

# Xiaojun Yuan

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Assistant Professor  
Department of Information Studies  
College of Computing and Information  
University at Albany, State University of New York  
Draper Hall, Room 114C  
135 Western Avenue  
Albany, NY 12222  
Tel: (518) 591 - 8746 Email: xyuan [at] albany.edu

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## **CURRENT POSITION**

**Assistant Professor.** September 2006 – present.

Department of Information Studies, College of Computing and Information, University at Albany, SUNY

## **EDUCATION**

- ***Ph.D. in information science.*** October 2007.

Department of Library and Information Science, School of Communication, Information and Library Studies (SCILS), Rutgers University, New Brunswick, NJ.

- ***M.S. in statistics.*** January 2003.

Department of Statistics, Rutgers University, New Brunswick, NJ

- ***Ph.D. in computer application.*** July 2000.

Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China

- ***B.E., M.E. in computer application.*** May 1994, May 1997.

Department of Computer Science, Xi'an University of Science & Technology, Xian, China

## **RESEARCH GRANTS**

- **Improving Information System Performance by Employing Information Visualization Techniques**

Principle Investigator. April 2007 – April 2008. (\$10,000 awarded)

University at Albany Faculty Research Awards Program (FRAP A), University at Albany, SUNY

- **Speak to Me: A Spoken Language Interface to Information Systems**

Principle Investigator. Submitted on February 1, 2008. (\$188,508.27 requested)

National Leadership Grants, IMLS (Institute of Museum and Library Services)

- **Usability Analysis for New York State Education Department**

Principle Investigator. May 2008 – December 2008. (\$23,612.16 granted)

New York State Education Department

## **RESEARCH EXPERIENCE**

### **Usability Analysis for New York State Education Department**

Principle Investigator, May 2008 --

Department of Information Studies, College of Computing and Information, University at Albany, SUNY

- Conduct a heuristic evaluation analysis for some existing information systems
- Conduct a cognitive walkthrough usability analysis for some sections of existing information systems
- Design and conduct a formal user experiment for evaluating some information systems

### **Improving Information System Performance by Employing Information Visualization Techniques**

Principle Investigator, September 2006 –

Department of Information Studies, College of Computing and Information, University at Albany, SUNY

- Conduct a comparative study on several information visualization systems
- Construct and evaluate an information retrieval system which incorporates some tested information visualization techniques
- Develop evaluation methodologies which can be particularly tailored to the information visualization user studies

### **Speak to Me: A Spoken Language Interface to Information Systems**

Principle Investigator, December 2006 –

Department of Information Studies, College of Computing and Information, University at Albany, SUNY

- Conduct a Wizard-of-Oz study
- Design and conduct a spoken language recognition experiment

### **A Better Book Viewer: How to Read a Million Books (NSF Grant No. 0414557)**

Research Team Member, October 2004 – August 2005

Dr. Michael Lesk, Dr. Nina Wacholder, Principle Investigators, SCILS, Rutgers University, New Brunswick, NJ

- Design a better book browser interface for digital library
- Investigate methods and tools for efficient information visualization
- Construct experimental methods and instruments

### **Collaborative Information Retrieval Research**

Research Team Member, May 2003 – December 2003

Dr. Xiangmin Zhang, Principle Investigator, SCILS, Rutgers University, New Brunswick, NJ

- Designed collaborative information retrieval interface based on thorough review of methods and applications of collaborative filtering
- Constructed and designed experimental methods and instruments
- Performed data analysis using statistical tools

### **Experimental Search and Browsing Interface**

Research Team Member, March 2002 – September 2003

Dr. Nina Wacholder, Principle Investigator, SCILS, Rutgers University, New Brunswick, NJ

- Designed a search and browsing interface and experimental instruments
- Explored the application of natural language processing methods
- Contacted subjects and scheduled time for experiments
- Wrote reports with data analysis results

### **Rutgers TREC (Interactive and Hard Tracks)**

Research Team Member, September 2000 – present

Dr. Nicholas J. Belkin, Principle Investigator, SCILS, Rutgers University, New Brunswick, NJ

- Designed and implemented interactive information retrieval systems
- Developed methods and instruments for laboratory experiments
- Investigated the application and effectiveness of language modeling approach
- Evaluated system effectiveness and performed statistical analyses

