

Scalable Modeling & Imaging & Learning Lab  
Dept. Computer Science & Engineering  
The University of Texas at Arlington  
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Google Scholar Profile

## Research Interest

- Machine Learning, Computer Vision, Digital Health, Computational Pathology, Computational Immunology, Computational Drug Discovery

## 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, 2004 - 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

- **The University of Texas at Arlington**  
2022 - now, Jenkins Garrett Professor  
2022 - now, Amazon Scholar  
2021 - now, Professor in Computer Science and Engineering  
2017 - 2021, On leave, Director of the Machine Learning Center at Tencent AI Lab  
2016 - 2021, Associate Professor in Computer Science and Engineering  
2011 - 2016, Assistant Professor in Computer Science and Engineering
- **Rutgers University**  
2005 - 2011, Research Assistant in Computer Science
- **Chinese Academy of Science**  
2003 - 2004, Research Assistant in the National Lab of Pattern Recognition
- **Industrial and Commercial Bank of China**  
1996 - 2000, Software Engineer

## Award and Honor

- **Microsoft Accelerate Foundation Models Research Award**, Redmond, WA, January 2024.
- **Outstanding Research Record Award**, College of Engineering, the University of Texas at Arlington, 2023.
- **UT Rising STARS Award**, The University of Texas System, 2022.
- **Google TensorFlow Model Garden Award**, Mountain View, CA, October 2021.
- **6th Place Winner**, the 3D Structure Prediction Challenge in the 14th Community Wide Experiment on the Critical Assessment of Techniques for Protein Structure Prediction (CASP14), December 2020. (AlphaFold2 from Deepmind won the 1st place),

- **1st Place Winner**, the Contact and Distance Prediction Challenge in the 14th Community Wide Experiment on the Critical Assessment of Techniques for Protein Structure Prediction (CASP14), December 2020.
- **NSF CAREER Award**, National Science Foundation, 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 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.

#### Grants (Total: \$9M; PI/MPI: \$8M)

1. “Machine Learning for Identifying Antigen-Antibody Interactions from Massive Sequencing Data”, **\$3,136,243**, NIH NIAID R01, 2025 – 2030. (Role: **MPI**).
2. “Enhancing Toxicity Prediction through Multimodal Large Language Model”, **\$200,000**, Johnson & Johnson, 2024 – 2026. (Role: **PI**).
3. “EAGER: Integrating Pathological Image and Biomedical Text Data for Clinical Outcome Prediction”, **\$200,000**, NSF IIS, 2024 – 2026. (Role: **PI**).
4. “Developing Foundation Models for Survival Prediction from Pathological Image and Biomedical Text”, **\$90,000**, Microsoft Accelerate Foundation Models Research, 2024. (Role: **PI**).
5. “EAGER: Integrating Multi-Omics Biological Networks and Ontologies for lncRNA Function Annotation using Deep Learning”, **\$300,000**, NSF CCF, 2023 – 2025. (Role: **PI**).
6. “Developing Knowledge-guided Deep Learning Models to Predict the Binding Between T Cell Receptors and Neoantigens for Facilitating TCR-T Therapies”, **\$1,199,997**, CPRIT, 2023 – 2026. (Role: **MPI**).
7. Rising STARS Award, **\$300,000**, The University of Texas System, 2022. (Role: **PI**).
8. Gift Fund for TensorFlow Model, **\$20,000**, Google, Mountain View, CA, 2021. (Role: **PI**).
9. “Digital Pathology Analysis for Lung Cancer Patient Care”, **\$330,649**, CPRIT, 2019 – 2022. (Role: **Subcontract PI**).
10. Gift Fund for Deep Graph Learning Research, **\$150,000**, XtaiPi, Boston, 2018. (Role: **PI**).
11. “RI: Small: Collaborative Research: A Topological Analysis of Uncertainly Representation in the Brain”, **\$499,992**, NSF IIS, 2017 – 2021. (Role: **PI**).
12. “RAPID: Collaborative: Data Driven Post-Disaster Waste and Debris Volume Predictions Using Smartphone Photogrammetry App and Unmanned Aerial Vehicles”, **\$34,137**, NSF CNS, 2017 – 2018. (Role: **Co-PI**).
13. “CAREER: Large Scale Learning for Complex Image-Omics Data Analytics”, **\$535,763**, NSF IIS, 2016 – 2022. (Role: **PI**).
14. “III: Small: Collaborative Research: Robust Materials Genome Data Mining Framework for Prediction and Guidance of Nanoparticle Synthesis”, **\$500,000**, NSF IIS, 2014 – 2018. (Role: **PI**).

15. “CMMI:Statistics-based Optimization Methods for Adaptive Interdisciplinary Pain Management”, **\$374,998**, NSF CMMI, 2014 – 2017. (Role: **Co-PI**).
16. “CRI: A Spatiotemporal Annotated Human Activity Repository for Advanced Motion Recognition and Analysis Research”, **\$116,000**, NSF CRI, 2014 – 2017. (Role: **Co-PI**).
17. “Learning Fine-grained Digital Map for Autonomous Driving”, **\$136,058**, Nokia Research America, 2014 – 2016. (Role: **PI**).
18. Gift Fund for Highly Automated Driving Map, **\$50,000**, HERE Map Research, 2014. (Role: **PI**).
19. “Energy Disaggregation for Non-intrusive Load Monitoring”, **\$149,998**, Samsung Research America, 2013 – 2016. (Role: **PI**).
20. “GAANN: Educating Health Informatics Researchers”, **\$533,064**, Department of Education, 2012-2017 (Role: **Co-PI**)

## Teaching Experience

- *Undergraduate Courses*

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

- *Graduate Courses*

- CSE 6392 Advanced Topics in Scalable Learning and Optimization
- Semesters: Spring 2012 - present
- Average of Student Evaluation Scores: **4.5/5.0**
- CSE 5311 Design and Analysis of Algorithms
- Semesters: Fall 2015 - present
- Average of Student Evaluation Scores: **4.2/5.0**

