

**The Faculty of Medicine of Harvard University  
Curriculum Vitae**

**Date Prepared:** July 6th, 2023  
**Name:** Xiang Li  
**Office Address:** 65 Landsdowne Street, Cambridge, Ma 02139  
**Home Address:** 250 Hammond Pond Pkwy, Chestnut Hill, MA, 02467  
**Work Phone:** 706-248-0264  
**Work Email:** xli60@mgh.harvard.edu  
**Place of Birth:** China

**Education:**

09/2006	B.E.	Automation	Shanghai Jiaotong University, China
09/2009	Research Assistant	Data modeling and scientific software platform development	Nankai University, China
06/2016	PhD	Computer Science, Distinguished Prof. Tianming Liu	University of Georgia

**Postdoctoral Training:**

08/2016-07/2019	Research Fellow	Medical Image Analysis, Assoc. Prof. Quanzheng Li and Distinguished Prof. James H. Thrall	Harvard Medical School and Massachusetts General Hospital
-----------------	-----------------	---	---

**Faculty Academic Appointments:**

08/2019-05/2023	Instructor	Radiology	Harvard Medical School
06/2023-	Assistant Professor	Radiology	Harvard Medical School

**Appointments at Hospitals/Affiliated Institutions:**

08/2019-	Research Staff	Radiology	Massachusetts General Hospital
----------	----------------	-----------	--------------------------------

**Major Administrative Leadership Positions:**

**International**

2019	Organizer and program chair for the International Workshop on Multiscale Multimodal Medical Imaging	The Medical Image Computing and Computer-Assisted Intervention Society
2021	Organizer and program chair for the International Workshop on Multimodal Learning and Fusion Across Scales for Clinical Decision Support	The Medical Image Computing and Computer-Assisted Intervention Society
2022-2023	Organizer and program chair for the International Workshop on Multiscale Multimodal Medical Imaging	The Medical Image Computing and Computer-Assisted Intervention Society

### **Committee Service:**

#### **International**

2015	Program Committee	MICCAI Workshop on Machine Learning in Medical Imaging (MLMI)
2017	Program Committee	International Conference on Brain Informatics
2018	Program Committee	Machine Learning in Computational Biology
2019	Program Committee	NeurIPS Workshop on Machine Learning in Computational Biology
2019-2022	Program Committee	ACM SIGKDD Workshop on Mining and Learning from Time Series (MILETS)
2023	Area Chair	International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)
2023	Program Committee	International Workshop on Medical Image Learning with Noisy and Limited Data (MILLanD)

#### **Professional Societies:**

2011-	Institute of Electrical and Electronics Engineers (IEEE), International	Member
2011-	Engineering in Medicine and Biology Society (EMBS), International	Member
2011-	The Medical Image Computing and Computer-Assisted Intervention Society, International	Member
2017-	American Roentgen Ray Society (ARRS), Regional	Member
2023-	American Medical Informatics Association	Member

### **Editorial Activities:**

- **Ad hoc Reviewer**

Human Brain Mapping  
 IEEE Transactions on Affective Computing  
 IEEE Transactions on Biomedical Engineering  
 IEEE Transactions on Emerging Topics in Computational Intelligence  
 IEEE Transactions on Fuzzy Systems  
 IEEE Transactions on Knowledge and Data Engineering  
 IEEE Transactions on Medical Imaging  
 IEEE Transactions on Pattern Analysis and Machine Intelligence  
 JAMA Network Open  
 Medical Image Analysis  
 Nature Communications  
 Neuroimage  
 Neuroscience  
 Pattern Recognition  
 Progress in Neurobiology

- **Other Editorial Roles**

2021-	Associate Editor	Frontiers in Oncology
2021-	Associate Editor	Frontiers in Radiology
2021-	Associate Editor	Frontiers in Neuroscience
2022-	Associate Editor	Frontiers in Cardiovascular Medicine
2023-	Editorial Board	Meta-Radiology

**Honors and Prizes:**

2011	Best Student Paper Award	IEEE International Symposium on Biomedical Imaging	“Brain State Change Detection via Fiber-centered Functional Connectivity Analysis”
2013	Best Student Paper Award	IEEE International Symposium on Biomedical Imaging	“Discovering Common Functional Connectomics Signatures”
2015	Paul D. Coverdell Neuroimaging Franklin Foundation Scholars Program Travel Award	Department of Psychology, University of Georgia	
2015	Cover and Feature Paper	IEEE Transactions on Biomedical Engineering	“Holistic atlases of functional networks and interactions reveal reciprocal organizational architecture of cortical function”

