

Scalable Modeling & Imaging & Learning Lab
Dept. Computer Science & Engineering
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Research Interest

- Machine Learning, Computer Vision, Data Mining and Big Data Analytic

Education

Rutgers, the State University of New Jersey, New Brunswick, NJ, USA

Ph.D. in Computer Science, June 2011

- Thesis: *Structured Sparsity: Theorems, Algorithms and Applications*
Advisor: Dr. Dimitris Metaxas and Dr. Tong Zhang

University of Notre Dame, Notre Dame, IN, USA

- Ph.D. Candidate in Computer Science and Engineering, August 2004 - May 2005

Institute of Automation, Chinese Academy of Sciences, Beijing, China

M.S. in Pattern Recognition and Intelligent Systems, June 2003

- Thesis: *Super Resolution Based Iris Image Enhancement*
Advisor: Dr. Tieniu Tan

Huazhong University of Science and Technology, Wuhan, China

- B.E. in Control Science and Engineering, June 1996

Professional Experience

Tenured Associate Professor

- Computer Science and Engineering, U. of Texas at Arlington, TX, 09/2016 -

Adjunct Faculty

- University of Texas Southwestern Medical Center, TX, 04/2015 - present

Tenure-track Assistant Professor

- Computer Science and Engineering, U. of Texas at Arlington, TX, 09/2011 - 08/2016

Research Assistant

- Computer Science, Rutgers University, New Brunswick, NJ, 06/2005 - 07/2011

Research Assistant

- Institute of Automation, Chinese Academy of Science, Beijing, China, 09/2003 - 08/2004

- **Software Engineer**, Industrial and Commercial Bank of China, 07/1996 - 08/2000

Award and Honor

- **NSF CAREER Award**, National Science Foundation, 2016.
- **1st Place Winner**, the Surgical Tool Detection Challenge, Challenges on Modeling and Monitoring of Computer Assisted Interventions (M2CAI), Athens, Greece, October 2016.

- **Best Student Paper Award**, the 18th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Munich, Germany, October 2015.
- **Best Student Paper Award Finalist**, the 17th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Boston, USA, September 2014.
- **Best Reviewer Award**, the 27th Annual Conference on Neural Information Processing Systems (NIPS), Lake Tahoe, Nevada, USA, December 2013.
- **Best Paper Award**, the 1st MICCAI Workshop on Sparsity Techniques in Medical Imaging (STMI), Nice, France, October 2012.
- **Young Scientist Award Finalist**, the 14th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Toronto, Canada, September 2011.
- **Best Paper Award**, the 6th International Conference on Functional Imaging and Modeling of the Heart (FIMH), New York, USA, May 2011.
- **Young Scientist Award**, the 13th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Beijing, China, September 2010.
- **IBM Watson Emerging Leaders in Multimedia and Signal Processing**, Awarded to 10 students internationally, NY, USA, 2010.
- **Outstanding Graduate**, Chinese Academy of Science, Beijing, China, 2003.
- **Excellent Technology Impetus Prize**, Industrial and Commercial Bank of China, 1999.
- **Outstanding Undergraduate**, Huazhong University of Science and Technology, 1996.

PI Grants (Total: \$1.13M)

1. "CAREER: Large Scale Learning for Complex Image-Omics Data Analytics", **\$535,763**, NSF IIS, 08/1/2016 – 07/31/2021.
2. "III: Small:Robust Materials Genome Data Mining Framework for Prediction and Guidance of Nanoparticle Synthesis", **\$250,000**, NSF IIS, 08/15/2014 – 07/31/2017.
3. "Learning Fine-grained Digital Map for Autonomous Driving", **\$136,058**, Nokia Research America, 09/01/2014 – 08/31/2016..
4. Gift Research Grant, **\$50,000**, HERE Map Research, 09/2014.
5. "Energy Disaggregation for Non-intrusive Load Monitoring", **\$149,998**, Samsung Research America, 09/01/2013 – 08/31/2016.
6. "Structured Sparsity for Rapid Magnetic Resonance Imaging", **\$10,000**, UTA REP, 2012.

Co-PI Grants (Total: \$1.03M)

1. "A Materials Genome Approach to Novel Environment-Friendly Magnets", **\$15,000**, UTA REP, 2016.
2. "CRI: A Spatiotemporal Annotated Human Activity Repository for Advanced Motion Recognition and Analysis Research", **\$116,000**, NSF CRI, 09/01/2014 – 08/31/2017.

3. “CMMI:Statistics-based Optimization Methods for Adaptive Interdisciplinary Pain Management”, \$**374,998**, NSF CMMI, 09/01/2014 – 08/31/2017.
4. “GAANN: Educating Health Informatics Researchers”, \$**533,064**, Department of Education, 2012

Teaching Experience

- ***Undergraduate Courses***

- CSE 2312 Computer Organization and Assembly Language Programming
- Semesters: Fall 2011, Fall 2012, Spring 2013, Fall 2013, Fall 2014, Spring 2015
- Average of Student Evaluation Scores: **4.2/5.0**

- ***Graduate Courses***

- CSE 6392 Advanced Topics in Scalable Searching and Optimization
- Semesters: Spring 2012, Spring 2013, Spring 2014, Spring 2015 and Spring 2016
- Average of Student Evaluation Scores: **4.5/5.0**

- CSE 5311 Design and Analysis of Algorithms
- Semesters: Fall 2015, Spring 2016 and Fall 2016
- Average of Student Evaluation Scores: **4.2/5.0**

Advising and Mentoring

- **Ph.D Students**

- Yeqing Li (08/2012 - 12/2015, next stop: Google)
- Zheng Xu (08/2014 - present)
- Jiawen Yao (08/2014 - present)
- Ruoyu Li (08/2014 - present)
- Sheng Wang (08/2015 - present)
- Xinliang Zhu (08/2015 - present)
- Zhifei Deng (08/2016 - present)
- Mohammad Minhazul Haq (08/2016 - present)

- **Master Students with Thesis**

- Chen Chen (01/2012 -12/2014, next stop: UIUC)
- Dheeraj Ganti (01/2014 - 12/2015, next stop: Oracle)
- Viswanathan Rajalingam (01/2015 - present)
- Vivek Balaji (01/2015 - present)
- Shirong Xue (08/2015 - present)
- Ashwin Raju (01/2016 - present)
- Saravanakumar Velayutham (01/2016 - present)
- Kumar Jayaram Gayatri (06/2016 - present)
- Arjun Punabhai Vekariya (06/2016 - present)

- **Other Graduate Thesis Committees**

- Dijun Luo, July 2012, CSE (Chair: Dr. Heng Huang)
- Jin Huang, November 2013, CSE (Chair: Dr. Heng Huang)
- Deguang Kong, November 2013, CSE (Chair: Dr. Chris Ding)
- Jing Xu, November 2013, CSE (Chair: Jeff Lei)
- Junjie Chen, April 2013, EE (Chair: Qilian Liang)
- Shuai Zheng, October 2014, CSE (Chair: Dr. Chris Ding)
- Yun Liu, October 2014, CSE (Chair: Dr. Heng Huang)
- Mostafa Parchami, March 2015, CSE (Chair: Dr. Gian-Luca Mariottini)
- Jagannathan Chandrasekaran, June 2015 (Chair: Dr. Jeff Lei)
- Joy Wang, August 2015, CSE, (Chair: Dr. Heng Huang)