## Advising and Mentoring

- **Ph.D Students**

- Yeqing Li (2012-2016, next stop: Google)
- Zheng Xu (2014-2018, next stop: Google)
- Jiawen Yao (2014-2019, next stop: PAII)
- Ruoyu Li (2014-2020, next stop: Facebook)
- Sheng Wang (2015-2020, next stop: Google)
- Xinliang Zhu (2015-2020, next stop: Amazon)
- Mohammad Minhazul Haq (2016-2023, next stop: Caris Life Sciences)
- Ashwin Raju (2017-2022, next stop: Covera Health)
- Chaochao Yan (2017-2022, next stop: Google)
- Jinyu Yang (2018-2022, next stop: Amazon)
- Yuzhi Guo (2018-2022, next stop: PostDoc)
- Hehuan Ma (2018-2023, next stop: PostDoc; Female)
- Weizhi An (Start: Fall 2019; Female)
- Saiyang Na (Start: Fall 2021)
- Wenliang Zhong (Start: Fall 2021)
- Feng Jiang (Start: Fall 2022)
- Yuwei Miao (Start: Fall 2022; Female)
- Qifeng Zhou (Start: Fall 2022)

- Mai Thao Dang (Start: Fall 2023, Female)
- Xulin Chen (Start: Spring 2024, Female)
- Jingquan Yan (Start: Spring 2024)
- Haiqing Li (Start: Fall 2024)
- Yinhao Wu (Start: Spring 2025)
- **Master Students with Thesis (11)**
  - Chen Chen (01/2012 - 01/2015, next stop: UIUC)
  - Dheeraj Ganti (09/2014 - 01/2016, next stop: Oracle)
  - Viswanathan Rajalingam (01/2015 - 01/2017, next stop: Samsung Lab)
  - Vivek Balaji (01/2015 - 01/2017, next stop: BMW)
  - Shirong Xue (09/2015 - 07/2017, next stop: Walmart Lab)
  - Ashwin Raju (09/2015 - 07/2017, next stop: UTA PhD)
  - Arjun Vekariya (09/2015 - 07/2017, next stop: Raizlabs)
  - Xiaoyu Zhang (09/2017 - 12/2018, next stop: UTA PhD)
  - Zhifei Deng (08/2016 - 12/2019, next stop: Facebook)
  - Siyu Xiu (06/2018 - 01/2020, next stop: FutureDial; Female)
  - Zeheng Li (09/2018 - 05/2021, next stop: CoCoPIE LLC; Female)
- **Undergraduate**
  - John Maynard, Fall 2013
  - Pragya Neupane, Fall 2014 (Female)
  - Himank Yadav, Fall 2014
  - Ogenna Esimai, Spring 2015 (Female)
- **PostDocs and Visiting Scholars (8)**
  - Hao Pan, Beijing Institute of Petrochemical Technology, 2014 - 2015
  - Longwen Gao, Fudan University, 2014 - 2015
  - Xiaoming Li, Zhejiang Sci-Tech University, 2015 - 2016
  - Xiaoyan Wei, Hubei University of Economics, 2015 - 2016
  - Benxin Zhang, Guilin University of Electronic Technology, 2016 - 2017
  - Liu Yang, Central South University, 2017 - 2018
  - Feiyun Zhu, Walmart Lab, 2016 - 2018
  - Ying Li, Communication University of China, 2019 - 2020.

## Publication

### Invited Book Chapters

1. [Bookchapter'23] Junzhou Huang and Ruoyu Li, "Adaptive Graph Convolutional Neural Network and Its Biomedical Applications", *State of the Art in Neural Networks and Their Applications Volume 2*, ISBN: 9780128198728, Elsevier, January 2023.
2. [Bookchapter'22a] Junzhou Huang, Xinliang Zhu, Jiawen Yao, "Training a Deep Multiview Model Using Small Samples of Medical Data", *Artificial Intelligence in Cancer Diagnosis and Prognosis, Volume 1: Lung and kidney cancer*, IOP Publishing, 2022.
3. [BookChapt'22] Hehuan Ma, Yu Rong, Junzhou Huang, "Graph Neural Networks: Scalability", *Graph Neural Networks: Foundations, Frontiers, and Applications*, Springer, 2022.
4. [BookChapt'20] Junzhou Huang and Ruoyu Li, "Fast Regions-of-Interest Detection in Whole Slide Histopathology Images", *Histopathology and Liquid Biopsy*, IntechOpen, 2020.
5. [BookChapt'17] Junzhou Huang, Zheng Xu, "Accelerated Cell Detection with Sparse Convolution Kernels", *Deep Learning and Convolutional Neural Networks for Medical Image Computing*, ISBN: 9783319429984, Springer, 2017

