

UTC INSTITUTE FOR ADVANCED SYSTEMS ENGINEERING

DISTINGUISHED LECTURE

Data-Driven Modeling: Two Methodological Generalizations

The present seminar focuses on the development of data-driven models. It describes two generalizations of the classical design of experiments (DoE) methodology, the long-standing data-driven modeling methodology of choice. The first generalization enables the design of experiments with time-varying inputs, called Design of Dynamic Experiments (DoDE). The second generalization enables the development of a dynamic response surface model (DRSM) when time-resolved measurements are available. We will discuss how both advances are able to contribute significantly to the modeling, optimization, and understanding of processes for which a knowledge-driven model is not easily at hand. We also argue that such approaches can be widely used in developing reduced-size meta-models, for online use in existing processes.

Christos Georgakis

Dr. Christos Georgakis is a Professor of Chemical and Biological Engineering at Tufts University where he has also been the Bernard M. Gordon Senior Faculty Fellow in Systems Engineering. He received his Chemical Engineering Diploma (1970) from National Technical University in Athens, Greece; his MS (1972) from the University of Illinois and his Ph.D. (1975) from the University of Minnesota. In 1975, he served as du Pont Assistant Professor and Edgerton Associate Professor of Chemical Engineering at MIT, and as Professor of Measurement and Control at the University of Thessaloniki in Greece where he initiated the Chemical Process Engineering Research Institute. He joined Lehigh University in 1983 where he founded and directed the Chemical Process Modeling and Control Research Center, there he was honored with the Iacocca Professorship (2001). He was also awarded a Dreyfus Foundation Teacher-Scholar Grant in 1978, and was a recipient of the Computing Award of the CAST Division of the American Institute of Chemical Engineers in 2001.

Tuesday, April 26, 2016

1:00pm-2:00 pm

UConn, Storrs Campus – ITE Building 336

[To view live webcast click here](#)

Upcoming Distinguished Lectures

05/19/16 – Krithi Ramamritham
Being Smart: The Role of Timely
Analytics

10/06/16 – Olivier de Weck When is
complex too complex? Graph
energy, proactive complexity
management and the first law of
systems engineering

10/17/16 – Wei Chen
Design under uncertainty;
multidisciplinary design
optimization; simulation-
based design

Upcoming Seminars

05/03/16 – Calin Belta
Formal Methods for
Dynamical Systems

09/08/16 – Chris Ha
Think Like a Customer, Act
like a Startup in Analytics Space

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