- **Visiting Scholar and Students**

- Hao Pan, Beijing Institute of Petrochemical Technology, Fall 2014 - Fall 2015
- Xiaoming Li, Zhejiang Sci-Tech University, Fall 2015 - Spring 2016
- Xiaoyan Wei, Hubei University of Economics, Fall 2015 - Fall 2016
- Longwen Gao, Fudan University, Fall 2014 - Spring 2015

Publications

Invited Book Chapters

1. [BookChapt'16] **Junzhou Huang**, Yeqing Li, “Advanced Sparsity Techniques in Magnetic Resonance Imaging”, *Machine Learning and Medical Imaging*, ISBN: 978-0-12-804076-8, Elsevier Press, 2016.
2. [BookChapt'14] **Junzhou Huang**, Chen Chen and Xinyi Cui, “Sparsity Driven Background Modeling and Foreground Detection”, book chapter, *Handbook on Background Modeling and Foreground Detection for Video Surveillance*, CRC Press, 2014.
3. [BookChapt'10] Tian Shen, Shaoting Zhang, **Junzhou Huang**, Xiaolei Huang and Dimitris Metaxas, Integrating Shape and Texture in 3D Deformable Models: From Metamorphs to Active Volume Models, book chapter, to appear in *Multi Modality State-of-the-Art Medical Image Segmentation and Registration Methodologies*, Volume I, Chapter 1, A.S. El-Baz, R. Acharya U, and M. Mirmehdi (Editors), Springer, March 2011.

Peer-reviewed Journal Papers

1. [JTO'17] Xin Luo, Xiao Zang, Lin Yang, **Junzhou Huang**, Faming Liang, Jaime Rodriguez Canales, Ignacio I. Wistuba, Adi Gazdar, Yang Xie, Guanghua Xiao, “Comprehensive Computational Pathological Image Analysis Predicts Lung Cancer Prognosis”, *Journal of Thoracic Oncology*, Accepted.
2. [Neuro'17] Ruogu Fang, Ajay Gupta, **Junzhou Huang**, Pina Sanelli, “TENDER: TENSOR Non-local Deconvolution Enabled Radiation Reduction in CT Perfusion”, *NeuroComputing*, Volume 229, pp. 13C22, March 2017.
3. [MedIA'16] Menglin Jiang, Shaoting Zhang, **Junzhou Huang**, Lin Yang, Dimitris Metaxas, “Scalable Histopathological Image Analysis via Supervised Hashing with Multiple Features”, *Medical Image Analysis*, Volume 34, pp. 3-12, December 2016.

4. [TPAMI'16] Xiang Yu, **Junzhou Huang**, Shaoting Zhang, Dimitris Metaxas, "Face Landmark Fitting via Optimized Part Mixtures and Cascaded Deformable Model", *Transactions on Pattern Analysis and Machine Intelligence*, Volume 38, Issue 11, pp. 2212-2226, November 2016.
5. [MRI'16] Chen Chen, Yeqing Li, Leon Axel and **Junzhou Huang**, "Real Time Dynamic MRI by Exploiting Spatial and Temporal Sparsity", *Magnetic Resonance Imaging*, Volume 34, Issue 4, pp. 473-482, May 2016
6. [CMIG'15b] Ruogu Fang, Haodi Jiang, **Junzhou Huang**, "Tissue-Specific Sparse Deconvolution for Brain CT Perfusion", *Computerized Medical Imaging and Graphics*, Volume 46, pp. 64C72, December 2015.
7. [CMIG'15] Jinghao Zhou, Zhennan Yan, Giovanni Lasio, **Junzhou Huang**, Baoshe Zhang, Navesh Sharma, Karl Prado, Warren DSouza, "Automated Compromised right Lung Segmentation Method Using a Robust Atlas-based Active Volume Model with Sparse Shape Composition Prior in CT", *Computerized Medical Imaging and Graphics*, Volume 46, pp. 47-55, December 2015.
8. [TIP'15] Chen Chen, Yeqing Li, Wei Liu and **Junzhou Huang**, "SIRF: Simultaneous Satellite Image Registration and Fusion in A Unified Framework", *IEEE Transactions on Imaging Processing*, Vol. 24, No.11, November 2015.
9. [TC'15b] Lin Zhong, Qingshan Liu, Peng Yang, **Junzhou Huang** and Dimitris Metaxas, "Learning Multi-scale Active Facial Patches for Expression Analysis", *IEEE Transaction on Cybernetics*, Volume 45, Number 8, pp.1499-1510, August 2015.
10. [CVIU'15] Xi Peng, **Junzhou Huang**, Qiong Hu, Shaoting Zhang, Ahmed Elgammal and Dimitris Metaxas, "From Circle to 3-Sphere: Head Pose Estimation by Instance Parameterization", *Computer Vision and Image Understanding*, Volume 136, pp.92-102, July 2015.
11. [TC'15a] Xiang Yu, Shaoting Zhang, Zhenan Yan, Fei Yang, **Junzhou Huang**, Norah Dunbar, Matthew Jensen, Judee K. Burgoon and Dimitris N. Metaxas, "Is Interactional Dissynchrony a Clue to Deception? Insights from Automated Analysis of Nonverbal Visual Cues", *IEEE Transactions on Cybernetics*, Volume 45, Issue 3, pp. 506-520, March 2015.
12. [TMI'14] Chen Chen, Fenghua Tian, Hanli Liu and **Junzhou Huang**, "Diffuse Optical Tomography Enhanced by Clustered Sparsity for Functional Brain Imaging", *IEEE Transactions on Medical Imaging*, Volume 33, Issue 12, pp.2323-2331, December 2014.
13. [TPAMI'14] Hongsheng Li, **Junzhou Huang**, Shaoting Zhang and Xiaolei Huang, "Feature Matching with Affine-Function Transformation Models", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 36, Issue 12, pp. 2407-2422, December 2014
14. [MRI'14b] **Junzhou Huang**, Chen Chen and Leon Axel, "Fast Multi-contrast MRI Reconstruction", *Magnetic Resonance Imaging*, Volume 32, Issue 10, pp. 1344C1352, December 2014.
15. [MRI'14a] Chen Chen and Junzhou Huang, "Exploiting the wavelet structure in Compressed Sensing MRI", *Magnetic Resonance Imaging*, Volume 32, Issue 10, pp. 1377C1389, December 2014.
16. [MedIA'14] Chen Chen and **Junzhou Huang**, "The Benefit of Tree Sparsity in Accelerated MRI", Accepted by *Medical Image Analysis*, Volume 18, Issue 6, pp. 834-842, August 2014.