6. [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.
7. [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.
8. [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. [TPAMI'25] Jiying Zhang, Fuyang Li, Xi Xiao, Tingyang Xu, Yu Rong, Junzhou Huang, Yatao Bian, "A Unified Random Walk, Its Induced Laplacians and Spectral Convolutions for Deep Hypergraph Learning", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Minor Revision.
2. [NatureCancer'25] Bing Song, Kaiwen Wang, Saiyang Na, Jia Yao, Farjana J. Fattah, Alexandra L Martin, Mitchell S. von Itzstein, Donghan M. Yang, Jialiang Liu, Yaming Xue, Chaoying Liang, Yuzhi Guo, Indu Raman, Chengsong Zhu, Jonathan E. Dowell, Jade Homsy, Sawsan Rashdan, Shengjie Yang, Mary E. Gwin, Tuoqi Wu, David Hsiehchen, Yvonne Gloria-McCutchen, Catherine Pei-ju Lu, Prithvi Raj, Xiaochen Bai, Jun Wang, Jose Conejo-Garcia, Yang Xie, Junzhou Huang\*, David E. Gerber\* and Tao Wang\*, "Profiling Antigen Binding Affinity of B Cell Repertoires in Tumors by Deep Learning", *Nature Cancer*, To Appear. (\* Co-corresponding)
3. [TNNLS'25] Saiyang Na, Yuzhi Guo, Feng Jiang, Hehuan Ma, Jean Gao and Junzhou Huang, "Segment Any Cell: A SAM-based Auto-prompting Fine-tuning Framework for Nuclei Segmentation", *IEEE Transactions on Neural Networks and Learning Systems*, To Appear.
4. [TNNLS'25] Mingcai Chen, Yu Zhao, Bing He, Zongbo Han, Junzhou Huang, Bingzhe Wu, Jianhua Yao, "Learning with Noisy Labels over Imbalanced Subpopulations", *IEEE Transactions on Neural Networks and Learning Systems*, Volume 36, Issue 4, pp.6544-6555, April 2025.
5. [FM'25] Thao M. Dang, Qifeng Zhou, Yuzhi Guo, Hehuan Ma, Saiyang Na, Thao Bich Dang, Jean Gao and Junzhou Huang, "Abnormality-Aware Multimodal Learning for WSI Classification", *Frontiers in Medicine*, Volume 12, February 2025.
6. [Lancet'25] Yu Zhao, Shan Xiong, Qin Ren, Min Li, Jun Wang, Lin Yang, Di Wu, Kejing Tang, Xiaojie Pan, Fengxia Chen, Wenxiang Wang, Shi Jin, Xianling Liu, Gen Lin, Wenxiu Yao, Linbo Cai, Yi Yang, Jixian Liu, Jingxun Wu, Wenfan Fu, Kai Sun, Feng Li, Bo Cheng, Shuting Zhan, Haixuan Wang, Ziwen Yu, Xiwen Liu, Ran Zhong, Huiting Wang, Ping He, Yongmei Zheng, Peng Liang, Longfei Chen, Ting Hou, Junzhou Huang, Bing He, Jiangning Song, Lin Wu, Chengping Hu, Jianxing He, Jianhua Yao and Wenhua Liang, "Deep learning using histological images for gene mutation prediction in lung cancer: a multicentre retrospective study", *The Lancet Oncology*, Volume 26, Issue 1, pp. 136-146, January 2025.
7. [NatureMI'24] Fan Yang, Fang Wang, Longkai Huang, Linjing Liu, Junzhou Huang, Jianhua Yao, "Reply to: Deeper Evaluation of a Single-cell Foundation Model", *Nature Machine Intelligence*, Volume 6, pp.1447-1450, December 2024.
8. [TMI'24] De Cai, Jie Chen, Junhan Zhao, Yuan Xue, Sen Yang, Wei Yuan, Min Feng, Haiyan Weng, Shuguang Liu, Yulong Peng, Junyou Zhu, Kanran Wang, Christopher Jackson, Hongping Tang, Junzhou Huang and Xiyue Wang, "HiCervix: An Extensive Hierarchical Dataset and Benchmark for Cervical Cytology Classification", *IEEE Transactions on Medical Imaging*, Volume 43, Issue 12, pp. 4344-4355, December 2024.
9. [TNNLS'24] Jiaqi Han, Wenbing Huang, Yu Rong, Tingyang Xu, Fuchun Sun and Junzhou Huang, "Structure-Aware DropEdge Towards Deep Graph Convolutional Networks". *IEEE Transactions on Neural Networks and Learning Systems*, Volume 35, Issue 11, pp. 15565-15577, November 2024.
10. [NN'24] Kaili Ma, Han Yang, Shanchao Yang, Kangfei Zhao, Lanqing Li, Yongqiang Chen, Junzhou Huang, James Cheng and Yu Rong, "Solving the Non-Submodular Network Collapse Problems via Decision Transformer", *Neural Networks*, Volume 176, August 2024.

