

We are pleased to present the following speaker for our November 7th meeting (to be held at Evonik – see below):

### Smart Manufacturing @ Rutgers: Leveraging Data Science to Transform Advanced Manufacturing

Dr. Yuebin Guo  
Henry Rutgers Professor of Advanced  
Manufacturing  
Rutgers University-New Brunswick

#### Abstract

Data science provides compelling challenges and opportunities for advanced manufacturing in every dimension. This talk has two parts. Part I will provide an overview of our work in manufacturing process development, surface integrity, and functionality. Then, the unprecedented

challenges imposed by artificial intelligence (e.g. machine learning) to advanced manufacturing are highlighted. In addition, a few case studies are introduced to illustrate the great opportunities for data analytics to transform physical manufacturing processes. Part II present a vision on smart manufacturing at the New Jersey Advanced Manufacturing Institute.

#### Biography

Dr. Yuebin Guo is the Henry Rutgers Professor of Advanced Manufacturing at Rutgers University - New Brunswick to lead New Jersey Advanced Manufacturing Institute, USA. Before joining Rutgers, he was Assistant Director for Research Partnerships at the U.S. Advanced Manufacturing National Program Office (AMNPO).

Prior to AMNPO, he was Professor and Director of Consortium for Surface Integrity and Functionality at the University of Alabama. He was also the Alexander von Humboldt visiting professor in WZL at RWTH Aachen and Fraunhofer IPT, Germany. His research interests are in manufacturing processes, surface integrity, functionality, manufacturing informatics and manufacturing innovation policy. He is the recipient of various awards, including ASME Federal Government Swanson Fellow, Alexander von Humboldt Research Award for experienced scientists, Tau Beta Pi Outstanding Faculty, NSF CAREER, SAE Teetor Educational Award, and SME Outstanding Young Manufacturing Engineer. He is an elected Fellow of ASME, SME, and CIRP.

## DIRECTIONS TO EVONIK (Note – November meeting only)

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Evonik Corporation, 2 Turner Place, Piscataway,  
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**Via Route 287 South:** take Exit 6 and stay to right of the split (yield sign). Merge onto S. Washington Ave and make a left on Turner Place (third light). Follow road to end and proceed into fenced property. Turn left at entrance and follow road. Proceed to the end where you will see Evonik main entrance and parking lot.

**Via NJ Turnpike South or North:** take exit 10 and stay to left after toll. Follow signs for 287 North, right at second fork. Merge onto Route 287 North and take Exit 5. Stay to right of fork (yield sign) then merge onto Stelton Road. Follow Stelton Road to S. Washington and make a left at the light (4th light, at intersection of Shell gas station and Advanced

Auto Parts). Immediately turn right at next light onto Turner Place behind Advanced Auto Parts. Follow road to end and proceed onto fenced property. Follow road, to left, and proceed to the end where you will see Evonik main entrance and parking lot.

**Via Garden State Parkway:** Take Exit 129 and follow signs for 440 South / 287 North. Merge onto Route 440 South which will become Route 287 North. Take Exit 5. Stay to right of fork (yield sign) then merge onto Stelton Road. Follow Stelton Road to S. Washington and make a left at the light (4th light, at intersection of Shell Gas station and Advanced Auto parts). Immediately turn right at next light onto Turner Place behind Advanced Auto Parts. Follow road to end and proceed onto fenced property. Follow road, to left, and proceed to the end where you will see Evonik

main entrance and parking lot.

Everyone participating will have to sign in as visitors and review a site safety meeting. No Non Disclosure agreement is necessary.

### Other Details:

Time: 5:45 – 8:30 pm

Cost: \$30.00 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](mailto:mbc872@gmail.com) by noon Wednesday before the meeting. Meal options are available.



#### 2019 – 2020 Meeting Schedule

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**September 12, 2019** – Giuseppe Palmese,  
Drexel University

**September 23-26, 2019** – CAMX, Anaheim CA

**October 3, 2019** – Joe Abrantes, Evonik Corp.

**November 7, 2019** – Yuebin Guo, Rutgers

**December 5, 2019** – John Weber, Gentex

**February 6, 2020** – TBD

**March 5, 2020** – TBD

**April 2, 2020** – Students Night

**May 7, 2020** – TBD

**May 4-7, 2020** – SAMPE 2020, Seattle WA

**June 19, 2020** – 2<sup>nd</sup> Annual NJ Additive  
Manufacturing Symposium, at Rutgers Weeks  
Engineering Building

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