17. [TSP'14] Chen Chen, Yeqing Li and **Junzhou Huang**, “Forest Sparsity for Multi-channel Compressive Sensing”, *IEEE Transactions on Signal Processing*, Volume 62, Issue 11, pp. 2803-2813, June 2014.
18. [TPAMI'13] Baiyang Liu, **Junzhou Huang**, Casimir Kulikowski, Lin Yang, “Robust Visual Tracking Using Local Sparse Appearance Model and K-Selection”, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 35, Issue 12, pp. 2968-2981, December 2013.
19. [CVIU'13] Shaoting Zhang, Yiqiang Zhan, Xinyi Cui, Mingchen Gao, **Junzhou Huang**, Dimitris Metaxas, “3D Anatomical Shape Atlas Construction using Mesh Quality Preserved Deformable Models”, *Computer Vision and Image Understanding*, Special Issue on Shape Modeling in Medical Image, Volume 117, Issue 9, pp. 1061-1071, August 2013.
20. [TSMC'12] Shaoting Zhang, **Junzhou Huang**, Hongsheng Li and Dimitris Metaxas, “Automatic Image Annotation and Retrieval Using Group Sparsity”, *IEEE Transactions on Systems, Man, and Cybernetics: Part B*, Volume 42, Issue 3, pp. 838-849, June 2012.
21. [MedIA'12] Shaoting Zhang, Yiqiang Zhan, Maneesh Dewan, **Junzhou Huang**, Dimitris Metaxas and Xiang Zhou, “Toward Robust and Effective Shape Modeling: Sparse Shape Composition”, *Medical Image Analysis*, Volume 16, Issue 1, pp. 265-277, January 2012.
22. [JMLR'11] **Junzhou Huang**, Tong Zhang and Dimitris Metaxas. “Learning with Structured Sparsity”, *Journal of Machine Learning Research*, Volume 12, pp.3371-3412, December 2011.
23. [CVIU'11] **Junzhou Huang**, Shaoting Zhang, Hongsheng Li, Dimitris Metaxas, “Composite Splitting Algorithms for Convex Optimization”, *Computer Vision and Image Understanding*, Volume 115, Issue 12, pp. 1610-1622, December 2011.
24. [MedIA'11] **Junzhou Huang**, Shaoting Zhang, Dimitris Metaxas, “Efficient MR Image Reconstruction for Compressed MR Imaging”, *Medical Image Analysis*, Volume 15, Issue 5, pp.670-679, October 2011.
25. [GM'10] Shaoting Zhang, **Junzhou Huang** and Dimitris Metaxas, “Robust Mesh Editing Using Laplacian Coordinates”. *Graphical Models*, Volume 73, Issue 1, pp.10-19, January 2011.
26. [AoS'10] **Junzhou Huang** and Tong Zhang, “The Benefit of Group Sparsity”, *Annals of Statistics*, Volume 38, Number 4, pp.1978-2004, 2010.
27. [JCST'05] **Junzhou Huang**, Tieniu Tan, Li Ma, Yunhong Wang, “Phase Correlation Based Iris Image Registration Model”, *Journal of Computer Science and Technology*, Volume 20, Number 2, pp.419-425, March 2005.

Peer-reviewed Conference Papers

(8 CVPR/ 5 ICCV/ 3 ECCV/ 1 ICML/ 1 NIPS/ 5 AAAI/ 1 IJCAI/ 1 IPMI/ 18 MICCAI)

1. [ISBI'17] Sheng Wang, Ashwin Raju and **Junzhou Huang**, “Deep Learning Based Multi-label Classification for Surgical Tool Presence Detection in Laparoscopic Videos”, In *Proc. of The International Symposium on Biomedical Imaging*, Melbourne, Australia, April 2017.
2. [AAAI'17] Zheng Xu and **Junzhou Huang**, “A General Efficient Hyperparameter-free Algorithm for Convolutional Sparse Learning”, In *Proc. of The Thirty-first AAAI Conference on Artificial Intelligence*, AAAI'17, San Francisco, California, USA, February 2017.

3. [AAAI'17a] Li Shen, Wei Liu, **Junzhou Huang**, Yugang Jiang and Shiqian Ma, "Adaptive Proximal Average Approximation for Composite Convex Minimization", In *Proc. of The Thirty-first AAAI Conference on Artificial Intelligence*, AAAI'17, San Francisco, California, USA, February 2017.
4. [BIBM'16b] Xinliang Zhu, Jiawen Yao, Guanghua Xiao, Yang Xie, Jaime Rodriguez Canales, Edwin Parra, Carmen Behrens, Ignacio I. Wistuba, and **Junzhou Huang**, "Imaging-Genetic Data Mapping for Clinical Outcome Prediction via Supervised Conditional Gaussian Graphical Model", *IEEE International Conference on Bioinformatics and Biomedicine*, BIBM'16, Shenzhen, China, December 2016.
5. [BIBM'16] Xinliang Zhu, Jiawen Yao, and **Junzhou Huang**, "Deep Convolutional Neural Network for Survival Analysis with Pathological Images", *IEEE International Conference on Bioinformatics and Biomedicine*, BIBM'16, Shenzhen, China, December 2016.
6. [ICPR'16] Zheng Xu, Yeqing Li and **Junzhou Huang**, "Accelerated Sparse Optimization for Missing Data Completion", In *Proc. of the 23rd International Conference on Pattern Recognition*, ICPR'16, Cancun, Mexico, December 2016.
7. [MICCAI'16c] Zheng Xu, **Junzhou Huang**, "Detecting 10,000 Cells in One Second", In *Proc. of the 19th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'16, Athens, Greece, October 2016.
8. [MICCAI'16b] Sheng Wang, Jiawen Yao, Zheng Xu, **Junzhou Huang**, "Subtype Cell Detection with an Accelerated Deep Convolution Neural Network", In *Proc. of the 19th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'16, Athens, Greece, October 2016.
9. [MICCAI'16a] Jiawen Yao, Sheng Wang, Xinliang Zhu, **Junzhou Huang**, "Clinical Imaging Biomarker Discovery for Survival Prediction on Lung Cancer Imaging Genetic Data", In *Proc. of the 19th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'16, Athens, Greece, October 2016. (**Oral Presentation**)
10. [BMVC'16] Xi Peng, Qiong Hu, Junzhou Huang and Dimitris Metaxas, "Track Facial Points in Unconstrained Videos", In *Proc. of the 27th British Machine Vision Conference*, BMVC'16, York, UK, September 2016.
11. [ECAI'16] Longwen Gao, Yeqing Li, **Junzhou Huang**, Shuigeng Zhou, "Semi-supervised Group Sparse Representation: Model, Algorithm and Applications", In *Proc. of the 22st European Conference on Artificial Intelligence*, ECAI'16, Hague, August 2016.
12. [ISBI'16b] Xinliang Zhu, Jianwen Yao, Xin Luo, Guanghua Xiao, Yang Xie, Adi Gazdar and **Junzhou Huang**, "Lung Cancer Survival Prediction from Pathological Images and Genetic Data - An Integration Study", In *Proc. of the International Symposium on Biomedical Imaging*, ISBI'16, Prague, Czech Republic, April 2016
13. [ISBI'16] Zhongxing Peng, Zheng Xu, **Junzhou Huang**, "RSPIRiT: Robust Self-Consistent Parallel Imaging Reconstruction Based on Generalized Lasso", In *Proc. of the International Symposium on Biomedical Imaging*, ISBI'16, Prague, Czech Republic, April 2016
14. [AAAI'16] Yeqing Li, **Junzhou Huang**, Wei Liu, "Scalable Sequential Spectral Clustering", In *Proc. of the Thirty AAAI Conference on Artificial Intelligence*, AAAI'16, Phoenix, Arizona, USA, February 2016.
15. [MICCAI'15d] Zheng Xu, Yeqing Li, Leon Axel, **Junzhou Huang**, "Efficient Preconditioning in Joint Total Variation Regularized Parallel MRI Reconstruction", In *Proc. of*

the 18th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, MICCAI'15, Munich, Germany, October 2015.

