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Computer Science Seminar Series, 2012

National Capital Region

Scheduling in a Cell of Pigeon Networks
(Pilot Study)

Speaker: Prof. Jiang (Leo) Li
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Friday, December 7, 2012
1:00PM- 2:00PM, NVC 325

Abstract

In the domain of delay tolerant networks, we are studying pigeon networks. A static message producer/consumer/depot (called host) and a mobile message carrier (called pigeon) form a basic unit of pigeon network. Message transfer relies on the mobility of pigeon and is thus not real time. To minimize the average message delay, the pigeon's movement and stay need to be carefully scheduled. For the pilot study, we introduced a dual phase message generation model and investigated the optimal scheduling schemes for each phase respectively. Based on the analytical results, we proposed a quasi-optimal dual-phase (QODP) scheme as well as an approach to identify message generation phases at the host. Simulations have shown promising results.

Biography

Dr. Jiang (Leo) Li received his B.S. and M.S. degrees in Computer Science from University of Science and Technology of China, and Ph.D. degree in Computer Science from Rensselaer Polytechnic Institute. He is currently an associate professor in the Department of Systems and Computer Science at Howard University, Washington, DC. His research interests include computer networking, network security and network simulations and now focus on delay tolerant networks funded by NSF.