Hongyan Ma

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SUMMARY

- Teaching interests include database and data management, theory and design of IR systems, knowledge organization and representation, digital libraries, quantitative research methods
- Research interests include intelligent information retrieval, automatic text categorization, digital libraries, technology innovation, social informatics, bibliometrics
- Eight years of working experience in design and evaluation of information systems
- In my dissertation project 'User-System Coordination in Unified Probabilistic Retrieval: Explore Linguistic Evidence, Community Membership, and Perceptual Evidence to Construct Common Ground', I built a coordination model, depicting three types of information evidences and their relationship to common ground construction in information retrieval. A proof-of-concept system, Unified Probabilistic Information Retrieval (UPIR) system was designed to exploit linguistic evidence and shared-interest community information. Real users' queries and click-through data were analyzed to obtain implicit relevance feedback for adaptive indexing, ranking, and interactive query expansion. Computer-based experimental results show that the log-based, unified probabilistic retrieval yield relatively superior performance over Binary Independent Retrieval based probabilistic full text retrieval systems. A user study with 24 subjects demonstrates that users' perceptual evidence on search results and searching process correlates positively with retrieval performance.

EDUCATION

Ph.D. candidate	**University of California, Los Angeles** Department of Information Studies **Dissertation Committee** Dr. Gregory H. Leazer (co-chair), Dr. Jonathan Furner (co-chair), Dr. Christine L. Borgman, Dr. Junghoo Cho (computer science), Dr. Mark H. Hansen (statistics)	Expected, Fall 2006
MLIS in Informatics	**University of California, Los Angeles** Department of Information Studies	2003
Master Degree in Management	**Peking University, China** Department of Information Management	2001
BS in Information Science	**Peking University, China** Department of Information Management	1998
BS in Economics	**Peking University, China** China Center for Economic Research	1999
Minor in Law	**Peking University, China** School of Law	1998

HONORS AND AWARDS

- **Dissertation Fellowship, UCLA** 2005-2006
- Chun Hui Plan Fund, Ministry of Education, China 2006
- LACASIS McKinley Essay Competition, Runner-up 2005
- Unrestricted Fellowship, UCLA 2002, 2003, 2004
- **Chancellor's Fellowship, UCLA** 2001-2004
- **Outstanding Graduate Student with Honor, Peking University** 2001
- Prize Fellowship, Peking University 1994-1995,1999-2000
- Graduate Fellowship, Peking University 1998-2000
- Outstanding Student Scholarship, Peking University 1996-1997,1998-1999
- **Outstanding Undergraduate Student of Beijing with Honor** 1997-1998
- Sony Scholarship, Peking University 1996-1997
- 505 Scholarship, Peking University 1995-1996

RESEARCH EXPERIENCE

Department of Public Policy, University of California, Los Angeles 2003 - present

- Research Assistant for a NSF project *Nanobank: Science and Commercialization*
- Explore innovative text categorization techniques, construct NanoBank Digital Library with PostgreSQL databases, examine technology innovation in nano science and technology, investigate knowledge transfer in and among firms and research institutions

Department of Information Studies, University of California, Los Angeles 2002-2003

- Research Assistant on Scientometric Analysis of Digital Library Utility
- Research design, extensive literature review, questionnaire design, investigation of OAI, E-print software

Department of Sociology, University of California, Los Angeles 2001-2002

- Research Assistant on Multimedia Markup Environment for Social Scientists.
- User request analysis, interface design, XML-based markup environment development, Oracle database administration
- Tools: Visual C++, Oracle XDK, XML SPY, Xalan, AbiWord, Amaya

School of Education, Peking University, China 2000-2001

- Research Assistant for a China NSF Project: Integrated Real-time Distance Education System (DES)
- Designed and developed the sub-systems of DES, document distribution system, with Internet multimedia technologies and IP Multicast technologies
- Tools: C++ socket programming, HTML, ASP, VbScript.