16. [MICCAI'15c] Ruoyu Li, Yeqing Li, Ruogu Fang, Shaoting Zhang, Hao Pan, **Junzhou Huang**, “Fast Preconditioning for Accelerated Multi-Contrast MRI Reconstruction”, In *Proc. of the 18th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, MICCAI'15, Munich, Germany, October 2015. (Oral Presentation)*
17. [MICCAI'15b] Menglin Jiang, Shaoting Zhang, **Junzhou Huang**, Dimitris Metaxas, “Joint Kernel-Based Supervised Hashing for Scalable Histopathological Image Analysis”, In *Proc. of the 18th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, MICCAI'15, Munich, Germany, October 2015. (Best Student Paper Award)*
18. [MICCAI'15a] Jiawen Yao, Zheng Xu, Xiaolei Huang, **Junzhou Huang**, “Accelerated Dynamic MRI Reconstruction with Total Variation and Nuclear Norm Regularization”, In *Proc. of the 18th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, MICCAI'15, Munich, Germany, October 2015.*
19. [IJCAI'15] Cheng Deng, Zongting Lv , Wei Liu, **Junzhou Huang**, Dacheng Tao, Xinbo Gao, “Multi-View Matrix Decomposition: A New Scheme for Exploring Discriminative Information”, In *Proc. of International Joint Conference on Artificial Intelligence, IJCAI'15, Buenos Aires, Argentina, July 2015.*
20. [CVPR'15] Yeqing Li*, Chen Chen*, Fei Yang and **Junzhou Huang**, “Deep Sparse Representation for Robust Image Registration”, In *Proc. of IEEE Conference on Computer Vision and Pattern Recognition, CVPR'15, Boston, June 2015.*
21. [ISBI'15c] Ruogu Fang, **Junzhou Huang**, Wen-Ming Luh, “A Spatio-Temporal Low-rank Total Variation Approach for Denoising Arterial Spin Labeling MRI Data”, In *Proc. of IEEE International Symposium on Biomedical Imaging, ISBI'15, Brooklyn Bridge, NY, USA, April 2015.*
22. [ISBI'15b] Chen Chen, Venkaiah Chowdary Kavuri, Xinlong Wang, Ruoyu Li, Hanli Liu, **Junzhou Huang**, “Multi-frequency diffuse optical tomography for cancer detection”, In *Proc. of IEEE International Symposium on Biomedical Imaging, ISBI'15, Brooklyn Bridge, NY, USA, April 2015.*
23. [ISBI'15a] Yeqing Li, Chen Chen, Jinghao Zhou, **Junzhou Huang**, “Robust Image Registration in the Gradient Domain”, In *Proc. of IEEE International Symposium on Biomedical Imaging, ISBI'15, Brooklyn Bridge, NY, USA, April 2015.*
24. [FG'15] Xi Peng, **Junzhou Huang**, Qiong Hu, Shaoting Zhang, Dimitris Metaxas, “Three-Dimensional Head Pose Estimation in-the-Wild”, In *Proc. the 11th IEEE International Conference on Automatic Face and Gesture Recognition, FG'15, Ljubljana, Slovenia, May 2015.*
25. [AAAI'15] Yeqing Li, Feiping Nie, Heng Huang and **Junzhou Huang**, “Large-Scale Multi-View Spectral Clustering via Bipartite Graph”, In *Proc. of the Twenty-Ninth AAAI Conference on Artificial Intelligence, AAAI'15, Austin, TX, USA, January 2015.*
26. [ICIP'14] Soheil Shafiee, Farhad Kamangar, Vassilis Athitsos, **Junzhou Huang** and Laleh Ghandehari, “Multimodal Sparse Representation Classification with Fisher Discriminative Sample Reduction”, In *Proc. of IEEE International Conference on Image Processing, ICIP'14, Paris, France, October 2014.*

27. [MICCAI'14b] Yeqing Li, Chen Chen, Xiaolei Huang, **Junzhou Huang**, “Instrument Tracking via Online Learning in Retinal Microsurgery”, In *Proc. of the 17th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'14, Boston, USA, September 2014. **(Oral Presentation) (Best Student Paper Award Runners Up)**
28. [MICCAI'14a] Chen Chen, Yeqing Li, Leon Axel, **Junzhou Huang**, “Real time dynamic MRI with dynamic total variation”, In *Proc. of the 17th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'14, Boston, USA, September 2014.
29. [AAAI'14] Yeqing Li, Chen Chen, Wei Liu and **Junzhou Huang**, “Sub-Selective Quantization for Large-Scale Image Search”, In *Proc. of the 28th AAAI Conference on Artificial Intelligence*, AAAI'14, Quebec, Canada, July 2014. **(Oral Presentation)**
30. [ICPR'14c] Chen Chen, Zhongxing Peng, **Junzhou Huang**, “ $\mathcal{O}(1)$ Algorithms for Overlapping Group Sparsity”, In *Proc. of 22th International Conference on Pattern Recognition*, ICPR'14, Stockholm, Sweden, August 2014. **(Oral Presentation)**
31. [ICPR'14b] Yeqing Li, Chen Chen, **Junzhou Huang**, “Transformation-invariant Collaborative Sub-representation”, In *Proc. of 22th International Conference on Pattern Recognition*, ICPR'14, Stockholm, Sweden, August 2014.
32. [ICPR'14a] Xi Peng, **Junzhou Huang**, Qiong Hu, Shaoting Zhang, Dimitris Metaxas, “Robust Head Pose Estimation by Instance Parameterization”, In *Proc. of 22th International Conference on Pattern Recognition*, ICPR'14, Stockholm, Sweden, August 2014.
33. [CVPR'14b] Chen Chen, **Junzhou Huang**, Lei He and Hongsheng Li, “Preconditioning for Accelerated Iteratively Reweighted Least Squares in Structured Sparsity Reconstruction”, In *Proc. of the IEEE Conference on Computer Vision and Pattern Recognition*, CVPR'14, Columbus, Ohio, USA, June 2014. **(Oral Presentation)**
34. [CVPR'14a] Chen Chen, Yeqing Li, Wei Liu and **Junzhou Huang**, “Image Fusion with Local Spectral Consistency and Dynamic Gradient Sparsity”, In *Proc. of the IEEE Conference on Computer Vision and Pattern Recognition*, CVPR'14, Columbus, Ohio, USA, June 2014. **(Oral Presentation)**
35. [ISBI'14b] Chen Chen and **Junzhou Huang**, “Exploiting Both Intra-quadtrees and Inter-spatial Structures for Multi-contrast MRI”, In *Proc. of IEEE International Symposium on Biomedical Imaging*, ISBI'14, Beijing, China, April 2014.
36. [ISBI'14a] Chen Chen, Fenghua Tian, Jixing Yao, Hanli Liu and **Junzhou Huang**, “2D Diffuse Optical Imaging Using Clustered Sparsity”, In *Proc. of IEEE International Symposium on Biomedical Imaging*, ISBI'14, Beijing, China, April 2014. **(Oral Presentation)**
37. [MICCAI'13] Chen Chen, Yeqing Li and **Junzhou Huang**, “Calibrationless Parallel MRI with Joint Total Variation Regularization”, In *Proc. of the 16th Annual International Conf. on Medical Image Computing and Computer Assisted Intervention*, MICCAI'13, Nagoya, Japan, September 2013.
38. [ICCV'13] Xiang Yu, **Junzhou Huang**, Shaoting Zhang, Wang Yan and Dimitris Metaxas, “Pose-free Facial Landmark Fitting via Optimized Part Mixtures and Cascaded Deformable Shape Model”, In *Proc. of the 14th International Conference on Computer Vision*, ICCV'13, Sydney, Australia, December 2013.
39. [PETRA'13] Soheil Shafiee, Farhad Kamangar, Vassilis Athitsos and **Junzhou Huang**, “The Role of Dictionary Learning on Sparse Representation-based Classification”, In *Proc.*

of the 6th International Conference on Pervasive Technologies Related to Assistive Environments, PETRA'13, Rhodes Island, Greece, May 2013.

