



# Illinois Center for Wireless Systems

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## ICWS Seminar Series



### Mobility in Ad Hoc Wireless Networks: Friend or Foe?

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#### **Abstract:**

Ad hoc wireless networks are operated in multiple hops in which mobile nodes cooperate to maintain network connectivity. These networks perform various functions, including routing. In this presentation, two opposing views of mobility in ad hoc wireless networks are presented. One view casts mobility as an undesirable feature. This view normally represents an ad hoc wireless network as a connected graph where path information needs to be maintained to ensure message delivery. Another view considers mobility as a desirable feature which can increase network capacity and even assist the routing process. We offer our views on these two approaches and discuss some recent discoveries regarding mobility-mitigation mechanisms, including buffer zones and view consistency. Finally, we present several future applications of wireless networks.

#### **Bio:**

Jie Wu is chair and professor in the Department of Computer and Information Sciences, Temple University. Prior to joining Temple University, he was a program director at National Science Foundation. His research interests include wireless networks and mobile computing, routing protocols, fault-tolerant computing, and interconnection networks. He has published more than 450 papers in various journals and conference proceedings. He serves in the editorial board of the IEEE Transactions on Mobile Computing. Dr. Wu was also general co-chair for IEEE MASS 2006, IEEE IPDPS 2008, and DCOSS 2009. He has served as an IEEE Computer Society distinguished visitor and is the chairman of the IEEE Technical Committee on Distributed Processing (TCDP). Dr. Wu is a fellow of the IEEE.