

Dr KF Tsang
Associate Professor and Director of Wireless Sustainability Center
Department of Electronic Engineering
City University of Hong Kong

Medical analytics: Cliché or not

Abstract:

In this talk, I will brief the insight of IT infrastructure for medical innovations, from internet of things (IoT), artificial intelligence (AI) to medical applications. The content of discussions covers AI schemes dedicated to medical development, key IT infrastructures for medical setup and potential challenges encountered in IoT-medical infrastructure.

AI schemes

Cardiovascular diseases can wreak havoc on human beings and lead to 30% of global death annually. An electrocardiogram health identifier (ECGHI) was developed for swift identification of heart diseases. The ECGHI can be applied to four most common types of cardiovascular diseases, namely Myocardial Infarction, Dysrhythmia, Bundle Branch Block and Heart Failure. On the other hand, an accurate ECG-Based Transportation Safety Drowsiness Detection Scheme that detects the drowsiness of drivers during driving will also be discussed.

IT infrastructures for medical setup

A Dual Radio ZigBee Homecare Gateway (DRZHG) that furnishes low latency for telehealth service at home will be discussed.

Challenges

Cyber security, best practices, opportunities