Center for Networked Computing Seminar

Computer and Information Sciences
Temple University

On-road Localization and Data Dissemination in Vehicular Ad Hoc Networks

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Abstract:

On road localization and data dissemination are two important problems in Vehicular Ad Hoc Networks (VANET). In this talk, I will first present a grid based on-road localization system, GOT, for vehicles to evaluate their locations through the help of other vehicles in areas where GPS signal is blocked. An approximate geometric relationship pattern matching technique is provided to deal with network sparseness. In addition, I will present a distributed protocol, DOVE, for disseminating data to a desired number of drivers in an area of interest, a new problem in data dissemination. A class of heuristics are introduced to minimize the dissemination delay and reduce the message cost..

Bio:

Dr. Grace Guiling Wang received her BS degree from Nankai University, China. She received the PhD degree in Computer Science and Engineering and a minor in Statistics from the Pennsylvania State University at May 2006. She is currently an associate professor in the Computer Science Department at New Jersey Institute of Technology. Her research interests include wireless networks and mobile computing. Her publications have been cited for 1600+ times according to Google Scholar.