### **Supporting Effective Access through User- and Topic-Based Language Models (NSF Grant No. 9911942)**

Research Team Member, September 2000 – September 2004

Dr. Nicholas J. Belkin, Principle Investigator, SCILS, Rutgers University, New Brunswick, NJ  
with Dr. W. Bruce Croft and Dr. James Allan, Principal Investigators, Center for Intelligent Information Retrieval, University of Massachusetts, Amherst

- Contributed to the development of information retrieval systems
- Explored sources of implicit and explicit feedback for user modeling and automatic query expansion
- Investigated task and fact-based question classification and retrieval techniques

### **Research on Computer Storage and Reappearance of Culture Relic: 220 Dunhuang Mogao Grottos (Key Project of National Ninth 5-year Program for Science & Technology)**

Research Assistant, September 1997 – July 2000

Dr. Hua Li, Principle Investigator, Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China

- Developed algorithms for large-scale graphics and image processing
- Implemented the virtual navigation system
- Wrote technical reports and journal papers

### **Application of Mathematical Mechanization to Computer Graphics and Computer Vision**

Research Assistant, September 1997 – July 2000

Dr. Hua Li, Principle Investigator, Institute of Computing Technology, Chinese Academy of Sciences

- Designed mathematical mechanization algorithm for application in computer graphics

### **Research on Medical 3D Visualization Technologies and Their Applications (NSF 69673020)**

Research Assistant, September 1999 – July 2000

Dr. Hua Li, Principle Investigator, Institute of Computing Technology, Chinese Academy of Sciences

- Applied 3D visualization technologies for medical applications

## SELECTED PUBLICATIONS

### Refereed

- **Yuan, X.-J.**, & Belkin, N.J. (2008). Investigating information retrieval support techniques for different information-seeking strategies. Submitted to *Journal of the American Society for Information Science and Technology*.
- **Yuan, X.-J.**, & Belkin, N.J. (2008). Evaluating an integrated system supporting multiple information-seeking strategies. Submitted to *Journal of the American Society for Information Science and Technology*.
- Chen, C., Song, I-Y., **Yuan, X.-J.**, Zhang, J. (2008). The Thematic and Citation Landscape of *Data & Knowledge Engineering* (1985-2007). Accepted by Journal of the Data & Knowledge Engineering.
- **Yuan, X.-J.**, & Belkin, N.J. (2007). Supporting multiple information strategies in a single system framework. In: C.L.A. Clarke, N. Fuhr, N. Kando, W. Kraaij, A.P. de Vries (Eds.) In *Proceedings of the 30th annual international ACM SIGIR conference on Research and development in information retrieval*. SIGIR 2007 (pp. 247-254). New York: ACM.
- Murdock, V., Kelly, D., Croft, W.B., Belkin, N.J., **Yuan, X.-J.** (2007). Improving retrieval for task questions with question-independent structural features. *Journal of Information Processing and Management*. 43, 181-203.
- Zhang, X.-M., Anghelescu, H., **Yuan, X.-J.** (2005). Domain knowledge, search behavior, and search effectiveness of engineering/science students: An exploratory study. *Information Research: An International Electronic Journal*. 10(2), paper 217 (2005). [Available at <http://InformationR.net/ir/10-2/paper217.html>]
- Belkin, N.J., Cool, C., Kelly, D., Kim, G., Kim, J.-Y., Lee, H.-J., Muresan, G., Tang, M.-C., **Yuan, X.-J.** (2003). Query length in interactive information retrieval. In *Proceedings of the 24th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR '03)*, Toronto, Canada, 205-212.
- Wacholder, N., Sharp, M., Liu, L, **Yuan, X.-J.**, Peng Song (2003). Experimental study of index terms and information access. In *Proceedings of the Annual Conference of the American Society for Information Science and Technology (ASIST '03)*, Long Beach, CA, 184-192.
- Kelly, D., Murdock, V., **Yuan, X.-J.**, Croft, W.B. & Belkin, N.J. (2002). Features of documents relevant to task- and fact-oriented questions. In *Proceedings of the Eleventh International Conference on Information and Knowledge Management (CIKM '02)*, McLean, VA, 645-647.
- **Yuan, X.-J.**, Belkin, N.J., Kim, J. (2002). The relationship between ASK and relevance criteria. In *Proceedings of the 24th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR '02)*, Tampere, Finland, 359-360.