40. [IPCV'13] Soheil Shafiee, Farhad Kamangar, Vassilis Athitsos and **Junzhou Huang**, “Efficient Sparse Representation Using Adaptive K-means Clustering”, In *International Conference on Image Processing, Computer Vision, and Pattern Recognition, IPCV'13*, Las Vegas, USA, July 2013.
41. [IPMI'13] Yang Yu, Shaoting Zhang, **Junzhou Huang**, Dimitris Metaxas and Leon Axel, “Sparse Deformable Models with Application to Cardiac Motion Analysis”, In *Proc. of the 23rd Biennial International Conference on Information Processing in Medical Imaging, IPMI'13*, Asilomar, CA, June 2013.
42. [ISBI'13] Lin Zhong, Shaoting Zhang, Mingchen Gao, **Junzhou Huang**, Zhen Qian, Dimitris Metaxas and Leon Axel, “Papillary Muscles Analysis from High Resolution CT using Spatial-Temporal Skeleton Extraction”, In *Proc. of the IEEE International Symposium on Biomedical Imaging, ISBI'13*, San Francisco, CA, USA, April 2013.
43. [FG'13] Xiang Yu, Fei Yang, **Junzhou Huang** and Dimitris Metaxas, “Explicit Occlusion Detection based Deformable Fitting for Facial Landmark Localization”, In *Proc. of the IEEE International Conference on Automatic Face and Gesture Recognition, FG'13*, Shanghai, China, April 2013.
44. [HICSS'13] Xiang Yu, Shaoting Zhang, Zhennan Yan, Fei Yang, **Junzhou Huang**, Norah Dunbar, Matthew Jensen, Judee K. Burgoon and Dimitris N. Metaxas, “Is Interactional Dissynchrony a Clue to Deception: Insights from Automated Analysis of Nonverbal Visual Cues”, In *Proc. of the 46th Hawaii International Conference on System Sciences, HICSS'13*, Wailea, HI, USA, January 2013.
45. [NIPS'12] Chen Chen, **Junzhou Huang**, “Compressive Sensing MRI with Wavelet Tree Sparsity”, In *Proc. of the 26th Annual Conference on Neural Information Processing Systems, NIPS'12*, Lake Tahoe, Nevada, USA, December 2012.
46. [MICCAI'12b] **Junzhou Huang**, Chen Chen and Leon Axel, “Fast Multi-contrast MRI Reconstruction”, In *Proc. of the 15th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, MICCAI'12*, Nice, France, October 2012.
47. [MICCAI'12a] Mingchen Gao, **Junzhou Huang**, Xiaolei Huang, Shaoting Zhang and Dimitris Metaxas, “Simplified Labeling Process for Medical Image Segmentation”, In *Proc. of the 15th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, MICCAI'12*, Nice, France, October 2012.
48. [ECCV'12] Xinyi Cui, **Junzhou Huang**, Shaoting Zhang and Dimitris Metaxas, “Background Subtraction using Group Sparsity and Low Rank Constraint”, In *Proc. of the 12th European Conference on Computer Vision, ECCV'12*, Firenze, Italy, October 2012.
49. [ICIP'12b] Fei Yang, **Junzhou Huang**, Xiang Yu and Dimitris Metaxas, “Robust Face Tracking with a Consumer Depth Camera”, IEEE International Conference on Image Processing, ICIP'12, Orlando, Florida, USA, September 2012.
50. [ICIP'12a] Fei Yang, Xiang Yu, **Junzhou Huang**, Peng Yang and Dimitris Metaxas, “Robust Eyelid Tracking for Fatigue Detection”, IEEE International Conference on Image Processing, ICIP'12, Orlando, Florida, USA, September 2012.
51. [CVPR'12] Lin Zhong, Qingshan Liu, Peng Yang, Bo Liu, **Junzhou Huang** and Dimitris Metaxas, “Learning Active Facial Patches for Expression Analysis”. In *Proc. of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition, CVPR'12*, Providence, Rhode Island, USA, June 2011.

52. [ISBI'12b] Xinyi Cui, Shaoting Zhang, **Junzhou Huang**, Xiaolei Huang and Dimitris Metaxas, Leon Axel, "Left Endocardium Segmentation using Spatio-temporal Metamorphs". In *Proc. of the IEEE International Symposium on Biomedical Imaging*, ISBI'12, Barcelona, Spain, May 2012.
53. [ISBI'12a] **Junzhou Huang** and Fei Yang, "Compressed Magnetic Resonance Imaging Based on Wavelet Sparsity and Nonlocal Total Variation". In *Proc. of the IEEE International Symposium on Biomedical Imaging*, ISBI'12, Barcelona, Spain, May 2012.
54. [Asilomar'11] Athina P. Petropulu, Yao Yu and Junzhou Huang, "On Exploring Sparsity in Widely Separated MIMO Radar". In *Proc. of Asilomar Conference on Signals, Systems and Computers*, Asilomar'11, November 2011.
55. [ICCV'11b] Hongsheng Li, **Junzhou Huang**, Shaoting Zhang, and Xiaolei Huang, "Optimal Object Matching via Convexification and Composition", In *Proc. of the 13th International Conference on Computer Vision*, ICCV'11, Barcelona, Spain, November 2011.
56. [ICCV'11a] Tian Shen, Xiaolei Huang, Hongsheng Li, Edward Kim, Shaoting Zhang, and **Junzhou Huang**, "A 3D Laplacian-Driven Parametric Deformable Model", In *Proc. of the 13th International Conference on Computer Vision*, ICCV'11, Barcelona, Spain, November 2011.
57. [MICCAI'11b] Shaoting Zhang, **Junzhou Huang**, Mustafa Uzunbas, Tian Shen, Foteini Delis, Xiaolei Huang, Nora Volkow, Panayotis Thanos and Dimitris N. Metaxas, "3D Segmentation of Rodent Brain Structures Using Hierarchical Shape Priors and Deformable Models", In *Proc. of the 14th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'11, Toronto, Canada, September 2011.
58. [MICCAI'11a] Shaoting Zhang, Yiqiang Zhan, Maneesh Dewan, **Junzhou Huang**, Dimitris Metaxas and Xiang Zhou, "Deformable Segmentation via Sparse Shape Representation", In *Proc. of the 14th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'11, Toronto, Canada, September 2011. **(MICCAI Young Scientist Award Runners Up)**
59. [CVPR'11b] Baiyang Liu, **Junzhou Huang**, Casimir Kulikowski, Lin Yang, "Robust Tracking Using Local Sparse Appearance Model and K-Selection", In *Proc. of the IEEE Computer Society Conf. on Computer Vision and Pattern Recognition*, CVPR'11, Colorado Springs, Colorado, USA, June 2011. **(Oral Presentation)**
60. [CVPR'11a] Shaoting Zhang, Yiqiang Zhan, Maneesh Dewan, **Junzhou Huang**, Dimitris Metaxas and Xiang Zhou, "Sparse Shape Composition: A New Framework for Shape Prior Modeling", In *Proc. of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, CVPR'11, Colorado Springs, Colorado, USA, June 2011.
61. [FIMH'11b] Mingchen Gao, **Junzhou Huang**, Shaoting Zhang, Zhen Qian, szilard Voros, Dimitri Metaxas, Leon Axel, "4D Cardiac Reconstruction Using High Resolution CT Images", *The Sixth International Conference on Functional Imaging and Modeling of the Heart*, FIMH'11, New York, USA, May 2011. **(Oral Presentation) (Best Paper Award)**
62. [FIMH'11a] Shaoting Zhang, Mustafa Uzunbas, Zhennan Yan, Mingchen Gao, **Junzhou Huang**, Dimitri Metaxas, Leon Axel, "Construction of Left Ventricle 3D Shape Atlas from Cardiac MRI", *The Sixth International Conference on Functional Imaging and Modeling of the Heart*, FIMH'11, New York, USA, May 2011.