2016	Outstanding Graduate Dissertation/Thesis	University of Georgia	
2018	Most Cited Articles	Journal of the American College of Radiology	“Artificial Intelligence and Machine Learning in Radiology: Opportunities, Challenges, Pitfalls, and Criteria for Success”
2020	Best Paper Awards	IEEE International Symposium on Biomedical Imaging	“ASCNet: Adaptive-Scale Convolutional Neural Networks for Multi-Scale Feature Learning”
2021	MGH Thrall Innovation Grants Award	Massachusetts General Hospital	“Chest Radiographs-based Lung Cancer Screening by the DeepProjection Technique”
2022	Best Paper Awards	IEEE Transactions on Radiation and Plasma Medical Sciences	“Deep Learning-Based Image Segmentation on Multimodal Medical Imaging”

## **Report of Funded and Unfunded Projects**

### **Past**

- 08/01/2013-07/31/2018 “Exploring Functional Interactions between Gyri and Sulci”  
National Science Foundation (NSF), Standard Grant #1263524  
Graduate student (research assistant) (PI: Tianming Liu)  
Investigation of functional architectures of gyri and sulci in human brain, in order to lay down solid foundations for brain disorders studies.
- 09/01/2013-05/31/2016 “Assessing Large-scale Brain Connectivities in Mild Cognitive Impairment”  
National Institute of Health (NIH), Research Project (R01) #R01AG042599  
Graduate student (research assistant) (PI: Tianming Liu)  
Establishment of a fine granularity next-generation brain atlas for studying of brain imaging that rely on accurate functional/structural localizations. The atlas is employed to assess large-scale brain network alterations in MCI/AD patients.
- 11/01/2014-10/31/2018 “Reciprocal Organizational Architecture of Human Brain Function”  
National Science Foundation (NSF), Standard Grant #1439051  
Graduate student (research assistant) (PI: Tianming Liu)  
Development of novel computational methods to investigate how different brain regions form distinctive networks. The model is used to develop and evaluate a novel theory of reciprocal organizational architecture to explain human brain function.
- 2016-2018 “Post-Doctoral Scholar in Artificial Intelligence and Image Analysis”  
Department of Radiology, Massachusetts General Hospital  
Research fellow in training (PI: James Thrall)  
Investigation of medical image analysis solutions to address practical challenges in radiology, including overcoming insufficient data samples for deep learning analysis, a fusion of multiple imaging modalities, and developing prescreening protocols to be used in the clinical flow. Training in radiology, especially chest imaging, image analysis, and artificial intelligence.
- 9/21/2020-03/01/2021 “Pseudo Chest CT from Chest X-RAY, COVID-19 Workstream”  
GE Precision Healthcare, Industrial Grant

Project Leader (PI: Quanzheng Li)

Development of a machine learning model, “DeepProjection,” that can generate pseudo-CT from X-rays images to improve the diagnosis and management of patients with COVID-19. The model will apply to COVID-19 patients and synthesize chest computed tomography (CT) images from a chest X-ray in COVID-19.

06/01/2021- “Aortic Stenosis Clinical Applications”

11/01/2022 GE Precision Healthcare, Industrial Grant

Project Leader (PI: Quanzheng Li)

Developing an application for the intelligent management of aortic stenosis (AS) that aims to predict relevant clinical outcomes from AS patients undergoing surgeries based on electronic health records (EHR), radiological reports, and imaging data.

### **Current**

03/15/2022- “Deep Learning-Based Phenotyping and Treatment Optimization of Heart Failure with  
02/28/2026 Preserved Ejection Fraction”

NIH R01, 1R01HL159183-01A1

Senior/Key Person (PI: Quanzheng Li)

Development of a multi-modal deep learning model on combined imaging and EHR data for the purpose of holistic HFpEF patient portrayal, disease phenotyping, as well as treatment optimization.

07/01/2022- “Identification of Multi-modal Imaging Biomarkers for Early Prediction of MCI-AD  
6/30/2024 Conversion via Multigraph Representation”

NIH R03, 1R03AG078625-01

Principal Investigator

Investigation of the interaction among structural, functional, and proteinopathies networks in MCI and AD patients via a contrastive learning-based, multigraph representation framework on the multi-modal neuroimaging data of MRI, fMRI, and PET modalities.

