

Brief Profile



Professor Jong-Myon Kim received the B.S. degree in electrical engineering from the Myongji University, Yongin, South Korea, in 1995, the M.S. degree in electrical and computer engineering from the University of Florida, Gainesville, FL, USA, in 2000, and the Ph.D. degree in electrical and computer engineering from the Georgia Institute of Technology, Atlanta, GA, USA, in 2005.

He is currently a Professor with the School of IT Convergence at the University of Ulsan, Ulsan, South Korea. He is also a Chair Professor in Safety and Health and Director of Safety Center at the University of Ulsan, Ulsan, South Korea. He has written over 400 technical articles and has over 50 patents. He also received over 50 Best Paper Awards. His research interests include fault diagnosis and condition monitoring, embedded systems, deep learning, and Internet of Things. Dr. Kim is a member of the IEEE Industrial Electronics Society and the IEEE.

Abstract of the Speech

Subject: Industry 4.0 and Condition based Maintenance

In this speech, the concept and examples of Industry 4.0 are introduced. Then, the process of condition-based maintenance for mechanical equipment is presented as an important application of the Industry 4.0. To avoid unexpected breakdown of industrial manufacturing process, early fault detection and identification, continuous condition monitoring, and reliable fault diagnosis are some of the most important issues related to proper operation of machines. In today's data-driven approaches, signal processing, data mining, and machine (deep) learning techniques are crucial for determining appropriate maintenance actions. This speech addresses these issues to consider and develop some innovative directions of research.