11. [BBio'24] Feng Jiang, Yuzhi Guo, Hehuan Ma, Saiyang Na, Wenliang Zhong, Yi Han, Tao Wang and Junzhou Huang, "GTE: A Graph Learning Framework for Prediction of T-cell Receptors and Epitopes Binding Specificity", *Briefings in Bioinformatics*, Volume 25, Issue 4, July 2024.
12. [DDT'24] Qifeng Bai, Tingyang Xu, Junzhou Huang and Horacio Prez-Snchez, "Geometric Deep Learning Methods and Applications in 3D Structure-based Drug Design", *Drug Discovery Today*, Volume 29, Issue 7, July 2024.
13. [BioMed'24] Weizhi An, Yuzhi Guo, Yatao Bian, Hehuan Ma, Jinyu Yang, Chunyuan Li and Junzhou Huang, "Advancing DNA Language Models through Motif-Oriented Pre-training with MoDNA", *Biomedinformatics*, Volume 4, Number 2, pp.1556-1571, June 2024.
14. [Bioinfor'24] Jiahan Liu, Chaochao Yan, Chan Lu, Junzhou Huang, Le Ou-Yang and Zhao, Peilin, "MARS: A Motif-based Autoregressive Model for Retrosynthesis Prediction", *Bioinformatics*, Volume 40, Issue 3, March 2024.
15. [JBC'24] Hehuan Ma, Feng Jiang, Yuzhi Guo and Junzhou Huang, "Towards Robust Self-training for Molecular Biology Prediction Tasks", *Journal of Computational Biology*, Volume 31, Issue 3, pp. 213-228, March 2024.
16. [TPAMI'24] Junchi Yu, Tingyang Xu, Yu Rong, Yatao Bian, Junzhou Huang, Ran He, "Recognizing Predictive Substructures with Subgraph Information Bottleneck", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 46, pp. 1650-1663, March 2024.
17. [BPPEE'23] Shiwei Zhou, Jinyu Yang, Krishna Konduri, Junzhou Huang, Lifeng Yu and Mingwu Jin, "Spatiotemporal Denoising of Low-dose Cardiac CT Image Sequences using RecycleGAN", *Biomedical Physics & Engineering Express*, Volume 9, September 2023.
18. [CRT'23] Yuwei Miao, Hehuan Ma and Junzhou Huang, "Recent Advances in Toxicity Prediction: Applications of Deep Graph Learning." *Chemical Research in Toxicology*, Volume 36, pp. 1206-1226, August 2023.
19. [TMLR'23] Xuefeng Du, Tian Bian, Yu Rong, Bo Han, Tongliang Liu, Tingyang Xu, Wenbing Huang, Yixuan Li and Junzhou Huang, "Noise-robust Graph Learning by Estimating and Leveraging Pairwise Interactions", *Transactions on Machine Learning Research*, June 2023.
20. [TKDE'23a] Heng Chang, Yu Rong, Tingyang Xu, Wenbing Huang, Honglei Zhang, Peng Cui, Xin Wang, Wenwu Zhu and Junzhou Huang, "Adversarial Attack Framework on Graph Embedding Models with Limited Knowledge", *IEEE Transactions on Knowledge and Data Engineering*, Volume: 35, Issue: 5, pp. 4499-4513, May 2023.
21. [MedIA'23b] Xiyue Wang, Jun Zhang, Sen Yang, Jingxi Xiang, Feng Luo, Minghui Wang, Jing Zhang, Wei Yang, Junzhou Huang and Xiao Han, "A Generalizable and Robust Deep Learning Algorithm for Mitosis Detection in Multicenter Breast Histopathological Images", *Medical Image Analysis*, Volume 84, February 2023.
22. [Frontier'23] Mohammad Minhazul Haq, Hehuan Ma and Junzhou Huang, "NuSegDA: Domain Adaptation for Nuclei Segmentation", *Frontiers in Big Data-Medicine and Public Health*, Volume 6, February 2023.
23. [MedIA'23a] Wenhua Zhang, Jun Zhang, Xiyue Wang, Sen Yang, Junzhou Huang, Wei Yang, Wenping Wang and Xiao Han, "Merging Nucleus Datasets by Correlation-based Cross-Training", *Medical Image Analysis*, Volume 84, February 2023.
24. [TKDE'23] Kangfei Zhao, Zhiwei Zhang, Yu Rong, Jeffrey Yu and Junzhou Huang, "Finding Critical Users in Social Communities via Graph Convolutions", *IEEE Transactions on Knowledge and Data Engineering*, Volume: 35, Issue: 1, pp. 456-468, January 2023.
25. [TPAMI'23] Zhen Peng, Minnan Luo, Wenbing Huang, Jundong Li, Qinghua Zheng, Fuchun Sun and Junzhou Huang, "Learning Representations by Graphical Mutual Information Estimation and Maximization", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 45, Issue 1, pp. 722-737, January 2023.
26. [MedIA'23] Xiyue Wang, Yuexi Du, Sen Yang, Jun Zhang, Minghui Wang, Jing Zhang, Wei Yang, Junzhou Huang and Xiao Han, "RetCCL: Clustering-guided Contrastive Learning for Whole-slide Image Retrieval", *Medical Image Analysis*, Volume 83, January 2023.

27. [JBC'23] Chaochao Yan, Jinyu Yang, Hehuan Ma and Junzhou Huang, "Molecule Sequence Generation with Rebalanced Variational Loss", *Journal of Computational Biology*, Volume 30, Issue 1, January 2023.
28. [TMI'22] Wenhua Zhang, Jun Zhang, Sen Yang, Xiyue Wang, Wei Yang, Junzhou Huang, Wenping Wang and Xiao Han, "Knowledge-Based Representation Learning for Nucleus Instance Classification from Histopathological Images", *IEEE Transactions on Medical Imaging*, Volume 41, Issue 12, pp. 3939-3951, December 2022.
29. [GPB'22] Sen Yang, Tao Shen, Yuqi Fang, Xiyue Wang, Jun Zhang, Wei Yang, Junzhou Huang and Xiao Han, "DeepNoise: Signal and Noise Disentanglement based on Classifying Fluorescent Microscopy Images via Deep Learning", *Genomics, Proteomics and Bioinformatics*, Volume 20, Issue 5, pp. 989-1001, October 2022.
30. [TPAMI'22b] Yong Guo, Yin Zheng, Mingkui Tan, Qi Chen, Zhipeng Li, Jian Chen, Peilin Zhao and Junzhou Huang, "Towards Accurate and Compact Architectures via Neural Architecture Transformer", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 44, Issue 10, pp. 6501-6516, October 2022.
31. [TPAMI'22c] Runhao Zeng, Wenbing Huang, Mingkui Tan, Yu Rong, Peilin Zhao, Junzhou Huang and Chuang Gan, "Graph Convolutional Module for Temporal Action Localization in Videos", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 44, Issue 10, pp. 6209-6223, October 2022.
32. [TNNLS'22] Lu Wang, Lei Han, Xinru Chen, Chengchang Li, Junzhou Huang, Weinan Zhang, Wei Zhang, Xiaofeng He and Dijun Luo, "Hierarchical Multi-Agent Reinforcement Learning for Allocating Guaranteed Display Ads", *IEEE Transactions on Neural Networks and Learning Systems*, Volume 33, Issue 10, pp. 5361-5373, October 2022.
33. [MedIA'22] Xiyue Wang, Sen Yang, Jun Zhang, Minghui Wang, Jing Zhang, Wei Yang, Junzhou Huang and Xiao Han, "Transformer-based Unsupervised Contrastive Learning for Histopathological Image Classification", *Medical Image Analysis*, Volume 81, October 2022.
34. [NatureMI'22] Fan Yang, Wenchuan Wang, Fang Wang, Yuan Fang, Duyu Tang, Junzhou Huang, Hui Lu and Jianhua Yao, "scBERT as a Large-scale Pretrained Deep Language Model for Cell Type Annotation of Single-cell RNA-seq Data", *Nature Machine Intelligence*, Volume 4, pp. 852-866, September 2022.
35. [Biomolecules'22a] Chaochao Yan, Peilin Zhao, Chan Lu, Yang Yu and Junzhou Huang, "RetroComposer: Composing Templates for Template-based Retrosynthesis Prediction", *Biomolecules*, Volume 12, September 2022.
36. [SR'22] Piumi Sandarenu, Ewan KA Millar, Yang Song, Lois H Browne, Julia Beretov, Jodi Lynch, Peter Graham, Jitendra Jonnagaddala, Nick Hawkins, Junzhou Huang and Erik Meijering, "Survival Prediction in Triple Negative Breast Cancer Using Multiple Instance Learning of Histopathological Images", *Scientific Reports*, Volume 12, August 2022.
37. [TPAMI'22a] Jing Liu, Bohan Zhuang, Zhuangwei Zhuang, Yong Guo, Junzhou Huang, Jinhui Zhu and Mingkui Tan, "Discrimination-aware Channel Pruning for Deep Model Compression", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 44, Issue 8, pp. 4035-4051, August 2022.
38. [Elife'22] Darshana Narayanan, Daniel Takahashi, Lauren Kelly, Sabina Hlavaty, Junzhou Huang and Asif Ghazanfar, "Prenatal Development of Neonatal Vocalizations", *Elife*, Volume 11, July 2022.
39. [JChem'22] Xiaochu Tong, Dingyan Wang, Xiaoyu Ding, Xiaoqin Tan, Qun Ren, Geng Chen, Yu Rong, Tingyang Xu, Junzhou Huang, Hualiang Jiang, Mingyue Zheng and Xutong Li, "BloodBrain Barrier Penetration Prediction Enhanced by Uncertainty Estimation", *Journal of Cheminformatics*, Volume 14, Number 44, July 2022.
40. [CMS'22] Qifeng Bai, Shuo Liu, Yanan Tian, Tingyang Xu, Antonio Jess Banegas-Luna, Horacio Prez-Sanchez, Junzhou Huang, Huanxiang Liu and Xiaojun Yao, "Application Advances of Deep Learning Methods for De Novo Drug Design and Molecular Dynamics Simulation", *WIREs Computational Molecular Science*, Volume 12, Issue 3, June 2022.