### Papers in Progress

- **Yuan, X.-J.**, Belkin, N.J. (2008). Applying a dialogue model into an integrated information system. (will submit to *Journal of Information Processing and Management*)
- **Yuan, X.-J.**, Chen, C., Zhang, X. (2008). The effect of domain knowledge on search performance of information visualization system users. (will submit to Journal of American Society of Information Science and Technology)

- **Yuan, X.-J.**, Chen, C., Zhang, X. (2008). Will visualization and individual difference make a difference in the information visualization users? (will submit to Journal of American Society of Information Science and Technology)

## Non-refereed

### TREC (Text REtrieval Conference)

- Belkin, N.J., Cole, M. , Gwizdka, J. , Li, Y.-L. , Liu, J.-J., Muresan, G., Roussinov, D. , Smith, C. L., Taylor, A., **Yuan, X.-J.** (2006). Rutgers Information Interaction Lab at TREC 2005: Trying HARD. In D. Harman & E. Voorhees (Eds.), *TREC2004, Proceedings of the Fourteenth Text Retrieval Conference*. Washington, D.C.: GPO.
- Belkin, N. J., Kelly, D., Lee, H.-J., Li, Y.-L., Muresan, G., Tang, M.-C., **Yuan, X.-J.**, and Zhang, X.-M. (2005). Rutgers' HARD Experiences at TREC 2004. In D. Harman & E. Voorhees (Eds.), *TREC2004, Proceedings of the Thirteenth Text Retrieval Conference*. Washington, D.C.: GPO.
- Belkin, N. J., Kelly, D., Lee, H.-J., Li, Y.-L., Muresan, G., Tang, M.-C., **Yuan, X.-J.**, and Zhang, X.-M. (2004). Rutgers' HARD and Web Interactive Track Experiences at TREC 2003. In D. Harman & E. Voorhees (Eds.), *TREC2003, Proceedings of the Twelveth Text Retrieval Conference*. Washington, D.C.: GPO.
- Belkin, N. J., Cool, C., Kelly, D., Kim, G., Kim, J., Lee, H.-J., Muresan, G., Tang, M.-C., & **Yuan, X.-J.** (2003). Rutgers' TREC 2002 Interactive Track Experience. In D. Harman & E. Voorhees (Eds.), *TREC2002, Proceedings of the Eleventh Text Retrieval Conference*. Washington, D.C.: GPO.
- Belkin, N. J., Cool, C., Jeng, J., Keller, A., Kelly, D., Kim, J., Lee, H.-J., Tang, M.-C., & **Yuan, X.-J.** (2002). Rutgers' TREC 2001 Interactive Track Experience. In D. Harman & E. Voorhees (Eds.), *TREC2001, Proceedings of the Tenth Text Retrieval Conference*. Washington, D.C.: GPO.

## Doctoral Seminars

- **Yuan, X.-J.**(2006). Supporting multiple information-seeking strategies in a single system framework. In *Proceedings of the HLT-NAACL 2006*. Human Language Technology-North American Association for Computational Linguistics Conference June, 2006, doctoral consortium, New York City, NY, USA.
- **Yuan, X.-J.** (2004). Supporting multiple information-seeking strategies in a single system framework. In *Proceedings of the 26<sup>th</sup> Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR'04)*, doctoral consortium, Sheffield, England.
- **Yuan, X.-J.** (2004). Supporting multiple information-seeking strategies in a single system framework. *Accepted by the conference of Information Seeking in Context (ISIC'04)*, doctoral workshop, Dublin, Ireland.
- **Yuan, X.-J.** (2004). Supporting multiple information-seeking strategies in a single system framework. In *Proceedings of Annual Conference of the American Society for Information Science and Technology (ASIST '04)*, Doctoral Seminar, Providence, RI, USA.

## **TEACHING EXPERIENCE**

- Instructor, Fall 2008  
College of Computing and Information, SUNY-Albany  
Department: Information Studies  
**Graduate Course (Face to face): Fundamentals of Information Technology: School Libraries (IIST 523)**  
**Graduate Course (Fully online): Fundamentals of Information Technology: School Libraries (IIST 523)**
- Instructor, Spring 2008  
College of Computing and Information, SUNY-Albany  
Department: Information Studies  
**Graduate Course: Systems Analysis in the Information Environment (IIST 636)**
- Instructor, Spring 2007  
College of Computing and Information, SUNY-Albany  
Department: Information Studies  
**Graduate Course: Fundamentals of Information Technology: School Libraries (IIST 523)**  
**Graduate Course: Systems Analysis in the Information Environment (IIST 636)**
- Instructor, Fall 2006  
College of Computing and Information, SUNY-Albany  
Department: Information Studies  
**Graduate Course: Fundamentals of Information Technology: School Libraries (IIST 523)**
- Instructor, Spring 2004, Summer 2004, Fall 2004, Fall 2005  
SCILS, Rutgers University  
Department: Library and Information Science  
**Graduate Course: Information Technologies for Libraries and Information Agencies (17:610:550)**
- Teaching Assistant, Fall 2000, Spring 2001, Fall 2001, Spring 2002, Fall 2002, Spring 2003  
SCILS, Rutgers University  
Department: Library and Information Science  
**Graduate Course: Information Technologies for Libraries and Information Agencies (17:610:550)**
- Teaching Assistant, Spring 2003  
SCILS, Rutgers University  
Department: Library and Information Science  
**Undergraduate Course: Programming for ITI majors II (04:547:202)**

