



**Title:** *Smart Healthcare IoT based on Edge Computing: Architecture, Applications and Challenges*

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**Abstract:** The history of human development has proven that medical and healthcare applications for humanity always are the main driving force behind the development of science and technology. The advent of Cloud technology for the first time allows providing systems infrastructure as a service, platform as a service and software as a service. Cloud technology has dominated healthcare information systems for decades now. However, one limitation of cloud-based applications is the high service response time. In some emergency scenarios, the control and monitoring of patient status, decision-making with related resources are limited such as hospital, ambulance, doctor, medical conditions in seconds and has a direct impact on the life of patients. To solve these challenges, optimal computing technologies have been proposed such as cloud computing, edge computing, and fog computing technologies. This talk will present a comparison between computing technologies, and a common architectural framework based on fog and edge computing for Internet of Health Things (Fog-IoHT) applications. Besides, our talk will also indicate possible applications and challenges in integrating fog and edge computing into IoT Healthcare applications. The analysis results indicated that there is huge potential for IoHT applications based on fog and edge computing.

**Short Bio:** Prof. Le Anh Ngoc is a Director of Swinburne Innovation Space, Swinburne University of Technology (Vietnam). He received his B.S in Mathematics and Informatics from Vinh University and VNU University of Science, respectively. He received a Master's degree in Information Technology from Hanoi University of Technology, Vietnam. He obtained a Ph.D. degree in Communication and Information Engineering from the School of Electrical Engineering and Computer Science, Kyungpook National University, South Korea, in 2009. His general research interests are Embedded and Intelligent Systems, Communication Networks, the Internet of Things, Image/Video Processing, AI & Big Data Analysis. On these topics, he published more than 60 papers in International journals and Conference proceedings. He served as a Keynote Speaker, TPC member, Session chair, Book Editor, and Reviewer of The international conferences and journals (Email: [nle@swin.edu.au](mailto:nle@swin.edu.au))