NATIONAL UNIVERSITY OF SINGAPORE

School of Computing

C S S E M I N A R

Title: **Games on Demand: Are We There Yet?**

Speaker: Dr. Kuan-Ta Chen
                    Academia Sinica
                    Taiwan

Date/Time: 4 August 2015, Tuesday, 10:00 AM to 11:30 AM

Venue: MR1, COM1-03-19

Chaired by: Dr Ooi Wei Tsang, Associate Professor, School of Computing
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Abstract:

Games on demand, a.k.a., cloud gaming, refers to a new way to deliver computer games to users, where computationally complex games are executed on powerful cloud servers, the rendered game scenes are streamed over the Internet to gamers with thin clients on heterogeneous devices, and the control events from input devices are sent back to cloud servers for interactions. In late 2000's, we started to see cloud gaming services offered by startups, such as OnLive, G-cluster, Gaikai, and Ubitus. We also witnessed that Gaikai was acquired by SONY, which is a major game console developer. This was followed by the competition between Sony's PlayStation Now and NVIDIA's Grid Game Streaming Service, which further heats up the cloud gaming market.

In this talk, I will give an overview of the technical challenges in developing cloud gaming systems, what we have done, and how much remains to do. I will start from the development of GamingAnywhere, an open-source cloud gaming system, followed by a number of studies based on the open system, including the feasibility of mobile cloud gaming, the provisioning of QoE during a game session, and the consolidation of virtual machines running cloud game servers. More recent researches on how to reduce communication overhead and speed up the infamous latency problem in cloud gaming will also be covered. I'd like to conclude this talk via an interactive discussion with the audience to get to the question "Are we there yet?" for the cloud gaming era.

Biodata:

Dr. Sheng-Wei Chen (also known as Kuan-Ta Chen) is a Research Fellow at the Institute of Information Science and the Research Center for Information Technology Innovation (joint appointment) of Academia Sinica. He was an Assistant Research Fellow from 2006 to 2011

and an Associate Research Fellow from 2011 to 2015 at the Institute of Information Science, Academia Sinica.

He received his Ph.D. in Electrical Engineering from National Taiwan University in 2006, and his B.S. and M.S. in Computer Science from National Tsing Hua University in 1998 and 2000, respectively. Prior to taking his academic path, he was active as a programmer specialized in Windows system programming, a technical writer, and a freeware/shareware developer.

His research interests span various areas in multimedia computing and social computing with an emphasis on user experience, multimedia systems and networking, crowdsourcing, and computational social science. He received the Best Paper Award in IWSEC 2008 and K. T. Li Distinguished Young Scholar Award from ACM Taipei/Taiwan Chapter in 2009. He also received the Outstanding Young Electrical Engineer Award from The Chinese Institute of Electrical Engineering in 2010, the Young Scholar's Creativity Award from Foundation for the Advancement of Outstanding Scholarship in 2013, and IEEE ComSoc MMTC Best Journal Paper Award in 2014. He has been an Associate Editor of IEEE Transactions on Multimedia (TMM) since 2011 and an Associate Editor of ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM) since 2015. He is a Senior Member of ACM and a Senior Member of IEEE.