Name:

Yo-Ping Huang

Speech Title:

AIoT and its Applications: Industry and Healthcare

Abstract:

Through several waves of ups and downs in the past decades, artificial intelligence (AI) has evolved into a must-have new technology or tool in various domains. Furthermore, with the advent of powerful GPU, AI-related research or AI-based applications have sprouted in every corner of the world. Originating from pure network connectivity, the Internet of Things (IoT) has become a structure that can collect every piece of data from physical devices, daily activities, images, or videos into a data reservoir. As a result, tons of data are automatically generated into an enterprise database in a single day. This creates research opportunities on integrating AI, IoT, big data, and cloud or edge computing, to improve the quality of industrial production or medical service.

Applications of AI algorithms, fuzzy modeling, and/or intelligent systems play important roles and can be found everywhere, including widespread usage in industry and medical systems for tasks such as locating and detecting scratches or defects in product surface, printed circuit board manufacturing, monitoring rehabilitation progress for patients with Parkinson's disease or stroke, autonomous moving and planning of service robots in healthcare, and short-term or long-term prediction of air quality in certain areas. Furthermore, AI can be integrated with other techniques, such as Internet of things, fuzzy modeling, and edge computing to become powerful tools for industry and medicine domains. This talk will address from the AIoT, fuzzy modeling and system engineering perspective for applications faced in industry and healthcare.

Biography:

Yo-Ping Huang (Fellow, IEEE) received the Ph.D. degree in electrical engineering from Texas Tech University, Lubbock, TX, USA. He is currently the President of National Penghu University of Science and Technology, Penghu, Taiwan. He is also a Chair Professor in the Department of Electrical Engineering, National Taipei University of Technology, Taipei, Taiwan, where he served as the Secretary General. He was a Professor and the Dean of Research and Development, the Dean of the College of Electrical Engineering and Computer Science, and the Department Chair with Tatung University, Taipei. His current research interests include fuzzy system design and modeling, deep learning modeling, intelligent control, medical data mining, and rehabilitation systems design.

Dr. Huang received 2021 Outstanding Research Award from Ministry of Science and Technology, Taiwan. He is Fellows of IET, CACS, TFSA, and an International Association of Grey System and Uncertain Analysis. He serves as the IEEE SMCS VP for Conferences and Meetings, Chair of the IEEE SMCS Technical Committee on Intelligent Transportation Systems, and President of Chinese Automatic Control Society. He was the IEEE SMCS BoG, the President of the Taiwan Association of Systems Science and Engineering, the Chair of the IEEE SMCS Taipei Chapter, the Chair of the IEEE CIS Taipei Chapter, and the CEO of the Joint Commission of Technological and Vocational College Admission Committee, Taiwan.

Personal Website:

https://www.npu.edu.tw/content/index.aspx?Parser=1,4,39,31