Automation R&D Division of Peking University Library, China 1999-2000

- Research Assistant for a NSF Project: Customized Information Service System (CISS)
- Analyzed and designed a push service system which sends users articles and book information with information filtering techniques
- Tools: Oracle DBMS, Visual C++, PL/SQL, HTML and JavaScript

TEACHING EXPERIENCE

Department of Information Studies, University of California, Los Angeles

Guest Lecturer Spring, 2004
- IS 207 International Issues & Comparative Research in LIS, graduate course
- Delivered a presentation on "Curriculum development in library and information science: A case study at Peking University"

Teaching Assistant (Special Reader) Winter, 2004
- IS 461 Descriptive Cataloging, graduate course (about 40 students)
- Prepared LCSH and DDC assignments, graded term papers and assignments

Teaching Assistant (Special Reader) Fall, 2003, 2004
- IS 260 Information Structure, graduate course (about 90 students)
- Student support, graded weekly assignments, and facilitated course projects

Teaching Assistant (Special Reader) Winter,2003
- IS 462 Subject Cataloging, graduate course (about 40 students)
- Student support, graded weekly assignments

Teaching Assistant (Special Reader) Spring, 2003
- IS 245 Information Access, graduate course (about 80 students)
- Class administration, student support, graded term papers and weekly assignments

Department of Information Management, Peking University, China

Lecturer Fall, 2000
- Computerized Information Retrieval, undergraduate course, distance education program (about 50 students)
- Delivered lectures on information retrieval models and commercial IR systems, designed and graded homework and exams

Lecturer Fall, 1999
- Introduction to Computer Science, undergraduate course, distance education program (about 60 students)
- Delivered integrated introductory lectures on operating systems and computer languages, designed and graded homework and exams

PROFESSIONAL EXPERIENCE

Technical Support, IBM China, Beijing, China 07/1998-08/1998
Intern as an information specialist: monitored and analyzed daily data flow on an e-commerce Web server

Department of Cataloging, DaQing Library, Heilongjiang, China 01/1998-03/1998
Intern as a cataloger: indexed books in English

PUBLICATIONS AND PRESENTATIONS

Refereed Publications

- Ma, H. Constructing common ground for and through coordination in unified probabilistic retrieval, *Journal of the American Society for Information Science and Technology*, (in review).
- Zucker, L.G., Darby, M.R., Furner, J. Liu, R.C, Ma, H. Minerva unbound: knowledge and organizational prologues to evolution of a new knowledge area, nanotechnology, *Research Policy*, (accepted)
- Ma, H. (2000). Systematic implementation of digital libraries, *Library and Information Service, August*, 725-748.
- Ma, H. (2000). Improving protection for intellectual property right in networked environment, *Chinese Journal of Information Science and Technology, March*, 216-238.

Poster Presentations

- Exploiting Web query logs and click-through data in unified probabilistic retrieval: A coordination theory approach, to present at the *Association for Library and Information Science Education Annual Meeting*, San Antonio, Texas, USA, January, 2006.
- Field delineation of nanotechnology with scientific articles: a probabilistic approach, *Converging Technologies for Improving Human Performance Conference: Nanotechnology, Biology, Information Technology, and Cognitive Science*, Kona, Hawaii, USA, February, 2005.
- A coordination theory approach: Dynamically constructing and visualizing common language ground in unified probabilistic retrieval, *Association for Library and Information Science Education Annual Meeting*, Boston, Massachusetts, USA, January, 2005.

Refereed Conference Paper and Presentation

- Improving protection for intellectual property right in networked environment, *The 13th National Information Science and Computer Technology Conference*, Shanghai, China, August, 1999.

Bookreview

- Ma, H. Process-aware information systems: bridging people and software through process technology, *Journal of the American Society for Information Science and Technology*, (accepted).

Invited Presentation

- An integrated text categorization method for NanoBank digital library, *Department of Information Management, Peking University*, Beijing, China, December, 2005

TECHNICAL EXPERTISE

- Computer languages(unix C/C++, perl, PASCAL, SQL/PLSQL, Visual C++)
- DBMS(Oracle, PostgreSQL, MS Access, Visual FoxPro)
- Web(HTML, XML, Java Script)
- Applications(EndNote, TCS-8, PhotoShop, DreamWeaver, MS Office, Acrobat)
- Online searching(Various WWW search engines, Lexis/Nexis, OPAC, ERIC, Expanded Academic Index, LISA)
- Operating systems(Windows 9X/2000/NT/XP, Macintosh OS X, Linux, Unix)

PROFESSIONAL AFFILIATIONS AND SERVICES

- Association for Library and Information Science Education 2001-present
- American Society for Information Science and Technology 2001-present
- Chinese American Library Association 2001-present
- Cofounder of International Graduate Student Association, UCLA 2005
- Volunteer at California Library Association Annual Conference, Pasadena, CA 2005
- Student Advisory Board member for InterActions: UCLA Journal of Education and Information Studies 2005
- Peer mentor for graduate students at Department of Information Studies, UCLA 2003-2005
- Vice President of Departmental Student Association, Peking University 1997