

Welcome
Computer Science and Electrical Engineering Seminar & PhD Colloquium



Dr. Cory Beard



Dr. Vijay Kumar

The first seminar will be presented by Dr. Cory Beard and Dr. Vijay Kumar. The seminar will open with welcome address and then a sketch of the seminar series will be presented. After welcome, introduction and sketch Dr. Vijay Kumar will present a research talk on the following topic.

Malicious Transactions in Mobile Database Systems

Vijay Kumar

Abstract.

Securing the database from the effects of malicious activities and maintaining data consistency have never been easy. This task becomes significantly more complex in Mobile Database Systems (MDS) because of the unique demands it imposes on data processing activity. The characteristics of a malicious transaction have been discussed in many papers; however, a formal definition seems to be missing. Such definition is very useful, rather essential to investigate its interaction with MDS and to develop schemes for its management. In this seminar, we ponder over and discuss a few things about malicious transactions and its interactions with MDS. In particular, we first try to develop a formal definition of malicious transaction, explain our reference architecture of a mobile database system, define the structure and processing of mobile transactions, and investigate interaction of malicious transactions with mobile database systems. Finally, we present an outline of a scheme, which we call "Location Signature", to identify the attack of malicious transactions on mobile database systems.

The work which we present here is still on going. Therefore, one of our aims here is to gather your useful comments and suggestions to revise, improve, and possibly modify our approach for the management of mobile malicious transactions.

Cory Beard: Dr. Cory Beard is an Associate professor of Electrical and Computer Engineering at the University of Missouri-Kansas City. His research areas are disaster communication networks, integrated communication networks, wireless networking, differentiated quality of service provisioning, network traffic engineering, queuing theory, and intelligent agents.

Vijay Kumar: Dr. Vijay Kumar is a professor of Computer Science at the University of Missouri-Kansas City. His research areas are Data Dissemination through Wireless Channels, Mobile Database Systems (MDS), Sensor Technology, Security and Trust, Web Technology, and Bioinformatics. A number of these projects are funded by grants from National Science Foundation, HP labs, Sprint, and St Lukes Hospital research Foundations.