Welcome

Seminar Series of the Department of Computer Science Electrical Engineering

Presents

Detection and Monitoring of Selected Events before, during and after Emergency Department Care
November 30, 2007. Time: 2:00-3:00PM. FH 557.

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Abstract

An Emergency Department (ED) is an extremely dynamic environment where a few seconds of mismanagement may threaten human life. For this reason, all activities are managed by highly skilled and efficient emergency physicians and nurses, whose activities receive crucial support from computers. The patient care provided in the ED is part of a continuum of care, which begins when emergency medical services (EMS) vehicles are dispatched to assist, who must be taken to a hospital with the capacity to treat that illness or injury. Treatment in the hospital begins in the ED and often continues in an intensive care unit (ICU) or operative theater (OR). Thus, proper pre-hospital support of the EMS environment, and in-hospital support of the OR and ICU environments, is also crucial. At present such support is provided to EMS by ambulances and helicopters, which transport patients to an appropriate hospital. The present system is predominantly manually operated. An improved outside support system would include, when possible, automatic notification of events requiring an EMS response for assistance (accident, vehicle roll-over, etc). Such a notification systems is being jointly developed by St. Lukes and CSEE of UMKC. The notification system is called NOW (Notification on Wireless), the initial development of which has been funded by the St. Luke's Hospital Foundation.

In this talk I will explain and discuss selected activities in the EMS and ED arenas, and relate how are they managed. This will be interwoven with an overview of the architecture and selected aspects of the working design of NOW.

Bio: Dr. Gary Gaddis has served as the St. Luke's/Missouri Endowed Chair in Emergency Medicine since 1999, and has collaborated with Dr. Vijay Kumar in developing ideas for automating patient care processes since 2004. He is a 1989 graduate of the Emergency Medicine Residency Program at the Wright State University School of Medicine. He completed his MD training at Indiana University in 1986, and his Ph.D. training in Physiology in 1984. His Ph.D. dissertation investigated the differential influences of blood volume and body temperature upon local and whole body sweating rates during exercise in a hot and dry environment. Research interests include factors influencing the acquisition of skills and maintenance of accuracy of interpretation of the Focused Abdominal Sonogram for Trauma, Knowledge Translation and Research Methodology, and Medication Safety in the Emergency Department. He has been the course director at the University of Missouri-Kansas City School of Medicine for "Clinical Correlations Discussions" since the course's inception in 2003, and also has been a guest discussant or lecturer at several other medical school courses. He also serves on the School of Medicine Council on Curriculum as the Vice-Chair, and as the Chair of the Clerkship Directors' subcommittee. He is the Council's representative to the Medical School's executive committee, the Coordinating Council, and that council's Student Appeals subcommittee.