

# RONG ZHAO

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Information Technology (CEWIT)  
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## Research Interests

Information Retrieval  
Data Mining  
Search Technologies  
Knowledge Management  
Semantic Web  
Information Visualization  
User Interface  
Human Computer Interaction  
Software Engineering  
Mobile Application Development

## Teaching Interests

Information Retrieval  
Data Mining  
User Interface Design and Development  
Human Computer Interaction  
Software Engineering  
Object-Oriented Programming  
Design Patterns

## Education

Ph.D., Department of Computer Science, Wayne State  
University, Detroit, Michigan, July 2001

B.E., Department of Computer Science and Technology,  
Tsinghua University, Beijing, China, July 1996

## Professional Experience

Director, Software Systems Division, New York State  
Center of Excellence in Wireless and Information  
Technology (CEWIT), Stony Brook University, Stony  
Brook, New York (August 2006 – Present)

Computer Science Coordinator, New York State Strategic  
Partnership for Industrial Resurgence (SPIR) Program,  
Stony Brook University, Stony Brook, New York (August  
2001 – Present)

Research Assistant Professor, Department of Computer Science, Stony Brook University, Stony Brook, New York (August 2001 – July 2006)

### **Teaching Experience**

Department of Computer Science, Stony Brook University, Stony Brook, New York (August 2001 – Present)

- User Interface Design and Development
- Software Engineering
- Patterns in Programming
- Analysis, Modeling and Design
- Object Oriented Programming

Center for Emerging Technologies, Stony Brook University, Stony Brook, New York (May 2003 – Present)

- Software Engineering and UML
- System Analysis and Design
- Introduction to Java Programming

### **Research Projects**

New York State Center of Excellence in Wireless and Information Technology, Stony Brook, New York (August 2006 – Present)

- Patient Flow Optimization and Hospital Resource Management
- Mobile Applications for Vital Sign Monitoring
- Personalized Search of Multimedia Contents
- Environmental Data Acquisition, Management and Analysis
- Mobile Commerce Applications
- Mobile Mapping and Location Intelligence

Department of Computer Science, Stony Brook University, Stony Brook, New York (August 2001 – Present)

- Multimodal Biometric Verification Using Semantic-Based Data Fusion and Analysis
- Semantic-Based and Multimodal Image/Video Retrieval
- Relevance Feedback and Semi-Automated Annotation in Image/Video Retrieval
- Semantic-Based Web Document Retrieval
- Semi-Automated and Personalized Annotation of Web Documents
- Human-Centered Software Interface Design

Department of Computer Science, Wayne State University, Detroit, Michigan (August 1996 – July 2001)

- Content- and Semantic-Based Image Retrieval
- Content- and Semantic-Based Web Document Retrieval
- Face Recognition

Visual Information Management Group, Imaging Science and Technology Lab, Eastman Kodak Company, Rochester, New York (May 1999 – August 1999)

- Structured Color Texture Similarity Based Image Retrieval

### **Industry Projects**

New York State Center of Excellence in Wireless and Information Technology, Stony Brook, New York (August 2006 – Present)

- Environmental Compliance Network
- Network-Based Multimodal Biometric Patient Verification System

Department of Computer Science, Stony Brook University, Stony Brook, New York (August 2001 – Present)

- Wiki and Product Knowledge Infrastructure
- Development of Software for Real Time Financial Transactions and Data Monitoring
- Development of Specialized Software for Portfolio Management and Trading Applications
- Stereo Computer Vision System for 3D Monitoring of Animal Behavior
- Web-Based Information System for Customized Production Processes
- iGetIt Identification System for Mobile Devices
- Automatic Scheduling and Allocation of Physicians
- Improvement and Implementation of VoIP SIP Server Modules
- Content Management Software Application Architecture Design and Development
- Language Interpretation Application for Healthcare Service Providers Using PDA and Tablet PC

- Workflow Design and Implementation for Automated Document Generation and Management
- Wi-RAN Upgrades and User Interface Implementation
- Workflow Analyzer
- Automatic Stereo Image Processing System
- LanguageMate - Language Interpretation Application for PDA
- Software System For Phenotype Tracking of Knock-Out Mice
- Container Tracking
- Online and Offline Information Management System
- New York State WCB POC Reporting and Workflow Management
- Development and Deployment of Online Quote Request System for Independent Insurance Agencies
- Integrated Resource Management System for Video Conferencing Service Providers
- Audio Visual Presentation Techniques for Educational Software
- Virtual Document Distribution and Deployment
- A Web-Based Hotel Facilities Information Systems for Travelers with Disabilities
- Portable Forms Enhancement
- Emergency Room Electronic Charting System
- Automated Code Generation for Airbus 340/380 Refuel Panel Software Development
- Speech Recognition and Messaging for Healthcare Service Providers
- Nutritional and Substance Information Acquisition and Analysis System
- Handheld Database For Nuclear Waste Tracking and Management
- Multilingual Content Management System for Healthcare Service Providers
- Hospital Catalogs and Electronic Publishing Management System

### **Selected Publications**

R. Zhao and W. I. Grosky, Video Shot Detection Using Color Anglogram and Latent Semantic Indexing: From

Contents to Semantics, *The Handbook of Video Databases: Design and Applications*, B. Furht and O. Marques (Eds.), CRC Press, 2003, pp. 371-392.

