

Department of Computer Science
University of Houston

Distinguished Lecturers Seminar 
Fall 2010

WHEN: MONDAY, JANUARY 24, 2011
WHERE: PGH 232
TIME: 11:00 AM

SPEAKER: Dr. Jiawei Han, University of Illinois at Urbana-Champaign

Host: Dr. Rakesh Verma

TITLE: Will Heterogeneous Information Network Play a Key Role in Future Data Mining?

ABSTRACT

Many objects in the real world are interconnected, forming complex information networks. There have been a lot of studies on mining homogeneous information networks where objects and links are either treated as of the same type, such as friends linking with friends, or treated indiscriminately, without structural or type distinction. However, real-world objects and links often belong to distinct types, such as students, professors, courses, departments, teach and advise in a university network, and such typed networks form structured, heterogeneous information networks.

We explore methodologies on mining such structured information networks and introduce several interesting new mining methodologies, including integrated ranking and clustering, classification, role discovery, data integration, data validation, and similarity search. We show that structured information networks are informative, and link analysis on such networks becomes powerful at uncovering critical knowledge hidden in large networks.

Therefore, we believe that heterogeneous information network will play a key role in successful large-scale data mining.

Short bio:

Jiawei Han, Professor of Computer Science, University of Illinois at Urbana-Champaign. He has been researching into data mining, information network analysis, database systems, and data warehousing, with over 450 journal and conference publications. He has chaired or served on many program committees of international conferences, including PC co-chair for KDD, SDM, and ICDM conferences, and Americas Coordinator for VLDB conferences. He is currently the founding Editor-In-Chief of ACM Transactions on Knowledge Discovery from Data and as the Director of Information Network Academic Research Center supported by U.S. Army Research Lab. He is a Fellow of ACM and IEEE, and received 2004 ACM SIGKDD Innovations Award, 2005 IEEE Computer Society Technical Achievement Award, and 2009 IEEE Computer Society Wallace McDowell Award. His book "Data Mining: Concepts and Techniques" (2nd ed., Morgan Kaufmann, 2006) has been adopted as a textbook worldwide.