Title: Data-Driven Smart Manufacturing

Abstract:

With increasing global competition among industries, countries like the USA, Germany, China have come forward to rejuvenate manufacturing by using advanced technologies. The USA is now focusing on the concept of smart manufacturing. Germany, on the other hand, coined the concept of Industry 4.0 to build smart factories, smart production, and smart logistics. The government of China proposed the ñMade in China 2025ò strategy to upgrade its manufacturing into high-technology driven industries. All these initiatives are essentially focusing on smart and intelligent manufacturing.

The key technologies that will be playing an important role in the advancement of manufacturing system are cyber-physical system, internet of things, internet of services, cloud computing, big data, and advanced information and communication technologies. With these technologies, the volume of manufacturing data is growing that can offer endless opportunities to transfer the current manufacturing paradigm. The data-driven strategies will thus empower the sustainability of industries in a highly competitive scenario. In this talk, the role of big data in supporting smart manufacturing is discussed. The conceptual framework for big data in manufacturing is presented along with typical application scenarios.