

COMPUTER SCIENCE  
SEMINAR

*Medical Devices Cybersecurity*

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**Abstract:** The Institute of Medicine commissioned my 2011 report on the role of trustworthy software in the context of U.S. medical device regulation. This talk will provide a glimpse into the risks, benefits, and regulatory issues for innovation of trustworthy medical device software.

Today, it would be difficult to find medical device technology that does not critically depend on computer software. The technology enables patients to lead more normal and healthy lives. However, medical devices that rely on software (e.g., drug infusion pumps, linear accelerators) continue to injure or kill patients in preventable ways despite the lessons learned from the tragic radiation incidents of the Therac-25 era. The lack of trustworthy medical device software leads to shortfalls in properties such as safety, effectiveness, dependability, reliability, usability, security, and privacy.

Come learn a bit about the science, technology, and policy that shapes medical device software.

Bio: Kevin Fu is an Associate Professor of Computer Science and adjunct Associate Professor of Electrical & Computer Engineering at the University of Massachusetts Amherst. Prof. Fu makes embedded computer systems smarter: better security and safety, reduced energy consumption, faster performance. His most recent contributions on trustworthy medical devices and computational RFIDs appear in computer science and medical conferences and journals. The research is featured in critical articles by the NYT, WSJ, and NPR.

Prof. Fu served as a visiting scientist at the Food & Drug Administration, the Beth Israel Deaconess Medical Center of Harvard Medical School, and MIT CSAIL. He is a member of the NIST Information Security and Privacy Advisory Board. Prof. Fu received a Sloan Research Fellowship, NSF CAREER award, and best paper awards from various academic silos of computing. He was named MIT Technology Review TR35 Innovator of the Year. Prof. Fu received his Ph.D. in EECS from MIT when his research pertained to secure storage and web authentication. He also holds a certificate of achievement in artisanal bread making from the French Culinary Institute.

Friday, April 6, 2012, 3:00 pm  
Mathematics and Science Center: W301

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