

JIAN JAMES MA

Senior Scientist
Cataphora, Inc.

Ph.D. Candidate
Management Information Systems
University of Arizona

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HIGHLIGHTS

- ◆ **4 years'** experience in teaching computational courses including Web Design, Programming, Systems Analysis and Design, etc
- ◆ **7 years'** professional experience in software development, Web development, and database administration
- ◆ **3 years'** industrial experience as a senior scientist, system engineer/project manager
- ◆ Developed and maintained a number of Web projects for companies, conferences, and academic organizations.

TEACHING INTERESTS

Web Development
Data Structures and Algorithms
Systems Analysis and Design
Database Management Systems
Telecommunications and Data Communications

RESEARCH INTERESTS

Web Design Analysis and Evaluation
Complex Software System Analysis
Electronic Document Mining
Spatial-Temporal Data Analysis

EDUCATION

Ph.D. Candidate in Management Information Systems December 2009 (Expected)
University of Arizona (GPA 3.88/4.00), Tucson, AZ
Minor: Systems and Industrial Engineering
Dissertation Title: Products, Processes, and People: A Case Study in Open-Source Software Using Random Networks
Dissertation Committee Chair: Daniel Zeng

Master of Science in Computer Science May 2002
University of Texas at Dallas, Richardson, TX

Bachelor of Science in Chemistry September 1996
Peking University, Beijing, China

TEACHING EXPERIENCES

Menlo College, Menlo Park, CA

Adjunct Professor, January 2009 – May 2009
MIS 101: Telecommunications and Networks

Adjunct Professor, August 2008 – December 2008
MCM 170: Web Design, Evaluation: **4.2/5.0**

University of Arizona, Tucson, AZ

Guest Lecturer / Teaching Associate, January 2008 – May 2008
MIS 507: Software Design and Integration (Graduate core course).

Instructor, January 2007 – December 2007
MIS 341: Information Systems Analysis and Design (College undergraduate core course),
Evaluation: **4.5/5.0**

Guest Lecturer / Teaching Associate, 2004 – 2006
MIS 301: Data Structures and Algorithms (College undergraduate core course).

Texas Tech University, Lubbock, TX

Instructor, 1998 – 2000
CHEM 1107: Principle of Chemistry (I) (Laboratory) (University public course)
CHEM 1108: Principle of Chemistry (II) (Laboratory) (University public course)

INDUSTRIAL EXPERIENCES

Senior Scientist, July 2008 – Present
Cataphora, Inc., Redwood City, CA

- ◆ Conducted research in the field of **Text Mining** and **Social Network**.
- ◆ Served as the research lead in the actor communication graph generation and analysis project using **Java** and **Python**.
- ◆ Led research project identifying social groups out of electronic communications using **Java** and **Python**.

Software Engineer (Intern), May 2006 – August 2006
Flandrau Science Center, Tucson, AZ

- ◆ Designed and implemented a Web-based system to evaluate the Web site comprehensibility. The project included both front-end and back-end Web development, and database design and maintenance by using **Java**, **JSP**, and **SQL Server**.

System Engineer/Project Manager, 2001 – 2003
Santera Systems Inc., Plano, TX

- ◆ Designed, implemented and maintained the Web-based Hardware Board Information Database (HBID) System using **ASP** on **IIS** with **SQL Server** at the back end. This system was used by three internal departments.
- ◆ Performed the project management and the milestone tracking for the product development. Developed and maintained the infrastructure for the project progress tracking.
- ◆ Involved in the process of decision making of the product development, testing and installation

RESEARCH EXPERIENCES

Research Associate, May 2003 – June 2008

University of Arizona, Tucson, AZ

- ◆ Studied the analysis and evaluation of **complex software system** structures with **Random Graph Theory**.
- ◆ Did research in the **Web site comprehensibility** evaluation. This project is supported by the Flandrau Science Center.
- ◆ Conducted research in the **spatial-temporal data analysis**, specifically, the data correlation analysis in security informatics.
- ◆ Studied the replacement strategy in **Web caching**.
- ◆ Developed and maintained a number of Web-based systems that are in the service of IEEE ITS Society, Flandrau Science Center, and several academic workshops.

PUBLICATIONS

Journal Publications

- ◆ “Modeling the growth of complex software function dependency networks,” James Ma, Daniel Zeng, and Huimin Zhao, *Physica A* (under second round review).
- ◆ “A Cross-Correlation Measure for Mining Spatial-Temporal Patterns,” James Ma, Daniel Zeng, et al., *Journal of Management Information Systems* (under review).
- ◆ “A System for Infectious Disease Information Sharing and Analysis: Design and Evaluation,” Paul Jen-Hwa Hu, Daniel Zeng, Hsinchun Chen, Catherine Larson, Wei Chang, Chunju Tseng, and James Ma, *IEEE Transactions on Information Technology in Biomedicine*, July 2007, 11(4), pp 483-492.
- ◆ “Multiple Queue-Based Web Caching Replacement Strategies,” Daniel Zeng, James Ma, et al., *Information Sciences* (under review).

