

## Society for the Advancement of Materials and Process Engineering

### New Jersey Chapter



We are Pleased to Present the Featured Guest Speaker for our December 4th Meeting:

### *Beyond 3D Printing; 3D Printing of Functional Soft Materials*

**Howon Lee, PhD**

Assistant Professor

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#### ABSTRACT

*A novel high resolution three-dimensional (3D) microfabrication technique, projection micro-stereolithography (PμSL), will be presented. PμSL is flexible, scalable, and multi-material manufacturing tool, capable of creating structural and functional*

*complexity in 3D micro-architectures. Various functional soft materials that can actively and reversibly reconfigure its shape were three dimensionally engineered by PμSL and developed into various micro devices by implementing design principles inspired by exquisite motions and morphologies of moving plants in nature such as Venus Flytrap. Ultra-light cellular material with unprecedented specific stiffness will be also presented.*

#### BIOGRAPHY

*Dr. Lee received his B.S. and M.S. from Seoul National University in South Korea and Ph.D. from the University of Illinois at Urbana-Champaign. He was a Battelle/MIT Postdoc Fellow at MIT before he joined Rutgers University in January 2014. His research interest includes three-dimensional micro fabrication, polymer science, soft materials mechanics, metamaterials, and biomedical engineering.*

#### MEETING DETAILS

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

Time: 5:45 – 8:30

Cost: \$10.00 Adv Registration; \$15.00 at Door; Students – Free  
This meeting is open to all SAMPE members, spouses, guests, and other interested parties

Reservations contact John Osterndorf at 973-248-5885 or at [jfo0956@gmail.com](mailto:jfo0956@gmail.com) by noon Wednesday before the meeting.  
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.





### 2014 – 2015 Meeting Schedule

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**September 4, 2014** – Tom Farnan, Cimquest Inc.

**October 2, 2014** – Russell Caspe, Gentex Corp

**October 13 - 16, 2014** – CAMX, Orlando FL, sponsored jointly by SAMPE and ACMA

**November 6, 2014** – John Busel, ACMA

**December 4, 2014** – Howon Lee, Rutgers

**February 5, 2015** – Kenichiro Mimura, Daicel Corp.

**March 5, 2015** – Students' Night

**April 2, 2015** – NJ SAMPE/NJ ASM joint meeting

**May 7, 2015** – TBD

**May 17 -21, 2015** – SAMPE Tech, Baltimore MD

**June 4, 2015** – TBD

**July 2015** – 32nd NJ SAMPE Golf Tournament, Picatinny Arsenal

# NEWSLETTER

December 2014

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### New Jersey Chapter

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## Sponsor of the Month Curtis-Wright Corp.

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