

# YanJun Zhao

## Research Interests

Image Processing, Signal Processing, Pattern Recognition, Computer Vision, Natural Language Processing, Artificial Intelligence, Machine Learning, Big Data, Data Mining and Analysis, Bioinformatics, Biomedical Informatics, Health Informatics, and Cloud Computing.

## Education

**Georgia State University**, Atlanta Georgia, USA

**Ph.D. in Computer Science**, Jan. 2015

Dissertation: Maximum Energy Subsampling: A General Scheme for Multi-resolution Image Representation and Analysis

**M.S. in Computer Science**, May 2011

## Professional Experiences

*Troy University, Troy Alabama, USA*

**Assistant Professor** (Aug. 2014 –present)

Design and give lecture for the courses:

- CS 6666 Computer Graphics (Spring 2016, Fall 2016)
- CS 6649 Special Topics in CIS (Spring 2017)
- CS 6699 Research and Thesis (Summer 2017)
- CS 6625 Specialized Study in CS (Summer 2016, Fall 2016, Spring 2017, Summer 2017)
- CS 5545 Computer Architecture (Summer 2016, Summer 2017)
- CS 4495 Special Topics in Computer Science (Fall 2015)
- CS 4448 Operating Systems (Spring 2016, Spring 2017)
- CS 3360 Concepts of Object Program I (Fall 2016)
- CS 3323 Data Structures (Fall 2015, Spring 2016, Fall 2016, Spring 2017)
- CS 3310 Foundations Computer Science (Spring 2015, Summer 2015, Fall 2015)
- CS 2255 Computer Science II (Fall 2014, Spring 2015, Spring 2016, Summer 2016, Fall 2016, Spring 2017, Summer 2017)
- CS 2250 Computer Science I (Fall 2014, Spring 2015, Summer 2015, Fall 2015)

Do research on Image Processing, Signal Processing, Pattern Recognition, Computer Vision, Natural Language Processing, Artificial Intelligence, Machine Learning, Big Data, Data Mining and Analysis, Bioinformatics, Biomedical Informatics, Health Informatics, and Cloud Computing

**Georgia State University, Atlanta Georgia, USA**

**Teaching Assistant**

Design and grade homework, quizzes & exams, tutor students for the courses:

- CSC 8260 Advanced Image Processing
- CSC 4210 Computer Architecture
- CSC 3410 Data Structures

**Research Assistant**

Do research on Image Processing, Signal Processing, Pattern Recognition, Natural Language Processing, Artificial Intelligence, Machine Learning, Big Data, Data/Web Mining, Bioinformatics, Algorithm Design & Applications, especially for the following projects:

- Multi-resolution Image Representation and Analysis
- Feature Invariance for Shape Recognition and Retrieval
- Knowledge Discover for Huge Text Documents
- Dramatic Managements for Dynamic Multi-agent Systems
- Scenarios Generation for Human-computer Interactive Systems
- Dimension Reduction and Feature Selection for Big Data

**Publications and Presentations**

- Alberto Arteta, Juan Castellanos, **Yanjun Zhao**, and Danush K Wijekularathna. “Implementing a Linear Function to Measure the Quality in Governments.” *International Journal “Information Theories and Applications”*, vol. 23, no.1, pp. 3-11, 2016.
- **Yanjun Zhao** and Saeid Belkasim. “Image Compression and Denoising Algorithm based on Multi-resolution Discrete Cosine Transform.” In *Proceedings of the International Conference on Image Processing, Computer Vision, and Pattern Recognition (ICIP)*. pp. 110-116, The Steering Committee of the World Congress in Computer Science, Computer Engineering and Applied Computing (WorldComp), 2016.
- Ben Miller, Jennifer Olive, Shakthidhar Gopavaram, **Yanjun Zhao**, Ayush Shrestha, and Cynthia Berger. “A Method for Cross-Document Narrative Alignment of a Two-Hundred Sixty-Million Word Corpus.” In *Big Data (Big Data), 2015 IEEE International Conference on*, pp. 1673-1677. IEEE, 2015.
- Sanghoon Lee, **Yanjun Zhao**, Mohamed Eid Mahmoud Masoud, Maria Valero, Semra Kul, and Saeid Belkasim. “Domain Specific Information Retrieval and Text Mining in Medical Document.” In *Proceedings of the 6th ACM Conference on Bioinformatics, Computational*

*Biology and Health Informatics*, pp. 67-76. ACM, 2015.