63. [ISBI'11b] Shaoting Zhang, **Junzhou Huang**, Mustafa Uzunbas, Tian Shen, Foteini Delis, Xiaolei Huang, Nora Volkow, Panayotis Thanos, Dimitris Metaxas, "3D Segmentation of Rodent Brain Structures Using Active Volume Model With Shape Priors", *IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro*, ISBI'11, Chicago, Illinois, USA, March 2011. **(Oral Presentation)**
64. [ISBI'11a] Yang Yu, **Junzhou Huang**, Shaoting Zhang, Christophe Restif, Xiaolei Huang, Dimitris Metaxas, "Group Sparsity Based Classification for Cervigram Segmentation", *IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro*, ISBI'11, Chicago, Illinois, USA, March 2011.
65. [FG'11a] Fei Yang, **Junzhou Huang**, Dimitris Metaxas, "Sparse Shape Registration for Occluded Facial Feature Localization", *The 9th IEEE International Conference on Automatic Face and Gesture Recognition*, FG'11, Santa Barbara, California, USA, March 2011.
66. [FG'11b] Fei Yang, **Junzhou Huang**, Peng Yang, Dimitris Metaxas, "Eye Localization through Multiscale Sparse Dictionaries", *The 9th IEEE International Conference on Automatic Face and Gesture Recognition*, FG'11, Santa Barbara, California, USA, March 2011.
67. [MICCAI'10] **Junzhou Huang**, Shaoting Zhang, Dimitris Metaxas, "Efficient MR Image Reconstruction for Compressed MR Imaging", *In Proc. of the 13th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'10, Beijing, China, September, 2010. **(Oral Presentation) (MICCAI Young Scientist Award)**
68. [ECCV'10b] Baiyang Liu, Lin Yang, **Junzhou Huang**, Peter Meer, Leiguang Gong, Casimir Kulikowski, "Robust and Fast Collaborative Tracking with Two Stage Sparse Optimization", *The 11th European Conference on Computer Vision*, ECCV'10, Crete, Greece, September, 2010.
69. [ECCV'10a] **Junzhou Huang**, Shaoting Zhang, Dimitris Metaxas, "Fast Optimization for Mixture Prior Models", *The 11th European Conference on Computer Vision*, ECCV'10, Crete, Greece, September, 2010.
70. [CVPR'10] Shaoting Zhang, **Junzhou Huang**, Yuchi Huang, Yang Yu, Hongsheng Li, Dimitris Metaxas, "Automatic Image Annotation Using Group Sparsity", *In Proc. of the IEEE Computer Society Conf. on Computer Vision and Pattern Recognition*, CVPR'10, San Francisco, California, USA, June, 2010. **(Oral Presentation)**
71. [ISBI'10] Shaoting Zhang, **Junzhou Huang**, Wei Wang, Xiaolei Huang, Dimitris Metaxas, "Discriminative Sparse Representations for Cervigram Image Segmentation", *IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro*, ISBI'10, Rotterdam, Netherlands, April, 2010.
72. [ICML'09] **Junzhou Huang**, Tong Zhang, Dimitris Metaxas, "Learning with Structured Sparsity", *The 26th International Conference on Machine Learning*, ICML'09, Montreal, Quebec, Canada, June, 2009. **(Oral Presentation)**
73. [ICCV'09] **Junzhou Huang**, Xiaolei Huang, Dimitris Metaxas, "Learning with Dynamic Group Sparsity", *The 12th International Conference on Computer Vision*, ICCV'09, Kyoto, Japan, October 2009. **(Oral Presentation)**
74. [MICCAI'08a] **Junzhou Huang**, Zhen Qian, Xiaolei Huang, Dimitris Metaxas, Leon Axel, "Tag Separation in Cardiac Tagged MRI", *In Proc. of the 11th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'08, LNCS-5242, pp. 289-297, 2008.

75. [MICCAI'08b] Tian Shen, Yaoyao Zhu, Xiaolei Huang, **Junzhou Huang**, Dimitris Metaxas, Leon Axel, "Active Volume Models with Probabilistic Object Boundary Prediction Module", *In Proc. of the 11th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'08, LNCS-5241, pp. 331-341, 2008.
76. [CVPR'08] **Junzhou Huang**, Xiaolei Huang, Dimitris Metaxas, "Simultaneous Image Transformation and Sparse Representation Recovery", *In Proc. of the IEEE Computer Society Conf. on Computer Vision and Pattern Recognition*, CVPR'08, pp. 1-8, 2008.
77. [ICCV'07] **Junzhou Huang**, Xiaolei Huang, Dimitris Metaxas, "Optimization and Learning for Registration of Moving Dynamic Textures", *In Proc. Of IEEE Int'l Conf. on Computer Vision*, ICCV'07, pp. 1-8, 2007. **(Oral Presentation)**
78. [MICCAI'07] **Junzhou Huang**, Xiaolei Huang, Dimitris Metaxas, and Leon Axel, "Adaptive Metamorphs Model for 3D Medical Image Segmentation", *In Proc. of the 10th Annual International Conference on Medical Image Computing and Computer Assisted Intervention*, MICCAI'07, pp. 302-310, 2007.
79. [ISBI'07] **Junzhou Huang**, Xiaolei Huang, Dimitris Metaxas, Leon Axel, "Dynamic Texture Based Heart Location and Segmentation in 4-D Cardiac Images", *IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro*, ISBI'07, pp. 852-855, 2007.
80. [ISBI'06] **Junzhou Huang**, Xiaolei Huang, Dimitris Metaxas, Debarata Banerjee, "3D Tumor Shape Reconstruction from 2D Bioluminescence Images", *IEEE Int'l Symposium on Biomedical Imaging: From Nano to Macro*, ISBI'06, pp.606-609, 2006. **(Oral Presentation)**
81. [ICIP'04] **Junzhou Huang**, Yunhong Wang, Jiali Cui, Tieniu Tan, "Noise Removal and Impainting Model for Iris Image", *International Conference on Image Processing*, ICIP'04, pp. 869-872, 2004.
82. [ICPR'04b] **Junzhou Huang**, Yunhong Wang, Tieniu Tan, Jiali Cui, "A New Iris Segmentation Method for Recognition", *17th International Conference on Pattern Recognition*, ICPR'04 (3), pp. 554-557, 2004.
83. [ICPR'04a] Jiali Cui, Yunhong Wang, **Junzhou Huang**, Tieniu Tan, Zenan Sun, "An Iris Image Synthesis Method Based on PCA and Super-Resolution", *17th International Conference on Pattern Recognition*, ICPR'04, pp. 471-474, 2004.
84. [ACCV'04] **Junzhou Huang**, Li Ma, and Yunhong Wang and Tieniu Tan, "Iris Recognition Based on Local Orientation Description", *Asian Conference on Computer Vision*, ACCV'04, pp. 954-959, Korea, 2004.
85. [BMVC'03] **Junzhou Huang**, Li Ma, Tieniu Tan and Yunhong Wang, "Learning-based Resolution Enhancement of Iris Images", *14th British Machine Vision Conference*, BMVC'03, pp. 153-162, Norwich, U.K., 2003.