The proposed framework will be used to identify and evaluate a multi-modal image biomarker for AD conversion in the MCI population from a multi-site dataset.

### **Projects Submitted for Funding**

02/05/ “Identification and characterization of Alzheimer’s disease subtypes using structural,  
2019 functional, and neuropathological brain networks”

Co-Investigator (PI: Quanzheng Li)

Investigation of possible AD subtypes through computational modeling. The model uses a combination of information describing brain atrophy, functional network organization, AD pathology, and neuropsychological assessment as input and employs a graph embedding approach to perform multi-modal data fusion and subtype discovery.

10/05/ “A deep learning-based MEG/EEG biomarker integrated with physiological information  
2019 for early detection and monitoring of Alzheimer’s disease.”

Senior/Key Person (PI: Quanzheng Li)

Multimodal, deep learning-based integration of macroscale MEG/EEG brain networks with microscale PET amyloid- $\beta$  and tau proteinopathy networks for identifying structural-functional AD biomarkers. Percentile: 55

08/06/ “Development of a Universal Framework for Video Data Acquisition, Standardization,  
2021 Validation, and Access”

Co-PI (PI: Ozanan Meireles and Quanzheng Li)

Development of a multi-modality universal video and metadata generation framework that is ethically sourced, scalable, and sustainable, addressing data structure, standardization, annotation, validation, and sharing, to allow the creation of large and diverse flagship datasets for research, education, and clinical use.

08/22/2022 “iBRAIN: Individualized Brain Representation, Analysis, and INtegration”  
NIH U24  
Subcontract PI (PI: Gang Li at UNC)  
Integrate, refine, enrich, standardize, and disseminate our previously developed cortical surface-based software, toolbox, and computational model libraries, which have been validated and widely used for years, into a unified and comprehensive neuroimaging software suite: the Individualized Brain Representation, Analysis, and Integration (iBRAIN).

08/26/2022 “Discover Amyloid- $\beta$ /Tau Causal Relationship on Personalized Multi-Modal Brain Network”  
NIH R01  
Principle Investigator  
Identification of regional-specific causal relationships between amyloid- $\beta$  and tau in Alzheimer's disease patients by PET imaging using advanced machine learning approaches.

02/18/2023 Generation of Near-real Computed Tomography (CT) Images from Wrist Radiographs via Deep Image Projection  
NIH R21  
Principle Investigator  
Developing an AI model that can generate near-real wrist CTs from a single X-ray image to better characterize patients' wrist bone condition with 3D imaging information.

06/15/2023 Advanced Multi-modal Foundational AI Models for Healthcare  
NIH R21  
Principle Investigator

### **Report of Local Teaching and Training**

#### **Teaching of Students in Courses:**

2014-2015	CSCI 4850/6850: “Biomedical Image Analysis” Graduate and undergraduate students	University of Georgia 2-hrs session per week for two weeks
2015	CSCI 8850: “Advanced Biomedical Image Analysis” Graduate students	University of Georgia 3-hrs session per week for one week
2016	CSCI 8360: “Data Science Practicum” Graduate students	University of Georgia 3-hrs session per week for one week

#### **Research Supervisory and Training Responsibilities:**

2018-	Supervised visiting students, graduate research interns, and research fellows (average 2-3 students per year).	Massachusetts General Hospital. Two hours of lab meetings per week; One hour per week per student and research fellow for 1:1 discussion and supervision.
2021-	Administration and coordination of the CAMCA AIXMedicine Biweekly Seminar, the public lab meeting on AI research in medicine of the Center for Advanced Medical Computing and Analysis in MGH.	Massachusetts General Hospital. One hour of meetings per two weeks.

