

# Guozhu Dong

## Professional Preparation

PH.D., 1988, Computer Science, University of Southern California.

## Appointments

- Associate Professor: 1999–present, Computer Science and Engineering, Wright State Univ; 1994–1998, Computer Science, Univ of Melbourne, Australia.
- Consultant: Lucent Bell Labs, 1998.
- Assistant Professor: 1991-93, Computer Science, Univ of Melbourne; 1989-91, Flinders Univ, Australia.

## Research Interests

Data mining and knowledge discovery, OLAP, bioinformatics, microarray gene expression data analysis, information security, national security, mining of medical/business/scientific and text/image/time-series data, knowledge management.

## Representative Publications (from over 80 total)

- Mining Constrained Gradients in Multi-Dimensional Databases. G Dong, J Han, J Lam, J Pei, K Wang, W Zou. To appear in *IEEE Transactions on Knowledge and Data Engineering*.
- DeEPs: A New Instance-based Discovery and Classification System. J Li, G Dong, K Ramamohanarao, and L Wong. *Machine Learning* 54(2): 99-124 (2004).
- Knowledge Discovery in Databases. G. Dong. Chapter in John J. Marciniak, editor, *Encyclopedia of Software Engineering*. John Wiley and Sons, December 2001.
- Efficient Computation of Iceberg Cubes with Complex Measures. J Han, J Pei, G Dong and K Wang. In *Proc. ACM SIGMOD Int'l Conf on Management of Data (SIGMOD)*, 2001.
- Local properties of query languages. G. Dong, L. Libkin, and L. Wong. *Theoretical Computer Science*, pp. 277-308, 239 (2), 2000.
- Efficient Mining of Emerging Patterns: Discovering Trends and Differences. G Dong and J Li. *ACM SIGKDD Int'l Conf on Knowledge Discovery & Data Mining (KDD)*, pages 43 – 52. 1999.
- CAEP: Classification by Aggregating Emerging Patterns. G Dong, X Zhang, L Wong, J Li. *Proceedings of Second Int'l Conf on Discovery Science, LNCS, Vol. 1721, S Arikawa, K Furukawa (Eds.), December, 1999, Tokyo, Japan.*
- Relational Expressive Power of Constraint Query Languages, M. Benedikt, G. Dong, L. Libkin and L. Wong. *Journal of Association for Computing Machinery (JACM)*, 45(1):1-34, Jan 1998.
- Arity Bounds for First-Order Incremental Evaluation and Definition of Polynomial Time Database Queries. G. Dong and J. Su. *Journal of Computer and System Sciences*, 57(3):289-308, Dec 1998.
- Incremental and decremental evaluation of transitive closure by first-order queries. G. Dong and J. Su. *Information and Computation*, 120(1):101–106, July 1995.

## Awards and Funding

Guozhu Dong has published more than 80 research papers in refereed international journals, conference proceedings and book chapters. He has graduated 4 PhD and 5 Masters students. His research has been funded by government research agencies (NSF, Ohio Board of Regents, Air Force Research Lab, Australian Research Council) and industry, for a total of over \$1M.

### **Synergistic Activities**

- Steering committee (2002 –) and program committee co-chair (2003), International Conference on Web-Age Information Management.
- International editorial board, International Journal of Information Technology (2002 –).
- Served on NSF IIS grant review panels.
- Served on program committees of numerous international conferences.
- Supervised minority graduate students, including three females.
- Three US Patents: (1) Declarative workflow system supporting side-effects (with Lucent); (2) Data item evaluation based on the combination of multiple factors (with Lucent); (3) Method and apparatus for classification of data by aggregating emerging patterns (with KRDL, Singapore).
- Developed and taught graduate courses in data mining and in data warehousing.
- Faculty Member, Biomedical Science PhD Program (WSU).

### **Recent Collaborators**

Jianwen Su (UCSB; students: Xun Cheng, Tzekwan Lau). Jiawei Han and Benjamin W. Wah (UIUC); students: Wei Zou, Yixin Chen, Jianyong Wang). Ke Wang (Simon Fraser Univ; students: Joyce Lam, Yiwen Yin, Yudong Jiang). Richard Hull (Lucent Bell Labs; team members: Bharat Kumar, Gang Zhou, Francois Llibat, Eric Simon). Laks Laksmannan (UBC). Leonid Libkin (U of Toronto). J.S.N. Jean (WSU; students: H. Zhang, X. Guo, B. Zhang). Huan Liu, Debra Banks (Arizona State U). Jian Pei (SUNY). Kotagiri Ramamohanarao (Univ of Melbourne; student: Manoukian). Jeffrey Xu Yu (Chinese U of Hong Kong). Philip Yu (IBM). Limsoon Wong, Louxin Zhang (Singapore). Wei Wang (U North Carolina). Changjie Tang (Sichun Univ). James Warren (Univ of South Australia).

**PhD Advisor:** Professor Seymour Ginsburg, Univ of Southern California. Retired.

### **Thesis Advisees and Postgraduate-Scholar Advisees**

Dr James Bailey (1993–97). Lijun Chen, PhD student (2003 –). Kaustubh Deshpande, MSc (2000). Tim Hansell, PhD student (1999 –). Ravi Kiran Janga, MS student (2003 –). Hema Kalluri, MS student (2003 –). Chunyu Jiang, PhD student (2003 –). Dr Jinyan Li (1998 – 2001). Yadong Li, MSc (2000). Shihong Mao, PhD student (2003 –). Dr Mukesh Mohania (postdoc, 1996). Dr Chaoyi Pang (1992 – 1999). Qun Sun, MSc (1998 – 2003). Xue Sun, MSc (2002). Ying Sun, PhD Student (2003 –). Pavan Sannapareddy, MS student (2003 –). Madhukar Suryaprakash, MS student (2003 –). Lyubomir Zagorchev, MSc (2000). Dr Xiuzhen Zhang (1998 – 2001).