



**October 2, 2019**

**11:00 AM – 11:50 AM**

**Industrial Engineering | Room 235**

**Data Science for Wind Energy: Power Curve Modeling and  
Production Performance Analysis**

**ABSTRACT**

The speaker recently published the book “Data Science for Wind Energy,” in which a set of wind operational problems are framed through a general formulation of  $y = \int p(y|x)p(x)dx$ , where  $y$  is the power output and  $x$  is the wind and environmental input. In particular, the conditional density term,  $p(y|x)$ , is related to the power curve model of wind turbines and can be used to characterize a wind turbine’s performance and production efficiency. The speaker will discuss the data science problems encountered while working on wind energy applications and present examples in which data science solutions make sensible impacts.

**Biography**

Dr. Yu Ding is the Mike and Sugar Barnes Professor of Industrial & Systems Engineering, Professor of Electrical & Computer Engineering, and a member of Texas A&M Institute of Data Science, Texas A&M Energy Institute, and TEES Institute of Manufacturing Systems. Dr. Ding received his Ph.D. degree from the University of Michigan in 2001. His research interest is in the area of data and quality science. Dr. Ding is a recipient of the 2018 Texas A&M Engineering Research Impact Award, the recipient of the 2019 IISE Technical Innovation Award, and a Fellow of IISE and ASME.

