



The University of Delaware College of Engineering  
announces the appointment of

# Dion Vlachos

*as Allan and Myra Ferguson Professor of Chemical and Biomolecular Engineering*



## INAUGURAL LECTURE

*Meeting Future  
Global Energy, Water,  
and Food Needs*

Monday, April 17, 2017 at 4:00 p.m.

*University of Delaware*

KIRKBRIDE LECTURE HALL, ROOM 204  
114 SOUTH COLLEGE AVENUE  
NEWARK, DE 19716

Reception to follow at 5:00 p.m.

*Du Pont Hall Lobby*

RSVP: [zatto@udel.edu](mailto:zatto@udel.edu)

## ABSTRACT

In this talk, the grand challenges in meeting the global energy, water, and food needs due to growing population, urbanization, and increasing emissions will be discussed. Potential science and technology solutions will be outlined, and the need for new materials to meet these challenges will be discussed. Multi-scale simulation will be introduced as an enabling technology to address diverse engineering topics leading to better solutions for the nexus of energy, water, and food. An overview of work being done in the Catalysis Center for Energy Innovation (CCEI) on renewable chemicals and fuels from lignocellulosic biomass will be given as one technological platform toward increasing energy and, in particular, to providing green transportation fuels and chemicals. The newly awarded rapid advancement in process intensification deployment (RAPID), a manufacturing institute of the Manufacturing USA initiative focusing on chemicals, will also be discussed as an effective engineering approach to reducing energy use in numerous established and emerging processes.

## BIOSKETCH

Dion Vlachos is the Allan and Myra Ferguson Professor of Chemical & Biomolecular Engineering and a professor of Physics and Astronomy. He is also director of the University of Delaware Energy Institute (UDEI), the UD node of the manufacturing institute RAPID, and the Catalysis Center for Energy Innovation (CCEI). Vlachos earned his doctoral and master's degrees in chemical engineering and materials science from the University of Minnesota and his undergraduate degree from National Technical University of Athens. He was on the faculty of the University of Massachusetts for seven years prior to joining the UD faculty in 2000. Vlachos has published more than 340 peer-reviewed scientific papers, which collectively have had over 10,000 citations. He is the executive editor of *Chemical Engineering Science*, a member of the editorial advisory board of *ACS Catalysis*, and a member of several international scientific committees and boards. Vlachos has received numerous awards and honors, and he holds a U.S. patent for developing the highest-ever thermal efficiency technology for converting chemical energy to electricity for portable power generation.

*This professorship was established in 2015 with a gift from UD alumni Allan and Myra Ferguson. Allan had a 20-year career as a chemical engineer at Johnson & Johnson, then senior operating positions at two biotech companies, followed by 20-plus years in international venture capital investing in early-stage biotech and medical device companies.*