#### **Other Mentored Trainees and Faculty:**

2018-2019	Zhe Guo, Ph.D. student at Beijing Institute of Technology
-----------	---

- Graduate research intern at MGH. **Mentoring role:** Advising research on multi-modal image fusion strategies. **Accomplishments:** Research published in *IEEE-TRPMS* journal (Best Paper Award) and presented at the 2018 *IEEE International Symposium on Biomedical Imaging*.
- 2018-2019 Xuandong Zhao, undergraduate student at Zhejiang University  
Visiting student at MGH. **Mentoring role:** Advising research on algorithm development for medical image analysis. **Accomplishments:** Developed the Deep Voxel-Graph Convolution Network (DVGCN) model and presented at the 2019 *IEEE International Symposium on Biomedical Imaging*.
- 2018-2019 Weichen Wu, undergraduate student at Peking University  
Visiting student at MGH. **Mentoring role:** Advising research on multi-dimensional image analysis within the *DeepProjection* project.
- 2018-2019 Jiaming Guo, undergraduate student at Peking University  
Visiting student at MGH. **Mentoring role:** Advising research on graph-based deep learning modeling for MCI/AD progression (*PETNet*). **Accomplishment:** Research presented at the 2019 *IEEE International Conference on Big Data*.
- 2019- Hui Ren, Research Fellow at MGH. **Mentoring role:** Advising research on cardiac image analysis and Electronic Health Record (EHR) modeling. **Accomplishment:** Research presented at the 2019 *Annual Meeting of American Heart Association*, 2019 *IEEE International Symposium on Biomedical Imaging*, 2022 *International Workshop on Advances in Simplifying Medical Ultrasound*, and 2023 *AMIA Clinical Informatics Conference*.
- 2019-2020 Haixing Dai, Ph.D. student at the University of Georgia  
Graduate research intern at MGH. **Mentoring role:** Advising research on graph-based deep learning models for brain network modeling from MEG and PET images.
- 2019-2020 Mo Zhang, Ph.D. student at Peking University  
Graduate research intern at MGH. **Mentoring role:** Advising research on image segmentation methodologies. **Accomplishment:** Research published in *IEEE JBHI* and presented at the 2018 *International Conference on Medical Image Computing and Computer-Assisted Intervention*, and the 2020 *IEEE International Symposium on Biomedical Imaging* (Best Paper Award).
- 2020-2020 Qinglin Dong, Research Fellow at MGH. **Mentoring role:** Advising research on neuroimage, especially functional MRI analysis and modeling. **Accomplishment:** Research presented at the 2020 *International Conference on Medical Image Computing and Computer-Assisted Intervention* and 2020 *International Workshop on Machine Learning in Medical Imaging*.
- 2019-2022 Peiting You, Ph.D. student at Peking University  
Graduate research intern at MGH. **Mentoring role:** Advising research on brain surface parcellation and image analysis for AD diagnosis. **Accomplishment:** Research published in *BME Frontiers* and *Frontiers in Human Neuroscience*.
- 2021- Jerome Charton, Research Fellow at MGH. **Mentoring role:** Advising research on the computational modeling of ultrasound, especially echocardiogram images. **Accomplishment:** Research presented at the 2022 *International Workshop on Advances in Simplifying Medical Ultrasound*.
- 2022- Zhengliang Liu, Ph.D. student at the University of Georgia  
Graduate research intern at MGH. **Mentoring role:** Advising research on natural language processing (NLP) in healthcare. **Accomplishment:** Research presented at the 2022 *International Workshop on Machine Learning in Medical Imaging*.
- 2022- Zhenhong Chen, Research Fellow at MGH. **Mentoring role:** Advising research on the image analysis of cardiac MRI.

2022- Sekeun Kim, Research Fellow at MGH. **Mentoring role:** Advising research on the differential diagnosis for cardiac conditions and image modeling for echocardiography.

### **Local Invited Presentations:**

☒ *No presentations below were sponsored by 3<sup>rd</sup> parties/outside entities*

- 2014 “Interactive and Automatic Cell/Synapse Detection by Exemplar Learning and Propagation”  
Allen Institute for Brain Science, Seattle, WA.
- 2014 “Introduction to Vaa3D: an open-source platform for 3D visualization-assisted analysis on large-scale bioimages.”  
The Georgia Advanced Computing Resource Center (GACRC), Athens, GA
- 2014 “Dictionary Learning in Functional Brain Imaging”  
Network of Greater Georgia Institutions for Neuroimaging and Statistics (NOGGINS) workshop, Athens, GA.
- 2015 “Investigation of Alternated Functional Dynamics in Autism fMRI Data”  
Department of Biomedical Engineering, Emory University, Atlanta, GA.
- 2015 “Introduction to Functional Brain Imaging”  
Department of Statistics, University of Georgia, Athens, GA
- 2016 “Brain Imaging and Functional Network Dynamics”  
Computational Medicine and Bioinformatics in the Medical School, University of Michigan, Ann Arbor, MI.
- 2016 “Scalable Fast Rank-1 Dictionary Learning for fMRI Big Data Analysis”  
Society for Industrial and Applied Mathematics, Southeastern Atlantic Section Conference (SIAM-SEAS), Athens, GA.

