



## Finding the Most Useful Data via Bayesian Experimental Design

### Abstract

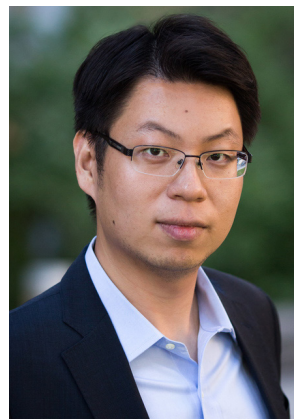
Data plays a crucial role in smart manufacturing, and is essential for tasks ranging from developing digital twins and cyber-physical systems, to cultivating decision-making processes and artificial intelligence algorithms, and beyond. However, despite living in an age of big data, not all data is equally useful, and some is more valuable than others. Indeed, the information content carried by a dataset will depend on its quantity, quality, and relevance to the investigation goal. When the cost of data acquisition opportunities—i.e. experiments—is expensive, a careful design of these experiments can lead to substantial resource savings.

### Speaker Bio

Dr. Xun Huan is an Assistant Professor of Mechanical Engineering at the University of Michigan, and affiliated faculty with the Michigan Institute for Computational Discovery & Engineering (MICDE), Michigan Institute for Data Science (MIDAS), and Applied Physics Program. Dr. Huan received a Ph.D. in Computational Science and Engineering from MIT Department of Aeronautics and Astronautics, and was a postdoctoral researcher at Sandia National Laboratories in Livermore, California. His research broadly revolves around uncertainty quantification, machine learning, and numerical optimization, with a focus on engineering applications.

## Friday, November 8, 2019 11:00am - 12:00pm

Chrysler Center, Room 151  
2121 Bonisteel Blvd  
Ann Arbor  
*Metered parking is available.*



**Xun Huan, Ph.D.**  
*Assistant Professor*  
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### Co-organized by:

Judy Jin (Professor, IOE) and  
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### Questions?

Contact Madolyn Lottman at [lottman@umich.edu](mailto:lottman@umich.edu)