Department of Computer Science
香港城市大學
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COMPUTER SCIENCE COLLOQUIUM

Cyber-Physical System Design in the Open System Environment

SPEAKER **Prof. Aloysius K. Mok**

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TIME 11:00 am - 12:00 pm

VENUE CS Seminar Room, Y6405
6th Floor, Yellow Zone
Yeung Kin Man Academic Building
City University of Hong Kong
83 Tat Chee Avenue
Kowloon Tong

ABSTRACT

Cyber-physical systems (CPS) consist of both physical and computational processes. CPS systems often operate in an open system environment (e.g. autonomous vehicle, robotic manufacturing) where the resource scheduler may not have knowledge of the real-time performance requirements of individual applications. The design of CPS systems must deal with the possible failures of physical processes that might exhibit unanticipated failure modes. We shall discuss how the concepts of failure semantics and real-time virtual resources may be used to ameliorate the impact of the open system environment and unknown failure modes in CPS system design.

BIOGRAPHY

Aloysius K. Mok received the S.B. degree in electrical engineering, the S.M. degree in electrical engineering and computer science, and the Ph.D. degree in computer science from the Massachusetts Institute of Technology, Cambridge, MA, USA, in 1977 and 1983, respectively. Since 1983, he has been with the Faculty of the Department of Computer Sciences, The University of Texas at Austin, Austin, TX, USA, where he is currently a Quincy Lee Centennial Professor in computer science. His current interests include real-time and embedded systems, cyberphysical systems, wireless process control, computer and network security, and real-time knowledge-based systems. Prof. Mok is internationally known for his work in real-time systems.

All are welcome!

In case of questions, please contact Dr Chun Jason XUE at Tel: 3442 9815, E-mail: jasonxue@cityu.edu.hk, or visit the CS Departmental Seminar Web at http://www.cs.cityu.edu.hk/.