41. [FrontOncol'22] Xiaoying Lou, Niyun Zhou, Lili Feng, Zhenhui Li, Yuqi Fang, Xinjuan Fan, Yihong Ling, Hailing Liu, Xuan Zou, Jing Wang, Junzhou Huang, Jingping Yun, Jianhua Yao and Yan Huang, "Deep Learning Model for Predicting the Pathological Complete Response to Neoadjuvant Chemoradiotherapy of Locally Advanced Rectal Cancer", *Frontiers in Oncology*, Volume 12, June 2022.
42. [Biomolecules'22] Yuzhi Guo, Jiaxiang Wu, Hehuan Ma, Sheng Wang and Junzhou Huang, "Deep Ensemble Learning with Atrous Spatial Pyramid Networks for Protein Secondary Structure Prediction", *Biomolecules*, Volume 12, 774, June 2022.
43. [PR'22] Junchi Yu, Tingyang Xu, Yu Rong, Junzhou Huang and Ran He, "Structure-aware Conditional Variational Auto-Encoder for Constrained Molecule Optimization", *Pattern Recognition*, Volume 126, June 2022.
44. [Bioinfor'22a] Xiaohan Xing, Fan Yang, Hang Li, Jun Zhang, Yu Zhao, Mingxuan Gao, Junzhou Huang and Jianhua Yao, "Multi-Level Attention Graph Neural Network Based on Co-expression Gene Modules for Disease Diagnosis and Prognosis", *Bioinformatics*, Volume 38, Issue 8, pp. 2178-2186, April 2022.
45. [Bioinfor'22] Hehuan Ma, Yatao Bian, Yu Rong, Wenbing Huang, Tingyang Xu, Weiyang Xie, Geyan Ye and Junzhou Huang, "Cross-Dependent Graph Neural Networks for Molecular Property Prediction", *Bioinformatics*, Volume 38, Issue 7, pp. 2003-2009, April 2022.
46. [BME'22] Hailing Liu, Yu Zhao, Fan Yang, Xiaoying Lou, Feng Wu, Hang Li, Xiaohan Xing, Tingying Peng, Bjoern Menze, Junzhou Huang, Shujun Zhang, Anjia Han, Jianhua Yao and Xinjuan Fan, "Preoperative Prediction of Lymph Node Metastasis in Colorectal Cancer with Deep Learning", *BME Frontiers*, Volume 2022, pp. 1-12, March 2022.
47. [TPAMI'22] Jiezhong Cao, Yong Guo, Qingyao Wu, Chunhua Shen, Junzhou Huang and Mingkui Tan, "Improving Generative Adversarial Networks with Local Coordinate Coding", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 44, Issue 1, pp. 211-227, January 2022.
48. [PROTEINS'21] Tao Shen, Jiayang Wu, Haidong Lan, Liangzhen Zheng, Jianguo Pei, Sheng Wang, Wei Liu and Junzhou Huang, "When Homologous Sequences Meet Structural Decoys: Accurate Contact Prediction by tFold in CASP14", *PROTEINS: Structure, Function, and Bioinformatics*, Volume 89(12), pp. 1901-1910, December 2021.
49. [NN'21] Shuaicheng Niu, Jiayang Wu, Yifan Zhang, Yong Guo, Peilin Zhao, Junzhou Huang, Mingkui Tan, "Disturbance-immune weight sharing for neural architecture search", *Neural Networks*, Volume 144, pp. 553-564, December 2021.
50. [Neuro'21] Kelong Mao, Xi Xiao, Tingyang Xu, Yu Rong, Junzhou Huang and Peilin Zhao, "Molecular Graph Enhanced Transformer for Retrosynthesis Prediction", *Neurocomputing*, Volume 457, pp. 193-202, October 2021.
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52. [VA'21] Meng Yue, Jun Zhang, Xinran Wang, Kezhou Yan, Lijing Cai, Kuan Tian, Shuyao Niu, Xiao Han, Yongqiang Yu, Junzhou Huang, Dandan Han, Jianhua Yao, Yueping Liu, "Can AI-assisted Microscope Facilitate Breast HER2 Interpretation? A Multi-institutional Ring Study", *Virchows Archiv*, 479, pp. 443C449, July 2021.
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### Peer-reviewed Workshop Papers

