



## Seminar Announcement

### *Bio-mediated & Bio-inspired Geotechnics*

**February 1<sup>st</sup>, 2018**

**College of Engineering  
Building M9 Room 007 (Al Bayrouni Hall)**

**Organized by  
Department of Civil & Environmental Engineering, University of Sharjah  
Jointly with  
Research Institute of Sciences & Engineering (RISE)**

The Department of Civil & Environmental Engineering is pleased to announce a seminar that will be held February 1<sup>st</sup>, 2018 at the University of Sharjah with the collaboration with RISE. The seminar will focus on fundamental principles that underlie current and anticipated developments in bio-inspired geotechnics.

This seminar introduces participants to the principles of biological processes that act in the ground, including the action of bacteria. It will discuss ways to use naturally occurring bacteria to strengthen the soil, to mitigate against earthquake-induced liquefaction and reinforce the soil. It will also explain methods inspired by biological processes to grout and enhance the soil properties with special emphasis on topics related to the Gulf region.

### PROGRAM

PRESENTER & TOPIC	TIME
□ Dr. Maher Omar, <b>Opening Remarks</b>	11:00 -11:10
□ Prof. Nidal Hilal, Dean of College of Engineering, <b>Welcoming Remarks</b>	11:10 -11:20
□ Prof. Abdallah Shanableh, Director of Research Institute of Sciences and Engineering (RISE), <b>RISE Overview</b>	11:20 - 11:30
□ Prof. Edward Kavazanjian, Arizona State University, USA <b>Topic: Bio-mediated &amp; Bio-inspired Geotechnics</b>	11:30 - 12:30
<b>Coffee Break 12:30 – 1:00</b>	
□ Prof. Edward Kavazanjian, Arizona State University, USA <b>Topic: State of the Art and Practice in the Assessment of Earthquake Induced Soil Liquefaction and Its Consequences</b>	1:00 - 1:45

#### **Prof. Edward Kavazanjian, Ph.D., P.E., D.GE, NAE, Arizona State University, USA**



Prof. Kavazanjian is leading the effort in the US in the topic of bio-inspired techniques in solving geotechnical issues. He has been working on several research projects related to the use of bacterial activity and enzymes to enhance the mechanical properties of the soil.

Edward Kavazanjian, Jr. is a Regents Professor and the Ira A. Fulton Professor of Geotechnical Engineering at Arizona State University (ASU). He joined the faculty at ASU in August 2004 after 20 years as a practicing geotechnical engineer. Dr. Kavazanjian has Bachelor and Master of Science degrees from M.I.T. and a Ph.D. from the University of California at Berkeley. He is recognized for his work on the properties of municipal solid waste, the design and construction of waste containment systems, geotechnical earthquake engineering, and the emerging field of biogeotechnical engineering. He is recipient of the 2009 Ralph B. Peck, the 2010 Thomas A. Middlebrooks, and the 2011 Karl Terzaghi awards from the American Society of Civil Engineers for his contributions to landfill engineering. In February 2013, he was elected to the National Academy of Engineering. In August 2015, he became Director of the Center for Bio-mediated and Bio-inspired Geotechnics, a National Science Foundation-funded Research Center at ASU.