Curriculum Vita

Aloysius K. Mok
Department of Computer Science
University of Texas at Austin
Austin, Texas 78712
Email: mok@cs.utexas.edu
Phone: 512-471-9542

a. PROFESSIONAL PREPARATION

Ph.D. Computer Science (1983) Massachusetts Institute of Technology)
MS Electrical Engineering and Computer Science (1977) Massachusetts Institute of Technology)
BS Electrical Engineering (1977) Massachusetts Institute of Technology)

b. APPOINTMENTS

1997 – now   Professor of Computer Science (University of Texas at Austin)
1990 – 1996   Associate Professor (University of Texas at Austin)
1983 – 1989   Assistant Professor (University of Texas at Austin)

c. RESEARCH RESULTS

RELATED PRODUCTS

1. Felipe Lopez, Lixun Zhang, Aloysius Mok, and Joseph Beaman, "Implementation of a particle filter on a GPU for nonlinear estimation in a manufacturing remelting process", in Proceedings of 2014 IEEE/ASME Conference on Advanced Intelligent Mechatronics (AIM), 2014, 340-345.
2. Felipe Lopez, Lixun Zhang, Aloysius Mok, and Joseph Beaman, "Particle filtering on GPU architectures for manufacturing application", Computers in Industry, 2015(71): 116-127.
3. Song Han, Kam-yiu Lam, Jiantao Wang, Krithi Ramamritham, Aloysius K. Mok. "On Co-Scheduling of Update and Control Transactions in Real-time Sensing and Control Systems: Algorithms, Analysis and Performance", IEEE Transactions on Knowledge and Data Engineering (TKDE), 2013.
4. Wenlong Zhang, Masayoshi Tomizuka, Yi-Hung Wei, Quan Leng, Song Han, Aloysius Mok, "Time Delay Compensation in a Wireless Tracking Control System with Previewed Reference", in Proceedings of 2014 Annual Conference of the American Automatic Control Council (ACC 2014), Portland, Oregon, June 4-6, 2014.
5. Quan Leng, Yi-Hung Wei, Song Han, Wenlong Zhang, Masayoshi Tomizuka, Aloysius Mok, "Improving Control Performance by Minimizing Jitter in RT-WiFi Networks", in Proceedings of the 35th IEEE Real-Time Systems Symposium, Rome, Italy, December 2-5, 2014.

OTHER SIGNIFICANT PRODUCTS

1. Song Han, Xiuming Zhu, Deji Chen, Aloysius K. Mok, Mark Nixon, "Reliable and Real-time Communication in Industrial Wireless Mesh Networks", in Proceedings of the 17th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), 2011. (Best Paper Award Nominee)

2. Yi-Hung Wei, Quan Leng, Song Han, Aloysius K. Mok, Wenlong Zhang, Masayoshi Tomizuka, "RT-WiFi: Real-Time High-Speed Communication Protocol for Wireless Cyber-Physical Control Applications", in Proceedings of the 34th IEEE Real-Time Systems Symposium (RTSS), 2013. (Best Paper Award)

3. Xiuming Zhu, Pei-Chi Huang, Jianyong Meng, Song Han, Aloysius K. Mok, Deji Chen, Mark Nixon. "ColLoc: A Collaborative localization and tracking System on WirelessHART", ACM Transactions on Embedded Computing Systems (TECS), 13(4s): Article 125, 2014.

4. Song Han, Deji Chen, Ming Xiong, Kam-yiu Lam, Aloysius K. Mok, Krithi Ramamritham. "Schedulability Analysis of Deferrable Scheduling Algorithms for Maintaining Real-Time Data Freshness", IEEE Transactions on Computers (TC), 63(4):979-994, 2014.

5. Jiantao Wang, Song Han, Kam-yiu Lam. "Maintaining Temporal Consistency of Real-time Data in Distributed Real-Time Systems", Real-Time Systems Journal, Vol. 48, No. 4, April 2012, pp. 387-429.

d. SYNERGISTIC ACTIVITIES

I was a founding member of the steering committee of the cyber-physical systems initiative of the National Science Foundation. This committee played a major role in helping NSF establish the cyber-physical systems research program.

I was Chairman of the IEEE Technical Committee on Real-Time Systems (1995-1996) and pioneered the real-time systems research area. I received the Award for Outstanding Technical Contributions and Leadership Achievements in Real-Time Systems, IEEE Computer Society in 2002.

I am currently on the editorial board of the Journal of Formal Methods in System Design and am a member of the editorial board of the new ACM Transactions on Cyber-Physical Systems.

I have been on the Avionics Advisory Team for several DoD programs including the F-22, F-35, SBIRS-High; for my service I received commendation from the Secretary of the United States Air Force and the Director of Defense Research & Engineering (DDR&E).