### **Report of Regional, National and International Invited Teaching and Presentations**

☒ *No presentations below were sponsored by 3<sup>rd</sup> parties/outside entities*

#### **Regional**

- 2015 “Dynamic Functional Connectivity Analysis on 512-Channel LFP long recording data”  
Brain and Behavior Discovery Institute, Medical College of Georgia, Augusta, GA.

#### **National**

- 2017 “Towards Practical Problems in Deep Learning for Radiology Image Analysis” (invited talk)  
Nvidia GPU Technology Conference, San Jose, CA.
- 2018 “Deep Learning Algorithm for rapid automatic detection of pneumothorax on chest CT” (selected oral abstract)  
Annual Meeting of American Roentgen Ray Society, Washington, D.C.
- 2019 “Personalized Healthcare for Heart Failure with Preserved Ejection Fraction (HFpEF): Diagnosis, Phenotyping and Treatment Optimization with Imaging and EHR Data”  
Department of Statistics, The University of Georgia, Athens, GA.
- 2022 “Novel Methodologies for Combined Image and EMR Modeling”



- Department of Computer Science and Engineering, The University of Texas at Arlington, Arlington, TX
- 2022 “Data Governance of the SAGES CVS Challenge” (invited talk)  
Society of American Gastrointestinal and Endoscopic Surgeons, Houston, TX (Virtual)
- 2023 “Application and Development of Foundational Models in Healthcare”  
Department of Electrical and Computer Engineering, University of Rochester, Rochester, NY (Virtual)

## International

- 2011 “Brain state change detection via fiber-centered functional connectivity analysis”  
(selected oral full-length paper)  
IEEE International Symposium on Biomedical Imaging, Chicago, IL.
- 2013 “Discovering common functional connectomics signatures” (selected oral full-length paper)  
IEEE International Symposium on Biomedical Imaging, San Francisco, CA.
- 2014 “Dynamic network partition via Bayesian connectivity bi-partition change point model”  
(selected oral full-length paper)  
IEEE International Symposium on Biomedical Imaging, Beijing, China.
- 2016 “Big Data Strategies on Neuroimaging Analysis: Challenge in Data Availability and Computation” (invited talk)  
International Conference on Brain Informatics and Health, Omaha, NE.
- 2017 “Opportunities, Challenges and Solutions for Artificial Intelligence in Medical Data Processing”  
Center for Data Science in Health and Medicine, Peking University, Beijing, China.
- 2019 “Towards Holistic Machine Intelligence in Healthcare Research and Clinical Practice”  
School of biomedical engineering, Shanghai Jiaotong University, Shanghai, China.
- 2019 “Large-Scale Spatial-Temporal Modeling”  
Chinese Center for Disease Control and Prevention, Beijing, China.
- 2019 “Automated Segmentation of Cervical Nuclei in Pap Smear Images using Deformable Multi-path Ensemble Model” (selected oral full-length paper)  
IEEE International Symposium on Biomedical Imaging, Venice, Italy.
- 2019 “Holistic Brain Representation for Discovery Science in Neuroimaging”  
Workshop on Computational Medical Imaging and Artificial Intelligence, Zhejiang University of Technology, China.
- 2022 “Data Analysis and Clinical Decision Support in Response to COVID-19: Experience from MGH Radiology and ED”  
School of Biomedical Engineering, Shanghai Tech University, Shanghai, China (Virtual)
- 2023 “Impact of ChatGPT on Medical Image Analysis”  
Medical Imaging Computing Seminar, Shanghai, China (Virtual)
- 2023 “Foundation Models in Medical Research and Clinical Application”  
Intelligent Medicine Forum, Beijing, China (Virtual)
- 2023 “Application and Development of Foundational Models in Healthcare”  
IEEE EMBS Webinar Series, “Frontiers of Biomedical Imaging and Analysis” (Virtual)