Book Chapters

- ◆ “Spatial-Temporal Data Analysis: HotSpot and Correlation Analysis in Infectious Disease Informatics,” Daniel Zeng, James Ma, et al., *Handbooks in Information Systems*, Emerald Group Publishing, Vol. 3, 2009.
- ◆ “Spatial-Temporal Cross-Correlation Analysis: A New Measure and A Case Study in Infectious Disease Informatics,” James Ma, Daniel Zeng, and Hsinchun Chen, *Intelligence and Security Informatics, IEEE International Conference on Intelligence and Security Informatics*, Springer Publishing, 2006, pp. 542-547.

Conference Publications

- ◆ “Automatically Determining Web Site Comprehensibility,” James Ma, Zhu Zhang, and Ray Garcia, *Proceedings of the 16th Workshop on Information Technologies and Systems (WITS 2006)*, Milwaukee, WI, USA, December 9-10, 2006.
- ◆ “Analyzing Software Function Call Graphs Using A Two-Phase Network Growth Model,” James Ma, Daniel Zeng, and Michael Conover, *Proceedings of the 5th Workshop on E-business (WeB 2006)*, Milwaukee, WI, USA, December 9, 2006.

Work in Process

- ◆ “Analyzing Complex Software Structures with a Random Graph Model,” James Ma, Daniel Zeng, Target Journal: *Decision Support Systems*
- ◆ “Products, Processes, and People: A Case Study in Open-Source Software Using Random Networks,” James Ma, Daniel Zeng, Target Journal: *Journal of Management Information Systems*

SERVICE EXPERIENCES

Conference Review Coordinator and Webmaster

- ◆ China Summer Workshop on Information Management (CSWIM), Kunming, China, June 29-30, 2008, <http://cswim2008.ecom.arizona.edu/>
- ◆ Workshop on E-Business (WeB), Milwaukee, WI, USA, December 9, 2006, <http://isd.arizona.edu/web2006/>
- ◆ International Workshop on Digital Government Research and Practice (IntDG), Beijing, China, October 11 - 13, 2006, <http://isd.arizona.edu/intdg2006/>

System Developer and Administrator

- ◆ Designed and implemented the Web-based Expertise Portal System for the IEEE Intelligent Transportation Systems Society (ITSS), <http://isd.arizona.edu/ITSS/>
- ◆ Implemented and maintained the Web site for Intelligent Systems and Decisions lab, <http://isd.arizona.edu/>

Reviewer

IEEE Transactions on Knowledge and Data Engineering
IEEE Intelligent Systems
Decision Support Systems
Workshop on Information Technologies and Systems (2005, 2006)
IEEE International Conference on Systems, Man, and Cybernetics (2006)
Workshop on E-business (2006)
IEEE Intelligence and Security Informatics Conference (2006)

TECHNICAL SKILLS

Languages: Java, C/C++, C#, JSP, ASP.NET, Python, Perl, HTML, SQL

Architectural Design: UML, DFD

Database Systems: SQL Server, Oracle, MS-Access

Web Server: Tomcat, IIS

Data Analysis: SAS, Stata, SPSS, R

Operating Systems: MS Windows, UNIX, MS-DOS

Applications: Perforce, Eclipse, MS Visual Studio, Rational Rose, MatLab, Arena, DreamWeaver, Flash, Photoshop, MS Project

HONORS AND AWARDS

Graduate In-state Tuition Scholarship, University of Arizona (2004 – Present)
Graduate Assistantship, University of Arizona (2003 – Present)
Graduate Tuition Waiver, University of Arizona (2003 – Present)
Scholarship of Texas Public Education (2000 – 2002)
Scholarship of Excellent Activities (1992 – 1995)

ACCTIVITIES

Department Head of Student Sports and Recreations, Chinese Academy of Sciences (1996 – 1998)
Department Head of Student Recreations, Peking University (1992 – 1995)
Editor-in-Chief of the Journal of Chemistry Department, Peking University (1992 – 1995)

CURRICULUM

Major Courses			
MIS 531A	Data Structure and Algorithms	MIS 541A	Information Systems Analysis and Design
MIS 507B	Data Communications	MIS 531B	Data Structure and Database
MIS 611A	Design Science Research Methodologies	MIS 611B	Topics in Research Methodologies in MIS
MIS 696A	Readings in MIS	MIS 696D	Models for Quantitative Analysis
ECON 531	Games and Decisions	MATH 543	Theory of Graphs and Networks
MAP 582C	Univariate Analysis	MAP 582D	Multivariate Analysis
Minor Courses			
SIE 520	Stochastic Processes	SIE 531	Simulation Modeling and Analysis
SIE 545	Fundamentals of Optimization	SIE 540	Survey of Optimization Methods

REFERENCES

Dr. Daniel Zeng, Associate Professor
 Department of Management Information Systems, University of Arizona, Tucson, AZ
 Email: zeng@eller.arizona.edu
 Phone: +1 (520) 621-4614

Dr. Mohan Tanniru, Dean
 School of Business Administration, Oakland University, Rochester, MI
 Email: tanniru@oakland.edu
 Phone: +1 (248) 370-3286

Dr. J. Leon Zhao, Department Head
 Department of Information Systems, City University of Hong Kong, Hong Kong
 Email: jlzhao@cityu.edu.hk
 Phone: +852 2788 9318

Dr. Pamela Slaten, Assistant Department Head
 Department of Management Information Systems, University of Arizona, Tucson, AZ
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