

DEPARTMENT OF COMPUTER SCIENCE
University of Houston

SUMMER SEMINAR 2012

WHEN: FRIDAY, JULY 20, 2012
WHERE: PGH 232
TIME: 11:00 AM

SPEAKER: Prof. Kyung-Joon Park, DGIST, Korea

Host: Dr. Rong Zheng

TITLE: Cyber Physical Systems: A New Science for Convergence

ABSTRACT:

Recently, the convergence of cyber and physical spaces has transformed traditional embedded systems into cyber physical systems (CPS), which are characterized by tight integration and coordination among computation and physical processes by networking. In CPS, various embedded devices with computational components are networked to monitor, sense, and actuate physical elements in the real world. Examples of CPS encompass a wide range of man-made systems such as avionics, healthcare, transportation, automation, and smart grid systems. In addition, the recent proliferation of smart phones and mobile Internet devices equipped with multiple sensors can be leveraged to enable mobile cyber-physical applications. In this tutorial, we provide an overview of CPS by summarizing recent research efforts and future opportunities for CPS.

Short Biography:

Kyung-Joon Park received his B.S. and M.S. degrees from the School of Electrical Engineering and Ph.D. degree from the School of Electrical Engineering and Computer Science, Seoul National University (SNU), Korea. He is currently an Assistant Professor in the Department of Information and Communication Engineering, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea. He was a Postdoctoral Research Associate in the Department of Computer Science, University of Illinois at Urbana-Champaign (UIUC), IL, USA from 2006 to 2010. He was with Samsung Electronics, Suwon, Korea as a Senior Engineer, from 2005 to 2006, and was a visiting graduate student in the Department of Electrical and Computer Engineering, UIUC in 2001 and 2002.

His current research interests include modeling and analysis of cyber physical systems and design of medical-grade protocols for wireless healthcare systems. He is currently serving on the editorial boards of Wiley Transactions on Emerging Telecommunications Technologies. He has served as a TPC member of numerous international conferences on wireless networking. He has been awarded the Samsung Human-Tech Thesis Prize multiple times. He is also a recipient of the Gold Prize in the Samsung InsideEdge Thesis Competition.