R. Zhao and W. I. Grosky, Semantics-Friendly Feature Extraction and Indexing for Geographic Image Retrieval, *NSF Japan-US Workshop on Annotation and Resource Discovery of Geographic Image Data*, Nikko, Japan, 2003.

R. Zhao and W. I. Grosky, A Novel Video Shot Detection Technique Using Color Anglogram and Latent Semantic Indexing, *the 25<sup>th</sup> International Workshop on Multimedia Network Systems and Applications*, in conjunction with *the 23<sup>rd</sup> International Conference on Distributed Computing Systems*, Providence, Rhode Island, 2003.

R. Zhao and W. I. Grosky, Extracting Semantic Information in Geographic Image Data: Some Preliminary Results, *International Conference on Imaging Science, Systems, and Technology*, Las Vegas, Nevada, 2003.

R. Zhao and W. I. Grosky, Narrowing the Semantic Gap – Improved Text-Based Web Document Retrieval Using Visual Features, *IEEE Transactions on Multimedia*, 4(2), 2002, pp. 189-200.

R. Zhao and W. I. Grosky, Negotiating the Semantic Gap: From Feature Maps to Semantic Landscapes, *Pattern Recognition*, 35(3), 2002, pp. 593-600.

W. I. Grosky and R. Zhao, From Context-Free to Context-Sensitive Content-Based Retrieval, *MLabNet 2001 Workshop: Advanced Multimedia Systems and Applications*, Karuizawa, Japan, 2001.

W. I. Grosky and R. Zhao, Improved Text-Based Web Document Retrieval Using Visual Features, *the 1<sup>st</sup> International Conference on Integration of Multimedia Contents*, Gwangju, Korea, 2001.

W. I. Grosky and R. Zhao, Negotiating the Semantic Gap: From Feature Maps to Semantic Landscapes, *the 28<sup>th</sup> Conference on Current Trends in Theory and Practice of Informatics*, Piestany, Slovak, 2001.

R. Zhao and W. I. Grosky, Bridging the Semantic Gap in Image Retrieval, *Distributed Multimedia Databases: Techniques and Applications*, T. K. Shih (Ed.), Idea Group Publishing, 2001, pp. 14-36.

W. I. Grosky and R. Zhao, From Feature Maps to Semantic Landscapes: Negotiating the Semantic Gap, *the 1<sup>st</sup> International Workshop on Multimedia Annotation*, Tokyo, Japan, 2001.

R. Zhao and W. I. Grosky, From Features to Semantics: Some Preliminary Results, *IEEE International Conference on Multimedia and Expo*, New York, New York, 2000.

### **Professional Activities**

Advisor, Long Island Angel Network

Program Committee Member, *IASTED International Conference on Human Computer Interaction (IASTED-HCI 2008)*

Program Committee Member, *IEEE International Conference on Multimedia & Expo (ICME 2007)*

Program Committee Member, *International Conference on Signal-Image Technology & Internet-Based Systems (SITIS 2007)*

Program Committee Member, *the 8<sup>th</sup> RIAO Conference on Large-Scale Semantic Access to Content (RIAO 2007)*

Program Committee Member, *IRMA International Conference on Managing Worldwide Operations & Communications with Information Technology (IRMA 2007)*

Program Committee Member, *the 4<sup>th</sup> International Conference on Cutting Edge Wireless & Information Technologies (CEWIT 2007)*

Program Committee Member, *IEEE International Conference on Multimedia & Expo (ICME 2006)*

Program Committee Member, *IADIS International Conference on e-Society (e-Society 2006)*

Program Committee Member, *the 4<sup>th</sup> Special Workshop on Multimedia Semantics (WMS 2006)*

Program Committee Member, *IEEE International Conference on Multimedia & Expo* (ICME 2005)

Program Committee Member, *IADIS International Conference on e-Society* (e-Society 2005)

Program Committee Member, *International Workshop on Multimodal Information Processing & Applications* (MIPA 2005)

Program Committee Member, *the 3<sup>rd</sup> Special Workshop on Multimedia Semantics* (WMS 2005)

Program Committee Member, *IEEE International Conference on Multimedia & Expo* (ICME 2004)

Invited Session Chair, *Content- and Semantic-Based Information Retrieval*, in conjunction with *the 6<sup>th</sup> World Multi-Conference on Systemics, Cybernetics, and Informatics* (SCI 2002)

Program Committee Member, *the 29<sup>th</sup> Annual Conference on Current Trends in Theory and Practice of Informatics* (SOFSEM 2002)

Program Committee Member, *the 1<sup>st</sup> Special Workshop on Multimedia Semantics* (WMS 2002)

Book Reviewer, *Object-Oriented Design & Patterns*, John Wiley & Sons, Inc

Grant Panelist, NSF Information & Intelligent Systems Division

Grant Panelist, NASA Earth-Sun System Division

Grant Panelist, First Steps to Market Program, United States Civilian Research & Development Foundation

## **Honors and Awards**

Spirit Award, Stony Brook University Career Center, 2007

Twenty Top Techies (T3) Award, Long Island Software and Technology Network, 2006

Graduate Recognition Award, Department of Computer Science, Wayne State University, 1999

Heberlein Excellence in Teaching Award for Graduate  
Students, Wayne State University, 1999

**Affiliation**

IEEE