

# Seminar Information

Frontier Research Institute For Information Science

## Professor Kwei-Jay Lin

University of California, Irvine

Visiting Professor

FRIS, Nagoya Institute of Technology



### About the Speaker:

Kwei-Jay Lin is a Professor at the University of California, Irvine, USA and Nagoya Institute of Technology, Japan. He is the Chief Scientist of the NTU IoX Research Center at the National Taiwan University. He is also an Adjunct Professor at the National Taiwan University and National Tsinghua University, Taiwan, Zhejiang University, China. He was an Associate Professor at the University of Illinois, Urbana-Champaign 1985-1993. He was a Visiting Research Fellow at the Academia Sinica, Taiwan in Spring 2016.

Prof. Lin is an IEEE Fellow, and Editor-In-Chief of the Springer Journal on Service-Oriented Computing and Applications (SOCA). He was the Co-Chair of the IEEE Technical Committee on Business Informatics and Systems (TCBIS) until 2012. He was an Associate Editor of IEEE Transactions on Parallel and Distributed Systems, 2002-2006, and an Associate Editor of IEEE Transactions on Computers, 1996-2000. He was the External Examiner for the Hong Kong University's Program on E-Commerce and Internet Computing during 2006-2009.

Prof. Lin has published more than 200 papers in journals and conferences. He has served on many international conferences, recently as PC-chair of IEEE SOCA 2017 and conference co-chair of CBI 2015. He has given keynote speeches in the 22nd IEEE Conference on Embedded and Real-Time Computing Systems and Applications in August 2016, the 6th IEEE Symposium on Cloud and Service Computing, in December 2016, and the 11th IEEE International Symposium on Service-Oriented System Engineering, in April 2017. His research interest includes service-oriented systems, intelligent IoT applications, middleware and kernel, real-time computing, and distributed computing.

July 4th (Tuesday), 2017 14:40 - 16:10 @Nitech Hall

### Seminar Title:

## Building Smart Buildings using Service-Oriented Internet of Things

### Abstract:

With the advance of sensing, actuation and wearable technology, Internet of Things (IoT) has become the next IT research focus. Many IT companies have started to invest heavily into this area by developing and inventing innovative IoT products. We have developed a flexible IoT platform and middleware, called WuKong, to support the development of new IoT applications. The WuKong middleware can intelligently decide how to deploy an IoT application by mapping an FBP to physical devices in order to meet the functionality requirements. We have designed smart building applications using "evacuation sensors" that can guide people to find safe exit paths when fires are detected in a building. We have also built smart drones designed to detect and lead human from dangerous areas. Algorithms and techniques can be integrated for real time detection of dangerous events and situations. Combined with data analytics, evacuation sensing can give predictions on dangerous areas for people to avoid. In this talk, the issues, techniques and challenges for evacuation sensing will be discussed.

セミナーは下記の授業として行います

(博士前期) 材料・エネルギー特別演習 1, 2 / 情報・社会特別演習 1, 2

(博士後期) 材料・エネルギー先進特別演習 1, 2 / 情報・社会先進特別演習 1, 2

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