e-Manufacturing & Design Collaboration Symposium 2018

Invited Speech: Emerging Trends in Semiconductor Industry: Artificial Intelligence (AI) and Predictive Analytics

Dr. John Wang

Industry Manager,
Communications, Electronics, and Semiconductors Industries
MathWorks, Inc., USA

About the Speaker

John Wang is an industry marketing manager at MathWorks responsible for the communications, electronics, and semiconductor segments. Prior to joining MathWorks, John managed the Wi-Fi product line in Quantenna Communications (NASNAQ: QTNA) and the Internet of Things (IoT) business at Ozmo Devices (acquired by Atmel). John holds a Ph.D. in electrical engineering from University of California with over 40 publications, and a bachelor's degree in electrical engineering from Peking University. He is the recipient of the IEEE Fred W. Ellersick Award for Best Unclassified Paper at MILCOM 2008 and is an IEEE senior member.

Abstract

Over the past few years Artificial Intelligence (AI) is powering a massive shift in the roles that computers and automation play in a variety of applications including autonomous systems, predictive analytics, and e-manufacturing. Most technical organizations expect to gain or strengthen their competitive advantage through the use of AI. Interest in predictive maintenance is increasing as more and more companies see it as a key application for data analytics that run on the sensor data. In this presentation, we will discuss trends in AI relevant to the Semiconductor industry, development of predictive maintenance algorithms for detecting and predicting failures, as well as the deployment of the algorithm into both embedded devices and enterprise IT platforms. We will share some recent examples of application of these technologies for improving semiconductor manufacturing workflows.