1. [MRR'24] Wenliang Zhong, Wenyi Wu, Qi Li, Boxin Du, Karim Bouyarmane, Shioulin Sam, Ismail Tutar and Junzhou Huang, "Enhancing Multimodal Large Language Models with Multi-instance Visual Prompt Generator for Visual Representation Enrichment", *SIGIR 2024 Workshop on Multimodal Representation and Retrieval*, MRR'24, Washington DC, July 2024.
2. [FM-Wild'24] Peng Xia, Ze Chen, Juanxi Tian, Gong Yangrui, Ruibo Hou, Yue Xu, Zhenbang Wu, Zhiyuan Fan, Yiyang Zhou, Kangyu Zhu, Wenhao Zheng, Zhaoyang Wang, Xiao Wang, Xuchao Zhang, Chetan Bansal, Marc Niethammer, Junzhou Huang, Hongtu Zhu, Yun Li, Jimeng Sun, Zongyuan Ge, Gang Li, James Zou, Huaxiu Yao, "CARES: A Comprehensive Benchmark of Trustworthiness in Medical Vision Language Models", *ICML 2024 Workshop on Foundation Models in the Wild*, Vienna, Austria, July 2024.
3. [AIBSD'24] Qichuan Yin, Junzhou Huang, Huaxiu Yao, and Linjun Zhang, "Distribution-Free Fair Federated Learning with Small Samples", *The AAAI 2024 Workshop on Artificial Intelligence with Biased or Scarce Data*, Vancouver, Canada, February 2024.
4. [ICDMW'23] Yucheng Shi, Hehuan Ma, Wenliang Zhong, Qiaoyu Tan, Gengchen Mai, Xiang Li, Tianming Liu and Junzhou Huang, "ChatGraph: Interpretable Text Classification by Converting ChatGPT Knowledge to Graphs", *IEEE International Conference on Data Mining Workshops on Learning with Knowledge Graphs: Opportunities and Challenges with ChatGPT*, Shanghai, China, December 2023.
5. [ICMLW'23] Wenliang Zhong, Hehuan Ma, Yu Rong, Yatao Bian, Long-Kai Huang, Yuzhi Guo, Peilin Zhao and Junzhou Huang, "CoSSL: A Context-based Semi-Supervised Framework for Molecular Property Prediction", *ICML Workshop on Computational Biology*, Honolulu, Hawaii, USA, July 2023.
6. [CVPRW'23] Yong Guo, Yaofu Chen, Yin Zheng, Qi Chen, Peilin Zhao, Junzhou Huang, Jian Chen, Minghui Tan, "Pareto-Aware Neural Architecture Generation for Diverse Computational Budgets", *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, Vancouver, Canada, June 2023.
7. [FedGraph'22] Bingzhe Wu, Zhipeng Liang, Yuxuan Han, Yatao Bian, Peilin Zhao, Junzhou Huang and Chaochao Chen, "D<sup>3</sup>RF: Distributionally Robust Federated Drug Discovery with Inter-client Noise", *The 1st International Workshop on Federated Learning with Graph Data at ACM CIKM*, Atlanta, Georgia, United States, October 2022.
8. [DGL'21] Heng Chang, Yu Rong, Tingyang Xu, Wenbing Huang, Somayeh Sojoudi, Junzhou Huang and Wenwu Zhu, "Spectral Graph Attention Network with Fast Eigen-approximation", *The KDD Workshop on Deep Learning on Graphs: Method and Applications*, DGL'21, Singapore, August 2021.
9. [DPML'21] Chaoyang He, Keshav Balasubramanian, Emir Ceyani, Yu Rong, Peilin Zhao, Junzhou Huang, Murali Annamalai and Salman Avestimehr, "FedGraphNN: A Federated Learning System and Benchmark for Graph Neural Networks", *The ICLR Workshop on Distributed and Private Machine Learning*, DPML'21, Vienna, Austria, May 2021.
10. [ML4Molecules'20] Hehuan Ma, Yatao Bian, Yu Rong, Wenbing Huang, Tingyang Xu, Weiyang Xie, Geyan Ye and Junzhou Huang, "Multi-View Graph Neural Networks for Molecular Property Prediction", *The Machine Learning for Molecules Workshop at NeurIPS 2020*, Vancouver, Canada, December 2020.
11. [MABM'20] Hehuan Ma, Chaochao Yan, Yuzhi Guo, Sheng Wang, Yuhong Wang, Hongmao Sun and Junzhou Huang, "Improving Molecular Property Prediction on Limited Data with Deep Multi-Label Learning", *IEEE BIBM Workshop on Machine Learning and Artificial Intelligence in Bioinformatics and Medical Informatics*, MABM'20, Seoul, Korea, December 2020.
12. [BeyondFOM'19] Jie Liu, Yu Rong, Martin Takc and Junzhou Huang, "Accelerating Distributed Stochastic L-BFGS by sampled 2nd-Order Information", In *The NeurIPS Workshop on Beyond First Order Methods in Machine Learning Systems*, Vancouver, Canada, December 2019.