## **WORK EXPERIENCE**

### **Bell Labs, Lucent Technologies, Homdel, NJ**

Human Factor Researcher Summer Intern, Human Factors Practice, June - August 2005

- Apply user-centered methodologies in mobile product design
- Identify end-user applications and corresponding objects of the greatest interest to the mobile users
- Collaborate with developers and user interface designers to construct a library of foundation classes and implement end-user applications
- Synchronize the terminology use of the mobile phone user interface features

## **Institutional Research & Academic Planning**

Graduate Assistant, Rutgers University, New Brunswick, NJ, September 2003 – May 2005

- Participated in interdisciplinary research projects on data warehouse with colleagues from departments of statistics, computer science and information science
- Performed data analysis using statistical software and created customized reports

## **GUEST LECTURES**

- **“Applying Logistic Regression model to Data Analysis of Information Retrieval Experiments”**  
Presented in Professor Dan O’Connor’s Ph.D. course in Quantitative Research Methods (16:914:604), Department of Library & Information Science, SCILS, Rutgers University, Fall 2003
- **“Multifactor ANOVA: Theory and Application”**  
Presented in Professor Dan O’Connor’s graduate course in Research Methods (17:610:511), Department of Library & Information Science, SCILS, Rutgers University, Summer 2003
- **“An Introduction to Database ”**  
Presented in Professor Gheorge Muresan’s graduate course in Information Technologies for Libraries and Information Agencies (17:610:550), Department of Library & Information Science, SCILS, Rutgers University, Spring 2003
- **“An Introduction to SQL Server”**  
Presented in Instructor Simmon Sibba’s graduate course in Information Technologies for Libraries and Information Agencies (17:610:550), Department of Library & Information Science, SCILS, Rutgers University, Spring 2002

## **PROFESSIONAL MEMBERSHIP**

- ASIST (American Society for Information Science and Technology) member
- ACM SIGIR (Special Interest Group in Information Retrieval) member
- ACM SIGCHI (Special Interest Group on Computer-Human Interaction) member
- ACM (Association for Computing Machinery) member
- UPA (Usability Professional’s Association) member

## **PROFESSIONAL SERVICES**

### **Journal Reviewer**

- Journal of the American Society for Information Science and Technology
- International Journal of Information Processing & Management
- Journal of Information Visualization

### **Conference Reviewer**

- CIKM 2004 (ACM Thirteenth Conference on Information and Knowledge Management) additional reviewer
- SIGIR 2005 poster reviewer

## **PROFESSIONAL ACTIVITIES**

- July 2008 – attended SIGIR'08, Singapore, Singapore
- June 2006 – attended *HLT-NAACL 2006*, doctoral consortium, New York City, NY, US
- November 2004 – attended ASIST'04, doctoral seminar, Providence, Rhode Island, US
- July 2004 – presented the doctoral proposal at SIGIR'04, doctoral consortium, Sheffield, England
- November 2003 – attended TREC 2003 in Gaithersburg, US
- March 2003 – presented two posters at Rutgers SCILS Research Day
- August 2002 – presented a poster at SIGIR'02 in Tampere, Finland
- November 2001 – attended TREC 2001 in Gaithersburg, US
- September 2001 – attended SIGIR'02 in New Orleans, US

## **AWARDS AND HONORS**

- Eugene Garfield Doctoral Dissertation Fellowship, 2004 – 2005
- Graduate Assistantship, Institutional Research and Academic Planning, Rutgers University, 2003 – Present
- Teaching Assistantship, SCILS, Rutgers University, 2000 – 2003
- Research Assistantship, The Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China, 1997-2000
- Best Paper Award, Xi'an University of Science & Technology, Xian, China, 1997
- Graduate Fellowship, Xi'an University of Science & Technology, Xian, China, 1994 – 1997

## **REFERENCES**

Available upon request.