**Title:** Digital Sign Posts of The Future

**Abstract:**

In this era of Internet of Things and Smart Cities, many transformations are imminent and they will change our lives for the better. Efforts are currently underway to apply new concepts and ICT technologies for realizing smart transport and for the intelligent roads of the future.

  Current traffic sign posts have been around for hundreds of years and they are signs made of a metal pole and sign plate. This is an old, analog, and passive approach since its’ purpose is to merely convey a sign, through providing visibility to the drivers. However, such an approach is primitive and limited since some signs are easily blocked by trees or appeared invisible under bad weather (fog, snow, and rain).

In this talk, I shall introduce a new system architecture of digital traffic sign posts targeted for the intelligent roads of the future. The duplex design uses a client-server architecture with advanced software and hardware to wirelessly transmit the signs, along with using mobile phones and Android apps to intelligently filter out the signs. The design, implementation, and results of experimental field trials will be presented, and its performance compared to other existing road navigation solutions from industries, such as Bosch, Evotegra, and Michelin.

**Chai K Toh**

Professor Toh graduated from Cambridge University with a PhD in Computer Science in 1996 and did his undergraduate degree at Manchester University, graduating first class honors in 1991. He has held professorships in USA and UK and is currently the Tsing Hua Honor Chair Professor in Computer Science at National Tsing Hua University. He is doing tech ventures and is an angel investor concurrently in the Silicon Valley, California. He has also held director, VP, CTO and assistant chief executive posts in the industries. Prof. Toh received the IEEE Kiyo Medal in 2005 and IET Fleming Medal in 2009 for pioneering the field of mobile ad hoc mesh networks. He is an elected fellow of IEEE, AAAS, IET and BCS. A Singapore native, his ancestry can be traced back to Hainan island, China.