



# **WORLD AUTOMATION CONGRESS**

**WAC 2020**

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**Honoree Keynote No. MON-AM1**

**Saeid Nahavandi**

**Alfred Deakin Professor**

**Institute for Intelligent Systems Research and Innovation Deakin**

**University - Victoria, Australia**

**Deakin University, VIC, Australia**



**Time: xx-xx**  
**Date Monday August 17, 2020**  
**Chair: TBN, CC**  
**Venue: xxx**

## ***Industry 5.0***

**ABSTRACT:** Future factories will be distinguished by Cloud computing, Internet of everything, intelligent machines, intelligent automation, human factors integration and knowledge management. While many advanced and smart factories the world over are embracing the fourth Industrial revolution, or better known as Industry 4.0, a key fundamental component has been overlooked, i.e.; the notion of human intelligence and creativity and its' integration into future smart systems that will carry us into the next phase, allowing future products to be personalized. This talk will cover the history, recent achievements, roles of modelling and computer simulation both at system and products levels from virtual reality, augmented reality to haptics and intelligent human machine interfaces and how future systems should be designed to facilitate the transition from mass production, mass customisation to

mass personalisation, hence the introduction of Industry 5.0. Through a series of case studies, various elements of such a futuristic system will be showcased and the knowledge gaps that require filling to take us across the threshold.

**Bio: Saeid Nahavnadi** received PhD in Control Engineering from Durham University, UK in 1991. Saeid is an Alfred Deakin Professor, Pro Vice-Chancellor and the Director for the Institute for Intelligent Systems Research and Innovation at Deakin University in Australia. Professor Nahavandi is a Fellow member of IEEE, IET and IEAust. He has published over 900 refereed papers and been awarded over 50 competitive grants over the past 30 years. He received the Research collaboration / initiatives award from Japan and Prince & Princess of Wales Science Award and two Life time Achievements Awards. Saeid won the title of Young Engineer of the Year Award in 1996 and holds six patents, two of which have resulted in two very successful start-ups (Universal Motion Simulator Pty Ltd and FLAIM Systems Pty Ltd).

In 2002 Professor Nahavandi served as a consultant to the Jet Propulsion Lab (NASA) during his visit to JPL Labs in Pasadena, California. Saeid has carried out industry-based research with several major international companies such as Airbus, Boeing, Bosch, Ford Motor Company, General Motors, General Dynamics, Holden, Lockheed Martin, Nissan, Thales and Vestas just to name a few.

Professor Nahavandi is the General Chair for IEEE SMC 2021. He was also the General Co-Chair for IEEE SMC 2011. He holds the positions of Senior Associate Editor: IEEE Systems Journal, Associate Editor: IEEE Transaction on Systems, Man, and Cybernetics: Systems, Editor-In-Chief for IEEE SMC Magazine, Chair: IEEE SMC Electronic Communications Subcommittee and founding Chair: IEEE SMC Victorian Chapter. Saeid is a Fellow of the Australian Academy of Technological Sciences and Engineering (FTSE).