

We are pleased to present the featured Guest Speaker for our September 7th Meeting:

Development of Functional Geopolymer Composites with Superior Fracture Resistance for Energy Harvesting Applications

Akm Samsur Rahman, Ph.D.
New York City Technology College,
City University of New York

Abstract:

The objective of the current research is to develop a high temperature functional geopolymer composite with superior mechanical properties. Geopolymer, an alumino silicate based polymer, developed from rock forming minerals, is a potential alternative to sintered ceramics and conventional ABO_3 based perovskite inorganic system, a common ferroelectric material. Recent efforts on interface modifications of various fibers enabled continuous fiber reinforced geopolymer with

superior toughness. The effort also included the understanding of the nanofillers/geopolymer interface and their effect on toughening. Further improvement in ferroelectricity is proposed with a thin barium oxide layer on the geopolymer surface. Successful completion of this proposed research will establish a completely new class of materials with ferroelectric functionality.

Biography

Akm Samsur Rahman is an Assistant Professor of Mechanical Engineering at New York City College of Technology. Dr. Rahman teaches advanced manufacturing technology including computer aided additive and subtractive manufacturing and manufacturing based on geometric and material heterogeneity. His research focuses on developing energy harvesting and electronic storage devices.

Professor Rahman received his PhD degree in Mechanical Engineering from Colorado State University in August 2015. He received his MS degree in Mechanical Engineering from Tuskegee University in 2010. Before that, he completed his BS degree in Mechanical Engineering at Bangladesh University of Engineering and Technology in 2003. He obtained his Professional Engineering license (PE) in 2014.

MEETING DETAILS

Place: Bridgewater Manor, Bridgewater, NJ; (908) 658-3000

Time: 5:45 – 8:30

Cost: \$20.00 at the door. Free for students. Cash, check and PayPal options are available. This meeting is open to all SAMPE members, spouses, guests and other interested parties.

For reservations or questions, please contact Megan Casey at mbc872@gmail.com by noon Wednesday before the meeting. Meal options are available.

Directions to Bridgewater Manor: From I-287 north, take exit 22A (206 south). Go thru two lights, Bridgewater Manor is on right. From I-287 south, take exit 22. Make right at end of ramp. Make next left, a jughandle to cross 202/206 to go south on 202/206. Go thru three lights, Bridgewater Manor is on the right.



2017 – 2018 Meeting Schedule

September 7, 2017 – Akm Samsur Rahman,
New York City Technology College

September 11-14, 2017 - CAMX, Orlando FL,
sponsored jointly by SAMPE and ACMA

October 5, 2017 – To be Announced

November 2, 2017 – To be Announced

December 7, 2017 – To be Announced

February 1, 2018 – To be Announced

March 1, 2018 – To be Announced

April 5, 2018 – To be Announced

May 3, 2018 – To be Announced

May 21-24, 2018 – SAMPE Long Beach CA

June 2018 – Field trip – Date To be
Announced

June 28, 2018 – 35th NJ SAMPE Golf Outing,
Picatinny Arsenal

NEWSLETTER

September 2017

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New Jersey Chapter



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From the Chair...

Dear Friends of NJ SAMPE,

Thanks for your continuing support of SAMPE and the work of the NJ Chapter. I would like to visit with you about 2 topics:

Membership - NJ SAMPE exists solely to provide value to our members. Monthly meetings with intriguing topics, continuous networking opportunities, field trips and student/new professional outreach are but part of our offerings. Sadly, we've observed a continual decline in membership. Everyone has busy days and hectic schedules, and perhaps others choose to find their content online. I welcome your comments on how to improve our programs or better align them to your interests. Drop me a line at borys.schafran@evonik.com ; I'd be pleased to chat with you.

Digital Content - This is a related topic. We want to improve our online presence, specifically the www.njsampe.com website. For those not able to attend our meetings, we're looking into on-demand presentations or videos of our guest speakers. We also invite everyone to provide updates that we can share with everyone. We intend to enrich our content shortly to serve you better, so once again, your direct input is most appreciated.

Best, Borys