

# Intelligent Systems Ready for the Digital Future of Supply Chains

## Seminar Series:

### Data Analytics for Knowledge Management in Design Engineering

**Speaker:** Dr. Ying Liu  
Associate Professor (SL)  
Cardiff University

**Date:** 23 June 2017

**Time:** 10:00 AM — 11:30 AM

**Venue:** Room A314  
Hang Seng Management College



Dr. Ying Liu is currently an Associate Professor (SL) with the Institute of Mechanical and Manufacturing Engineering at the School of Engineering in Cardiff University, UK. He obtained his bachelor and master both in Mechanical Engineering from Chongqing University, China in 1998 and 2001, and then MSc and PhD from the Innovation in Manufacturing Systems and Technology (IMST) program under the Singapore MIT Alliance (SMA) at Nanyang Technological University and National University of Singapore in 2002 and 2006 respectively. His research interests focus primarily on design informatics, manufacturing informatics, intelligent manufacturing, design methodology and process, product design, and ICT in design and manufacturing. He is an Associate Editor of the ASME Journal of Computing and Information Science in Engineering (JCISE) and the Journal of Industrial and Production Engineering (Taylor & Francis) and is on the Editorial Board of Advanced Engineering Informatics (ADVEI). He has served as Lead Guest Editor of special issues for many international journals such as Journal of Intelligent Manufacturing, Advanced Engineering Informatics, AIEDAM, Information Systems Frontiers, and was the General Co-Chair of the 3rd International Conference on Sustainable Design and Manufacturing (Apr 2016, Crete Greece). Currently, he is editing a special issue on Data-Driven Design (D<sup>3</sup>) with the ASME Journal of Mechanical Design (JMD).

**Abstract:** With the arrival of cyber-physical systems or internet of things era, the massive human- and machine-generated data will create unprecedented challenges and at the same time unmatched opportunities in advancing the theory, methods, tools and practice of data analytics for the design of products, systems and services. In this talk, I will first introduce the concept and scope of Design Informatics and its rising interests in different design communities in the past few years. I will then describe some of my recent efforts on knowledge discovery and management for product design through data mining, text mining and information retrieval at large, with details on two distinct topics: 1) Discovery and management of design rationale through patent mining, and 2) Learning from the past: uncovering design process model using an enriched process mining approach. I shall close my talk by highlighting some interesting future research directions.

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**Registration:**

<https://goo.gl/forms/sdLp1dcW5kHVffXH3>



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