- **Yanjun Zhao**, Saeid Belkasim and Janani Krishnamani. "Image Compression Scheme Based on Multi-resolution Boundary-Based Shape Descriptors." In *Web Intelligence (WI) and Intelligent Agent Technologies (IAT), 2013 IEEE/WIC/ACM International Joint Conferences on*, vol. 2, pp. 391-398. IEEE, 2013.
- Janani Krishnamani, **Yanjun Zhao** and Rajshekhar Sunderraman. "Forum Summarization Using Topic Models and Content-Metadata Sensitive Clustering." In *Proceedings of the 2013 IEEE/WIC/ACM International Joint Conferences on Web Intelligence (WI) and Intelligent Agent Technologies (IAT)*, vol.3, pp. 195-198. IEEE Computer Society, 2013.
- Ben Miller, Ayush Shrestha, Jason Derby, Jennifer Olive, Karthikeyan Umapathy, Fuxin Li, and **Yanjun Zhao**. "Digging into human rights violations: Data modelling and collective memory." In *Big Data, 2013 IEEE International Conference on*, pp. 37-45. IEEE, 2013.
- **Yanjun Zhao**, Fuxin Li and Ben Miller. "Knowledge Discovery Scheme for the Large Text Documents." *World Social Science Forum 2013: Social Transformations and the Digital Age (WSSF2013)*, Montreal, Canada, October 13-15, 2013.
- **Yanjun Zhao** and Saeid Belkasim. "Feature Extraction based on Multi-resolution Cartesian Zernike Moments for Biomedical Image Processing." *The 9th International Symposium on Bioinformatics Research and Applications (ISBRA)*, Charlotte, North Carolina, United States, May 20-22, 2013.
- **Yanjun Zhao** and Saeid Belkasim. "Multiresolution Fourier Descriptors for Multiresolution Shape Analysis." *IEEE Signal Processing Letters*, vol.19, no.10, pp. 692-695. 2012.
- **Yanjun Zhao** and Saeid Belkasim. "Improving Stability and Invariance of Cartesian Zernike Moments." In *Image Analysis and Interpretation (SSIAI), 2012 IEEE Southwest Symposium on*, pp. 61-64. IEEE, 2012.
- Ruhan He, Yong Zhu, Naixue Xiong, Wei Zhan and **Yanjun Zhao**. "Mobile Agent-Based Data Gathering for Web Image Retrieval." In *Computational Science and Engineering, 2009. CSE'09. International Conference on*, vol. 2, pp. 1024-1029. IEEE, 2009.

- **Yanjun Zhao**, Yanqing Zhang and Naixue Xiong. “Biological Data Classification Using Rough Sets and Support Vector Machines.” In *Fuzzy Information Processing Society, 2009. NAFIPS 2009. Annual Meeting of the North American*, IEEE, 2009, doi: 10.1109/NAFIPS.2009.5156445.
- **Yanjun Zhao**, Guoyin Wang and Feng Hu. “Data-driven Approach to Acquisition of Variable Precision Threshold in Variable Precision Rough Set Model.” *Computer Science*, vol.35, no.11, pp. 174-177, 2008.
- **Yanjun Zhao**, Guoyin Wang and Feng Hu. “Data-driven Approach to Acquisition of Variable Precision Threshold in Variable Precision Rough Set Model.” *Computer Science*, vol.35, no.11, pp. 174-177, 2008.
- Xiaoqi Liu, Chengliang Wang, Jianying Bai, Guobin Liao, **Yanjun Zhao**. “Hue-Texture-Embedded Region-Based Model for Magnifying Endoscopy with Narrow-Band Imaging Image Segmentation Based on Visual Features”. *Computer Methods and Programs in Biomedicine*, 2017, doi: 10.1016/j.cmpb.2017.04.010. (In Press, Accepted Manuscripts, Available online April 13, 2017).
- Ben Miller, Jennifer Olive, Ayush Shrestha, Jin Zhao, Nicholas Subtirelu, and **Yanjun Zhao**. “Narrative Markup with TEI.” *Text Encoding Initiative Conference and Members Meeting 2014*. Evanston, Illinois. October 22-24, 2014.
- Ben Miller, **Yanjun Zhao**, Jennifer Olive, and Ayush Shrestha. “Entity Resolution in Narrative Texts Using Graph Theory.” *The 9<sup>th</sup> annual meeting of the Chicago Colloquium on Digital Humanities and Computer Science (DHCS)*. Evanston, Illinois. October 23-24, 2014.
- Ben Miller, Jennifer Olive, Ayush Shrestha, Nicolas Subtirelu, Jin Zhao and **Yanjun Zhao**. “Language Processing Pipeline for Narrative Emergence: Digging into Human Rights Violations.” *Japanese Association for Digital Humanities Conference 2014 (JADH2014)*, University of Tsukuba, Japan, September 19-21, 2014.