Peer-reviewed Workshop Papers

1. [CVPRW'16] Xi Peng, **Junzhou Huang**, Dimitris Metaxas, "Sequential Face Alignment via Person-Specific Modeling in the Wild", *In Proc. of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, Las Vegas, USA, June 2016
2. [MLMI'15] Jiawen Yao, Dheeraj Ganti, Xin Luo, Guanghua Xiao, Yang Xie, Shirley Yan and **Junzhou Huang**, "Computer-assisted Diagnosis of Lung Cancer Using Quantitative Topology Features", *6th International Workshop on Machine Learning in Medical Imaging*, MLMI'15, Munich, Germany, October 2015.

3. [PMI'15c] Zheng Xu, **Junzhou Huang**, "Efficient Lung Cancer Cell Detection with Deep Convolution Neural Network", *1st International Workshop on Patch-based Techniques in Medical Imaging*, PMI'15, Munich, Germany, October 2015.
4. [PMI'15b] Hao Pan, Zheng Xu, **Junzhou Huang**, "An Effective Approach for Robust Lung Cancer Cell Detection", *1st International Workshop on Patch-based Techniques in Medical Imaging*, PMI'15, Munich, Germany, October 2015.
5. [PMI'15a] Ruoyu Li, **Junzhou Huang**, "Fast Regions-of-Interest Detection in Whole Slide Histopathology Images", *1st International Workshop on Patch-based Techniques in Medical Imaging*, PMI'15, Munich, Germany, October 2015. **(Oral Presentation)**
6. [MCV'15] Ruogu Fang, Ming Ni, **Junzhou Huang**, Qianmu Li, Tao Li, "A Efficient 4D Non-Local Tensor Total-Variation for Low-Dose CT Perfusion Deconvolution", *MICCAI Workshop on Medical Computer Vision: Algorithms for Big Data*, MCV'15, Munich, Germany, October 2015.
7. [NILM'14] Yeqing Li, Zhongxing Peng, **Junzhou Huang**, Zhilin Zhang, Jae Hyun Son, "Energy Disaggregation via Hierarchical Factorial HMM", *The second International Workshop on Non-Intrusive Load Monitoring*, NILM'14, Austin, TX, USA, June 2014.
8. [STMI'12b] Chen Chen, **Junzhou Huang**, "The Benefit of Tree Sparsity in Accelerated MRI", *In MICCAI Workshop on Sparsity Techniques in Medical Imaging*, STMI'12, Nice, France, October 2012. **(Oral Presentation) (Best Paper Award)**
9. [STMI'12a] Chen Chen, **Junzhou Huang** and Leon Axel, "Accelerated Parallel Magnetic Resonance Imaging with Joint Gradient and Wavelet Sparsity", *In MICCAI Workshop on Sparsity Techniques in Medical Imaging*, STMI'12, Nice, France, October 2012.
10. [MeshMed'12] Xinyi Cui, Shaoting Zhang, Yiqiang Zhan, Mingchen Gao, **Junzhou Huang** and Dimitris Metaxas, "3D Anatomical Shape Atlas Construction using Mesh Quality Preserved Deformable Models", *In MICCAI Workshop on Mesh Processing in Medical Image Analysis*, MeshMed'12, Nice, France, October 2012.
11. [SPIE'10] Shaoting Zhang, **Junzhou Huang**, Wei Wang, Xiaolei Huang, Dimitris Metaxas, "Cervigram Image Segmentation Based On Reconstructive Sparse Representations", *Proc. of SPIE, Medical Imaging: Image Processing*, SPIE'10, San Diego, California, USA, February 2010. **(Oral Presentation)**
12. [MIAAB'06] **Junzhou Huang**, Xiaolei Huang, Dimitris Metaxas, Debarata Banerjee, "3D Tumor Shape Reconstruction from 2D Bioluminescence Images and Registration with CT Images", *1st Workshop on Microscopic Image Analysis with Applications in Biology*, MIAAB'06, Washington DC, USA, April 2006. **(Oral Presentation)**

Patent

- A New Algorithm for MRI Reconstruction, US 20120155730 A1, Patent Number: 8548218.

Invited Talks

- "3D Tumor Shape Reconstruction from 2D Bioluminescence Images", IEEE International Symposium on Biomedical Imaging: From Nano to Macro, Washington, USA, April 2006.

- “Optimization and Learning for Registration of Moving Dynamic Textures”, International Conference on Computer Vision, Rio de Janeiro, Brazil, October 2007.
- “Learning With Structure Sparsity”, International Conference on Machine Learning, Montreal, Canada, June 2009.
- “Learning With Dynamic Group Sparsity”, International Conference on Computer Vision, Kyoto, Japan, October 2009.
- “Sparse Learning and Beyonds”, Institute of Computing Technology, Chinese Academy of Science, Beijing, China, November 2009.
- ”Structure Sparsity for Compressive Sensing”, Institute of Electronics, Chinese Academy of Science, Beijing, China, November 2009.
- “Structured Sparsity and Its Applications on Biomedical Imaging Computer Vision”, Siemens Corporate Research, Princeton, NJ, USA, August 2010.
- “Sparse Learning for Biomedical Imaging and Informatics”, Siemens Medical Solutions, Malvern, PA, USA, August 2010.
- “Structure Sparsity for Dynamic Data Analysis”, ExxonMobil Corporate Strategic Research, Clinton, NJ, USA, September 2010.
- “Efficient MR Image Reconstruction for Compressed MR Imaging”, 13th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, Beijing, China, September 2010.
- “Structured Sparsity and Its Applications”, 6th Annual Watson Workshop Emerging Leaders in Multimedia and Signal Processing, Hawthorne NY, USA, October, 2010.
- “Structured Sparsity and Its Applications on Medical Imaging and Machine Vision”, Department of Computer Science and Engineering, University of Texas at Arlington, TX, USA, March 2011.
- “Sparsity: From Theory to Applications in Machine Learning and Medical Imaging”, Department of Computer Science, Illinois Institute of Technology, Chicago, IL, USA, March 2011.
- “Sparsity Techniques and Their Applications”, NAVTEQ, Chicago, IL, USA, April 2011.
- “Sparsity and Deformable Models for Improved Medical Imaging and Diagnosis”, SPIE on Wavelets and Sparsity XIV, San Diego, CA, USA, August 2011.
- “Fast Composite Splitting Algorithm for Linear Composite Regularization”, SIAM Conference on Imaging Science, Philadelphia, PA, USA, May 2012.
- “Structured Sparsity: When Statistical Learning Met Signal Processing”, Department of Electrical Engineering, University of Texas at Arlington, TX, USA, April 2012.
- “Biomedical Imaging and Learning: When Statistical Learning Met Bio-Applications”, Department of Bioengineering, University of Texas at Arlington, TX, USA, August 2012.
- “Low-frequency Energy Disaggregation”, Samsung Research America, Dallas, TX, USA, March 2013.
- “ $\mathcal{O}(1)$ Algorithms for Overlapping Group Sparsity”, INFORMS Optimization Society Conference, Houston, TX, USA, March 2014.

