ANTEC® 2018 to be held May 7-10 at the Orange County Convention Center in Orlando, Florida. This year the event is co-located with NPE so attendees get the best of new technology and a large exhibit area. This year's many topics will include an exciting track on Technical Marketing and many sessions on digital production and additive manufacturing.

As always, we ask all members, their companies and industry professionals to consider presenting your latest technologies, tactics and techniques at one of our monthly meetings. If you or someone you know would like to present, please contact any officer or Board member.

Regards,
Jack Dispenza

President, SPE Palisades-New Jersey Section
Society of Plastics Engineers, Fellow

Speaker biography

Dr. Vipul Davé joined Johnson & Johnson in 1996 and held several roles of increasing responsibility within the Medical Device and Consumer Sectors of the company. He is currently a Research Director and Fellow in the Global OTC Technology Group in Johnson & Johnson Consumer Inc. and is responsible for leading the development of novel oral pharmaceutical dosage forms and external innovation. Vipul's research has focused on the fundamental understanding of structure-property-processing relationships of polymers for health care applications. Vipul is an inventor of over 28 granted US patents and 46 US patent applications, authored over 30 publications in journals and books, and presented over 70 papers at technical conferences. Vipul received his BS in Textile Engineering from University of Baroda, an MS in Polymer Science from University of Massachusetts Lowell and a PhD in Materials Engineering Science from Virginia Tech. Vipul is a Fellow of the American Institute for Medical and Biological Engineering and Society of Plastics Engineers, and a Board Member of SPE's Medical Plastics Division.




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THE PALISADES-NEW JERSEY SECTION OF THE SOCIETY OF PLASTICS ENGINEERS OFFERS ACADEMIC SCHOLARSHIPS

Young people are not only our pride and joy but they are also the future leaders of the world. So, they deserve our blessings and support. With that in mind, the Palisades-New Jersey Section of the Society of Plastics Engineers (SPE) is proud to offer academic scholarships to associated members who have demonstrated excellence in various fields of study. The scholarship categories and criteria are listed below. If you, or a family member, are interested in participating **please submit the required documents by April 15, 2018.**



If you are not a current member of SPE but you are interested in joining or becoming affiliated with the SPE Palisades-New Jersey Section, please contact Mike Carnese, 732-208-4333, mjcarnese@msn.com or visit <http://www.4spe.org>

Scholarship Name	Scholarship Award	Number Available	Academic Criteria	Society of Plastics Engineers (SPE), Palisades-New Jersey Section Criteria
ALVA WHITNEY GRADUATE SCHOLARSHIP	\$4,000	1	Graduate Study In Any Field, Applicant must be in good academic standing	Full, Affiliate or Student SPE Member or Child or Grandchild of active Palisades-New Jersey Section Member
JACK RYAN UNDERGRADUATE SCHOLARSHIP	\$4,000	1	Undergraduate Study in Any Field, Applicant must be in good academic standing	Full, Affiliate or Student SPE Member or Child or Grandchild of active Palisades-New Jersey Section Member
RICHARD BRADLEY AND STEPHEN DUERR UNDERGRADUATE SCHOLARSHIPS	\$2,000	2	Undergraduate study in Physical, Chemical, or Materials Science/Engineering, Applicant must be in good academic standing	Full, Affiliate or Student SPE Member or Child or Grandchild of active Palisades-New Jersey Section Member
FRANCIS McANDREW AND SAL MONTE HIGH SCHOOL SCHOLARSHIPS	\$2,000	2	Planned Study in any field	Graduating High School Student at time of award, Child or Grandchild of an active Palisades-New Jersey Section Member
PALISADES-NEW JERSEY DISCRETIONARY SCHOLARSHIPS	Varied	TBD	Graduate or Undergraduate Study In Any Field, Applicant must be in good academic standing	Full, Affiliate or Student SPE Member or Child or Grandchild of active Palisades-New Jersey Section Member

To apply for a scholarship, please submit the documents listed below. Official transcripts must be submitted by postal mail or courier (i.e. FedEx, UPS) to the address below. Transcripts are considered confidential and will not be viewed by anyone outside of the evaluation team. Essays and membership information may be submitted by email to mark.lavach@arkema.com
Submit official transcripts to: Mark Lavach, ARKEMA INC. 900 First Avenue, King of Prussia, PA 19406

Required Documents:

- Official Transcript
- A one to two page essay describing your contributions to your chosen field of study or how the scholarship award might help you to achieve your future goals.
- Your SPE membership number or the number of the member to whom you are related (as necessary).

The deadline for submissions April 15, 2018.

Awards will be announced in May 2018 and will be distributed at the final Palisades-New Jersey Section Meeting.

EDITOR'S NOTE



More Information on Tariq Rahman's Work and Medical 3D Printing

According to the [Nemours Research website](#), "The Center for Orthopedic Research and Development (CORD) works closely with Nemours Department of Orthopedics to develop devices and methods that directly impact children with musculoskeletal and orthopedic disabilities. The Center efforts are focused within the [Pediatric Engineering Research Laboratory](#) (PERL)." PERL's biomedical engineers and students develop engineering solutions to medical problems.

You can read more about the Center's research projects ([click here](#)), and you can [view a video](#) about one of the children helped by the Wilmington Robotic Exoskeleton (WREX).

You can also read about several 3D-printing medical projects, including WREX, on the [Stratasys website](#).

Medical devices, including 3D printed ones, are subject to regulatory requirements, and on Dec. 5, 2017, FDA updated its non-binding guidance on the [Technical Considerations for Additive Manufactured Devices](#). The [FDA website](#) also provides a general discussion of medical applications of 3D Printing.

Attend the meeting on Thursday, Feb. 15, to learn more about this dynamic field.

Jennifer Markarian, Editor
technicalwritingsolutions@comcast.net

UPCOMING MEETING DATES

March 29, 2018	Section Meeting, at Rutgers
April 19, 2018	Section Meeting
May 7-10	ANTEC®
May TBD	Awards Meeting
TBD	Golf Outing



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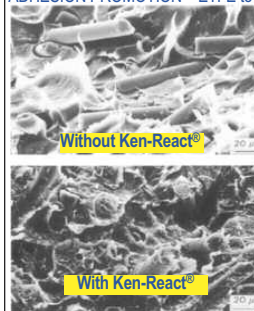
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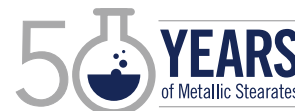
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