13. [MetaLearn'19] Ying Wei, Peilin Zhao, Huaxiu Yao, Junzhou Huang, "Transferable Neural Processes for Hyperparameter Optimization", In *The NeurIPS Workshop on Meta Learning*, Vancouver, Canada, December 2019.
14. [GraphRL'19] Huaxiu Yao, Chuxu Zhang, Ying Wei, Meng Jiang, Suhang Wang, Junzhou Huang, Nitesh Chawla, Zhenhui Li, "Graph Few-shot Learning via Knowledge Transfer", In *The NeurIPS Workshop on Graph Representation Learning*, Vancouver, Canada, December 2019.
15. [MI-NIPS'19] Yifan Zhang, Ying Wei, Peilin Zhao, Shuaicheng Niu, Qingyao Wu, Minghui Tan, Junzhou Huang, "Collaborative Unsupervised Domain Adaptation for Medical Image Diagnosis", In *The NeurIPS Workshop on Medical Imaging Meets NeurIPS*, Vancouver, Canada, December 2019.
16. [MetaLearn'18] Ho Chung Leon Law, Peilin Zhao, Junzhou Huang and Dino Sejdinovic, "Hyperparameter Learning via Distributional Transfer", In *The NIPS 2018 workshop on Meta-Learning*, Montreal, Canada, December 2018.
17. [CDNNRIA'18] Jiaxiang Wu, Yao Zhang, Haoli Bai, Huasong Zhong, Jinlong Hou, Wei Liu, Wenbing Huang and Junzhou Huang, "PocketFlow: An Automated Framework for Compressing and Accelerating Deep Neural Networks", In *The NIPS 2018 Workshop on Compact Deep Neural Networks with Industrial Applications*, Montreal, Canada, December 2018.
18. [MLMI'18] Feiyun Zhu, Xinliang Zhu, Sheng Wang, Jiawen Yao, Zhichun Xiao and Junzhou Huang, "Robust Contextual Bandit via the Capped- $L_2$  Norm for Mobile Health Intervention", In *The 9th International Workshop on Machine Learning in Medical Imaging*, MLMI'18, Granada, Spain, September 2018.
19. [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
20. [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", In *The 6th International Workshop on Machine Learning in Medical Imaging*, MLMI'15, Munich, Germany, October 2015.
21. [PMI'15c] Zheng Xu, Junzhou Huang, "Efficient Lung Cancer Cell Detection with Deep Convolution Neural Network", In *The 1st International Workshop on Patch-based Techniques in Medical Imaging*, PMI'15, Munich, Germany, October 2015.
22. [PMI'15b] Hao Pan, Zheng Xu, Junzhou Huang, "An Effective Approach for Robust Lung Cancer Cell Detection", In *The 1st International Workshop on Patch-based Techniques in Medical Imaging*, PMI'15, Munich, Germany, October 2015.
23. [PMI'15a] Ruoyu Li, Junzhou Huang, "Fast Regions-of-Interest Detection in Whole Slide Histopathology Images", In *The 1st International Workshop on Patch-based Techniques in Medical Imaging*, PMI'15, Munich, Germany, October 2015. **(Oral Presentation)**
24. [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", In *The MICCAI Workshop on Medical Computer Vision: Algorithms for Big Data*, MCV'15, Munich, Germany, October 2015.
25. [NILM'14] Yeqing Li, Zhongxing Peng, Junzhou Huang, Zhilin Zhang, Jae Hyun Son, "Energy Disaggregation via Hierarchical Factorial HMM", In *The second International Workshop on Non-Intrusive Load Monitoring*, NILM'14, Austin, TX, USA, June 2014.
26. [STMI'12b] Chen Chen, Junzhou Huang, "The Benefit of Tree Sparsity in Accelerated MRI", In *The MICCAI Workshop on Sparsity Techniques in Medical Imaging*, STMI'12, Nice, France, October 2012. **(Oral Presentation) (Best Paper Award)**
27. [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.
28. [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.

29. [SPIE'10] Shaoting Zhang, Junzhou Huang, Wei Wang, Xiaolei Huang, Dimitris Metaxas, "Cervigram Image Segmentation Based On Reconstructive Sparse Representations", In *Proc. of SPIE, Medical Imaging: Image Processing*, SPIE'10, San Diego, California, USA, February 2010. **(Oral Presentation)**
30. [MIAAB'06] Junzhou Huang, Xiaolei Huang, Dimitris Metaxas, Debarata Banerjee, "3D Tumor Shape Reconstruction from 2D Bioluminescence Images and Registration with CT Images", In *The 1st Workshop on Microscopic Image Analysis with Applications in Biology*, MIAAB'06, Washington DC, USA, April 2006. **(Oral Presentation)**

## Patent

1. A New Algorithm for MRI Reconstruction, US8548218B2, October 2013.
2. Method and Apparatus for Multiple Image Registration in the Gradient domain, US9466108B1, October 2016
3. Method, Apparatus and Computer Program Product for Robust Image Registration Based on Deep Sparse Representation, US20170026630A1, January 2017
4. Method and Apparatus for Image Registration in the Gradient Domain, US9582882B2, February 2017
5. Pathologic Microscope, Display Module, Control Method and Apparatus, and Storage Medium, US20200409134A1, December 2020
6. Method and Apparatus for Identifying Heterogeneous Graph and Property of Molecular Space Structure and Computer Device, US20210043283A1, February 2021
7. Methods, Apparatus, and Storage Medium for Classifying Graph Nodes, US20210142108A1, May 2021
8. Method for Training Object Detection Model and Target Object Detection Method, US20210192180A1, June 2021
9. Protein Structure Information Prediction Method and Apparatus, Device, and Storage medium, US20220093213A1, March 2022.
10. Drug Screening Method and Apparatus, and Electronic Device, US20220415433A1, December 2022.
11. Method and Apparatus for Determining Drug Molecule Property, and Storage Medium, December 2022.
12. Molecular Structure Reconstruction Method and Apparatus, Device, Storage Medium, and Program Product, US20230098398A1, March 2023.
13. Method and Apparatus for Processing Molecular Scaffold Transition, Medium, Electronic Device, and Computer Program Product, US20230083810A1, March 2023
14. Glucagon Receptor Antagonist and Use Thereof, US20230104956A1, April 2023.