- “Multichannel Compressed Sensing with Forest Sparsity”, SIAM Conference on Optimization, San Diego, CA, USA, May 2014.
- “Preconditioning for Accelerated Iteratively Reweighted Least Squares in Structured Sparsity Reconstruction”, IEEE Conference on Computer Vision and Pattern Recognition, Columbus, Ohio, USA, June 2014.
- “Recent Algorithm Development in Diffusion Optical Imaging”, Department of Bioengineering, University of Texas at Arlington, TX, USA, September 2014.
- “Big Image-Omics Data Analytics for Clinical Outcome Prediction”, Department of Clinical Science, University of Texas Southwestern Medical Center, Dallas, TX, USA, November 2015.
- “Integration of Pathological Images and Cell Profiling Data for Clinical Outcome Prediction”, National Center for Advancing Translational Sciences, National Institutes of Health, Bethesda, Maryland, USA, January 2016.
- “Biomarker Discovery from Histopathology Images for Clinical Outcome Prediction”, Radiology and Imaging Sciences, National Institutes of Health, Bethesda, Maryland, USA, June 2016.
- “Multi-modal Biomarker Discovery from Imaging Genomic Data”, School of Medicine, University of Maryland, Baltimore, USA, June 2016.
- “Big Imaging-Genomics Data Analytics for Clinical Outcome Prediction”, CVPR Workshop on Medical Computer Vision, Las Vegas, USA, July 2016.
- “Clinical Imaging Biomarker Discovery for Survival Prediction on Lung Cancer Imaging Genetic Data”, the 19th Annual International Conference on Medical Image Computing and Computer Assisted Intervention, Athens, Greece, October 2016.

Professional Activities

- **Member**

Institute of Electrical and Electronics Engineers (IEEE)
 Society for Industrial and Applied Mathematics (SIAM)
 The Medical Image Computing and Computer Assisted Intervention Society (MICCAI)
 Association for Advancement of Artificial Intelligence (AAAI)

- **Journal Reviewer**

Annals of Statistics,
 SIAM Journal on Image Science,
 IEEE Signal Processing Letters,
 IEEE Transaction on Multimedia,
 IEEE Transaction on Signal Processing,
 IEEE Transaction on Image Processing,
 IEEE Transactions on Biomedical Engineering,
 IEEE Transactions on Knowledge and Data Engineering,
 IEEE Transactions on Pattern Analysis and Machine Intelligence,
 IEEE Transactions on Circuits and Systems for Video Technology,
 IEEE Transactions on Neural Systems and Rehabilitation Engineering,
 ACM Transactions on Multimedia Computing, Communications and Applications,
 Journal of Optics Express,
 Journal of NeuroComputing,

Journal of Signal Processing,
Journal of Medical Image Analysis,
Journal of Machine Learning Research,
Journal of Machine Vision and Applications,
Journal of Signal Image and Video Processing,
Journal of Computer Vision and Image Understanding,
Journal of Biomedical Signal Processing and Control,
Journal of Computational Statistics and Data Analysis,
Journal of Visual Communication and Image Representation

- **Conference Program Committee or Reviewer**

International Conference on Computer Vision, 2007-2009
IEEE Conference on Computer Vision and Pattern Recognition, 2008
International Conference on Tools with Artificial Intelligence, 2009
European Conference on Computer Vision, 2010
Pacific-Rim Symposium on Image and Video Technology, 2011
International Conference on Functional Imaging and Modeling of the Heart, 2011
International Workshop on High Performance Computing for Biomedical Image Analysis, 2014
International Conference on Medical Image Computing and Computer Assisted Intervention, 2011-2016
International Symposium on Biomedical Imaging, 2016
Annual Conference on Neural Information Processing Systems, 2011-2016
International Conference on Machine Learning, 2012-2016

- **Conference Program / Session / Area Chair**

The Sixth International Conference on Functional Imaging and Modeling of the Heart, New York, USA, May 2011.
The MICCAI Workshop on Sparsity Techniques in Medical Imaging, Nice, France, October 2012.
The 22th International Conference on Pattern Recognition, Stockholm, Sweden, August 2014
The 18th International Conference on Medical Image Computing and Computer Assisted Intervention, Munich, Germany, October 2015
The 30th AAAI Conference on Artificial Intelligence, San Francisco, California, USA, February 2017.
The 20th International Conference on Medical Image Computing and Computer Assisted Intervention, Quebec, Canada, September 2017

- **Grant Panel Member and Reviewer**

National Science Foundation, Smart and Connected Health, 2015
National Science Foundation, Small Business Innovation Research, 2015
National Science Foundation, Information Integration and Informatics, 2015
National Science Foundation, Smart and Connected Health, 2016

- **Outreach Activity**

Guest Speakers and Demo Demonstration

Summer Camp for Middle School Students, Arlington, June 2013
Summer Camp for Middle School Girls, Arlington, July 2013
Summer Camp for Middle School Students, Arlington, July 2014
Summer Camp for Middle School Girls, Arlington, July 2014
Summer Camp for Middle School Students, Arlington, July 2015
Summer Camp for Middle School Students, Arlington, June 2016

- **Department Service**

Member of the Ph.D. Admission Committee, (Fall 2012-Spring 2014), CSE, UTA.
Member of the Master Admission Committee, (Fall 2011- Spring 2012), CSE, UTA.
Member of the Enrollments ad hoc Committee (Fall 2011- Spring 2012), CSE, UTA.
Member of the Visiting Appointments Committees (Fall 2014-now), CSE, UTA.
Member of the Quality Assurance Committees (Fall 2014-now), CSE, UTA.
Member of Graduate Student Committees:

1. Chen Chen, September 2013, CSE (Chair: Dr. Junzhou Huang)
2. Yeqing Li, September 2013, CSE (Chair: Dr. Junzhou Huang)
3. Zhongxing Peng, April 2015, CSE (Chair: Dr. Junzhou Huang)
4. Dijun Luo, July 2012, CSE (Chair: Dr. Heng Huang)
5. Jin Huang, November 2013, CSE (Chair: Dr. Heng Huang)
6. Deguang Kong, November 2013, CSE (Chair: Dr. Chris Ding)
7. Jing Xu, November 2013, CSE (Chair: Jeff Lei)
8. Junjie Chen, April 2013, EE (Chair: Qilian Liang)
9. Shuai Zheng, October 2014, CSE (Chair: Dr. Chris Ding)
10. Yun Liu, October 2014, CSE (Chair: Dr. Heng Huang)
11. Mostafa Parchami, March 2015, CSE (Chair: Dr. Gian-Luca Mariottini)
12. Jaganmohan Chandrasekaran, June 2015 (Chair: Dr. Jeff Lei)
13. Joy Wang, August 2015, CSE, (Chair: Dr. Heng Huang)
14. Dheeraj Ganti, September 2015, CSE, (Chair: Dr. Junzhou Huang)

Citations

- **Google Scholar Citations Until September 1, 2016**

- Total Citations: **3300**
- Total Publications: **121**
- H-index: **25**
- I10-index: **42**
- Web <http://scholar.google.com/citations?user=X7KrguAAAAAJ&hl=en>

- **≥ 300 citations in Google Scholar**

- **(Cited by 340)** “Learning with structured sparsity”, **J Huang**, T Zhang and D Metaxas, *Journal of Machine Learning Research*, Volume 12, pp. 3371-3412, 2011.
- **(Cited by 307)** “The benefit of group sparsity”, **J Huang** and T Zhang, *The Annals of Statistics*, 38(4), pp. 1978-2004, 2010.
- **(Cited by 324)** “Robust tracking using local sparse appearance model and k-selection”, B Liu, **J Huang**, L Yang and C Kulikowski, In *IEEE Conference on Computer Vision and Pattern Recognition*, CVPR’11, 2011.