## Research Grants

- Research Grant, awarded by Troy University, Summer 2016
- Summer Research Grant, awarded by Troy University, Summer 2016

## Awards

- Second Century Initiative (2CI) Fellowship, awarded by Georgia State University, 2012—2014
- The First Prize for the project “CF Digest”, awarded by Hack for CF: Cystic Fibrosis Hackathon, 2013
- Brains & Behavior (B&B) Fellowship, awarded by Georgia State University, 2011—2012
- Best Student Paper Award, awarded by NAFIPS, 2009
- UK/China Scholarships for Excellence, awarded by UK Department for Innovation, Universities & Skills and the China Scholarship Council, 2008
- Academic Excellence Prize, awarded by Jilin University (China), 2003
- Scholarships and Title of “Excellent Student”, awarded by Jilin University (China), 2001—2005

## Services

### *Troy University Services*

- Member, Computer Science Student Master Thesis Committee
- Member, New Faculty Search Committee of Computer Science Department
- Member, Chancellor’s Fellowship Committee
- Computer Science Student Advisor
- Coordinator, Friday Seminar
- Co-advisor, Computer Club
- Participated in 2015 Summer Impact, 2016 Summer Impact, 2017 Summer Impact
- Participated in 2015 Spring Preview Day, 2016 Fall Preview Day, 2017 Spring Preview Day in support of student recruitment
- Participated in Open House April 2017 in support of student recruitment
- Attended Commencements

### *Professional Services*

- Program Committee Member
  - International Conference on Intelligent Biology and Medicine (ICIBM) 2015
  - The 6<sup>th</sup> IEEE International Conference on Big Data and Cloud Computing (BDCloud) 2016
- Technical Program Committee Member
  - The 6th IEEE Joint International Information Technology and Artificial Intelligence Conference (ITAIC) 2011

- Reviewer for Journals
  - IEEE Transactions on NanoBioscience
  - IET Communications
  - Information Sciences
  - International Journal of Cloud Computing (IJCC)
  - International Journal of Sensor Networks (IJSNET)
  - Journal of Internet Technology
  - The Journal of Supercomputing
  - PeerJ Computer Science
  - Sensors
  - Telecommunication Systems
  - Journal of Sensor and Actuator Networks (JSAN)
  - International Journal of Information Technology, Communications and Convergence (IJITCC)
  - ISPRS International Journal of Geo-Information
  - Future Generation Computer Systems
  
- Reviewer for Conferences
  - Annual Simulation Symposium (ANSS) 2016
  - International IBM Cloud Academy Conference (ICA CON) 2015
  - 2015 International Conference on Intelligent Computing (ICIC2015)
  - 2015 Winter Simulation Conference (WSC 2015)
  - International Conference on Intelligent Biology and Medicine (ICIBM) 2015
  
- Member, IEEE

***Anna University Services***

- Ph.D. Examiner to evaluate the Ph.D. Thesis of a scholar at Anna University, India, 2016