Industrial, Systems, and Manufacturing Engineering
IME Colloquium Presentation
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Title:

pm 2 pm

Location: Clinton Hall 214

Abstract

Modeling and simulation methods are increasingly being used for the design and analysis of complex engineering systems to avoid high experimental cost to lower design time. Robust modeling requires the consideration of several uncertainty sources that may impact the predictions such as the uncertainty in the inputs, uncertainty in the models and uncertainty in measurements. Consideration of various uncertainty sources provides not only a prediction al so a confidence measure in the prediction which confidence measures beneficial for designing robust system. In this presentation, different types of uncertainty sources will discussed techniques for their quantification and aggregation, and their inclusion in the s design will be discussed. In addition, control and design methods for physical system will al so be discussed. Physical systems are feedback control systems where a computing system controls a physical process (such as a manufacturing process) through sensor measurements implementing appropriate actuation. This presentation primarily covers Bayesian pro methods such as Bayesian network and D for uncertainty aggregation and robust model predictions.

Speaker Biography

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Industrial, Systems, and Manufacturing Engineering at W University since January 2018. His research interests include surrog model ing uncertainty quantification in Bayesian statistics and design optimization under uncertainty with applications to mechani manufacturing, aerospace and physical systems. He received his PhD
and received his Bachelors deg