

The 46th Annual Conference of the IEEE Industrial Electronics Society



October 18-21, 2020, Marina Bay Sands Expo and Convention Centre Singapore

Special Session on

"Cyber-Physical Systems and Healthcare 4.0" Organized by

• Michael W. Condry,

Chair, ClinicAl Advisory Board, USA Co-Chari of IES Industry Forum, Senior IES AdCom, TEMS Past-President Associate Editor, IEEE Industrial Electronics Magazine email: condry@ieee.org

Yu Yuan,

Researcher/Inventor/Entrepreneur, China Chair of IEEE CE Society Standards Committee email: y.yuan@ieee.org

Zhibo Pang,

Chuo University email: niitsuma@mech.chuo-u.ac.jp

Call for Papers

Cyber-Physical Systems has had a major impact on automation allowing factories to predict and manage machine health and consequently much more efficient issue detection and problem resolution. Digital Health products can be used following a very similar model to detect symptoms of human health. As the market grows in the consumer space this will allow us to track heath trends and event early detection of pandemic situations. The session is to examine research in the various technologies for Digital Health and how cyber-physical systems can lead us to "Healthcare 4.0."

Topics of the Session:

- Sample Cyber-Physical systems for determining human symptoms of medical conditions
- Sensor technologies suitable for wearables and other devices to detect medical conditions
- Standardizing measurements of Cyber-Physical Systems for the medical community
- Data aggregation from diverse devices for symptom analysis
- Cyber-physical robotic systems for homecare, primary care, and hospitals
- In the future, could a large abundance of consumer medical devices prevent a pandemic like Coronavirus?
- Cyber-physical public health solutions for global public health emergencies
- What is the innovation strategy for consumer digital health products?
- What Cyber-Physical System models are most suitable for Healthcare 4.0
- Interaction of business and technology with Healthcare 4.0
- Remote patient exams using cyber-physical (robotic) systems
- Pharmacy robots to control medication refill with associated AI or data analytics to look for drug interactions