## 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 and 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.
- “Sparse Learning for Big Medical Data”, Department of Bioinformatics, University of Texas Southwestern Medical Center, Dallas, TX, USA, April 2017.
- “Big Image-Omics Data Analytics for Clinical Outcome Prediction”, GPU Technology Conference, Silicon Valley, May 2017.
- “Survival Prediction from Whole Slide Histopathology Images”, MICCAI PC Meeting, Quebec City, Quebec, Canada, May 2017.
- “Deep Learning Based Survival Prediction from Big Image-Omics Data”, Medical Computer Vision Workshop, Honolulu, Hawaii, USA, July 2017.
- “Deep Graph Learning on Biomedical Data”, MICCAI AC Meeting, Shenzhen, Guangdong, China, June 2019.
- “Application of Artificial Intelligence in Medtech and Life Science”, West Lake University, June 2020.
- “Deep Graph Learning: Foundations, Advances and Applications”, The 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD’20, San Diego, CA, USA, August 2020.
- “Machine Learning: From Concepts to Applications in Biomedicine”, Department of Bioengineering, University of Texas at Arlington, TX, USA, September 2020.
- “How Machine Learning Helps to Better Triage COVID-19 Patients?”, IEEE InTech: A Forum on the Response and Resiliency to COVID-19, USA, December 2020.
- “Advanced Deep Graph Learning: Deeper, Faster, Robuster, Unsupervised”, The 30th Web Conference, WWW’21, Ljubljana, Slovenia, April 2021.
- “Deep Graph Learning for Drug Property Prediction”, College of Science and Engineering, University of Minnesota, November 2021.
- “Trustworthy Graph Learning: Reliability, Explainability, and Privacy Protection”, The 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD’22, Washington DC, USA, August 2022.
- “Deep Learning on Graphs and Its Applications”, Department of Computer Science and Engineering, Texas A&M University, November 2022.
- “Deep Learning for Protein Structure Modeling: Current Progress and Open Challenges”, Experimental Therapeutics Research Program AlphaFold Retreat, University of Texas Southwestern Medical Center, Dallas, TX, USA, February 2023.
- “Curriculum Graph Poisoning”, International World Wide Web Conference, WWW’23, Austin, Texas, USA, May 2023.
- “Learning on Graphs and Its Applications”, Department of Radiation Oncology, University of Texas Southwestern Medical Center, Dallas, TX, USA, March 2024.
- “Multimodal Large Language Models for Computational Pathology”, Inaugural UT System AI Symposium in Health Care, Dallas, Texas, USA, May 2024.
- “Multimodal Large Language Models for Biomedical Applications”, Statistics & Data Science, University of Texas at Arlington, TX, USA, September 2024.
- “Multimodal Large Language Models for Computational Pathology”, BHI 2024 Workshop on Harnessing AI for Comprehensive Pathology Severity Estimation: Methodological Innovations and Patient-Centric Practical Applications?, Houston, Texas, USA, November 2024.
- “Multimodal Large Language Models for Computational Pathology”, ISBI 2025 Workshop on Unlocking the Potential of Foundation Models in Biomedicine: Opportunities and Challenges, Houston, Texas, USA, April 2025.

## Professional Activities



- **Member**

Fellow, American Institute for Medical and Biological Engineering (AIMBE), 2023 - present  
Board of Directors, The Medical Image Computing and Computer Assisted Intervention Society (MICCAI), 2025 - 2029

- **Editorial Board**

Journal of Visual Communication and Image Representation, 2016 - Present  
Journal of Machine Intelligence Research, 2020 - Present  
IEEE Transactions on Medical Imaging, 2022 - Present  
ACM Transactions on Computing for Healthcare, 2024 - Present

- **Area/Session Chair**

The Annual International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2015, 2017, 2019, 2021, 2022, 2025  
The AAAI Conference on Artificial Intelligence (AAAI), 2017, 2021, 2022, 2023, 2024, 2025  
The ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2020, 2021  
The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022, 2025  
The IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2024, 2025  
The International Conference on Machine Learning (ICML), 2022, 2023, 2024, 2025  
The Annual Conference on Neural Information Processing Systems (NeurIPS), 2022, 2023, 2024, 2025

- **Grant Panel Member and Reviewer**

National Science Foundation, Smart and Connected Health, 2015 - present  
National Science Foundation, Small Business Innovation Research, 2015 - present  
National Science Foundation, Information Integration and Informatics, 2015 - present  
National Science Foundation, Cyberinfrastructure for Sustained Scientific Innovation, 2022 - present  
National Science Foundation, Biological Infrastructure, Molecular and Cellular Biosciences, 2023 - present  
Nation Institute of Health, Clinical Informatics and Digital Health, 2024 - present  
Nation Institute of Health, Health Services and Systems Review Branch, 2025 - present

- **Outreach Activity**

*Annual Guest Speakers and Demo Demonstration*  
Summer Camp for Middle School Students, Arlington, 2013 - present  
Summer Camp for Middle School Girls, Arlington, 2013 - present

- **Department and University Service**

Member of the Ph.D. Admission Committee, (2012-2014), CSE, UTA.  
Member of the Visiting Appointments Committees (2014-2020), CSE, UTA.  
Member of the Quality Assurance Committees (2014-2020), CSE, UTA.  
Member of the Searching Committees for the Nooyi Endowed Chair, 2020, BE, UTA  
Member of FDL and REP Recognition Committees (2020-2025), CSE, UTA  
Member of CSE Volunteer Mentors to Junior Faculty (2020-2025), CSE, UTA  
Member of the Graduate Curriculum Committees (2020-2025), CSE, UTA  
Member of the Research Committees (2021-2025), College of Engineering, UTA  
Chair of the Research Committees (2022-2023), College of Engineering, UTA

## Citation

- **Google Scholar Citations until May 21, 2025**

- Total Citations: **34,268**
- H-index: **92**
- I10-index: **300**
- Web <http://scholar.google.com/citations?user=X7KrguAAAAAJ&hl=en>