## **Report of Technological and Other Scientific Innovations**

Automatic pre-screening method for pneumothorax detection, 2017	Development of a software system for automatically detecting pneumothorax from CT images. The system has been validated internally by multiple radiologists. The innovation was filed as Invention Disclosure to Partners HealthCare in 2017.
Inference of 3D chest CT images from 2D chest radiographs, 2019	Development of an invention to directly infer 3D chest CT images from 2D radiographs. The technique learns the mapping between the 2D image and the 3D spatial structure information of the corresponding CT image from the teaching dataset, thus achieving trans-dimensional 2D-3D mapping. The innovation was filed as an Invention Disclosure to Partners HealthCare in 2020.
COVID-19 risk score prediction system and its integration into clinical workflow, 2020	Developing a risk assessment model for COVID-19 based on deep learning-based analysis of EHR and chest radiography data in the Emergency Department and facilitating deployment and integration of the model into the clinical workflow via multiple medical informatics solutions (hospital FHIR infrastructure, Epic Cognitive Computing, Nvidia Clara). The system is currently running online, making >4,000 inferences per day.
Predicting Alzheimer's Disease by Hierarchical Graph Convolution from Positron Emission Tomography Imaging (PETNet), 2021	Lead inventor of the Graph Convolutional Network-based Positron Emission Tomography (PET) image analysis program PETNet. The program can automatically diagnose Alzheimer's Disease (AD) and Mild Cognitive Impairment (MCI) from the input PET imaging data. The program features a hierarchical graph inference algorithm for fine-grained analysis of large-scale voxel-wise data and a Neural Architecture Search (NAS) scheme for identifying the optimal graph representing the brain images. The invention has been filed and approved as an Innovation Disclosure to MGB.
Brain Image Analysis by Graph-based Matched Signal Detection (MSD) Algorithm, 2021	Inventor of the Matched Signal Detection (MSD) algorithm for predicting whether the given signal (e.g., medical images) belongs to a specific graph (e.g., graph of disease / normal population). MSD algorithm identifies the subspace for graph-signal by eigenvectors of the Laplacian matrix of the graph, which provides a concise encoding of the graph structure. Graph Fourier transform (GFT) is applied to project the graph signals onto the identified subspace. Based on GFT-based processing of graph signals, we can then test signal models on graphs before with hypothesis tests. The invention has been filed and approved as an Innovation Disclosure to MGB.
Predicting Patient Outcomes of In-hospital Stay and Readmission for Managing Aortic Stenosis with Valve Replacement, 2022	Lead inventor of the Aortic Stenosis Ensemble Risk Prediction (AS-ERP) Model. AS-ERP performs Aortic Stenosis patient outcome (length of stay and readmission) prediction based on the input Electronic Medical Records (EMR) data. The model utilizes an ensemble learning scheme consisting of three machine learning classifiers for patient outcome prediction. Internal validation performance meets the clinical acceptance criteria and is superior to the current risk score system developed by the Society of Thoracic Surgeons. The invention is currently pending for patent.

## **Report of Scholarship**

### **Peer-Reviewed Scholarship in print or other media:**

**Research Investigations** \*indicates co-first authorship, \*\*indicates my mentee

- 1 Sun J, Hu X, Huang X, Liu Y, Li K, **Li X**, Han J, Guo L, Liu T, Zhang J. Inferring consistent functional interaction patterns from natural stimulus fMRI data. *NeuroImage*. 2012;61(4):987-99.
- 2 **Li X**, Lim C, Li K, Guo L, Liu T. Detecting brain state changes via fiber-centered functional connectivity analysis. *Neuroinformatics*. 2013;11(2):193.
- 3 Zhang X, Guo L, **Li X**, Zhang T, Zhu D, Li K, Chen H, Lv J, Jin C, Zhao Q, Li L, Liu T. Characterization of task-free and task-performance brain states via functional connectome patterns. *Medical Image Analysis*. 2013;17(8):1106.
- 4 Yuan Y, Jiang X, Zhu D, Chen H, Li K, Lv P, Yu X, **Li X**, Zhang S, Zhang T, Hu X, Han J, Guo L, Liu T. Meta-analysis of Functional Roles of DICCOLs. *Neuroinformatics*; 11(1):47.
- 5 **Li X**, Zhu D, Jiang X, Jin C, Zhang X, Guo L, Zhang J, Hu X, Li L, Liu T. Dynamic functional connectomics signatures for characterization and differentiation of PTSD patients. *Human brain Mapping*. 2014;35(4):1761.
- 6 Ou J, Lian Z, Xie L, **Li X**, Wang P, Hao Y, Zhu D, Jiang R, Wang Y, Chen Y, Zhang J, Liu T. Atomic dynamic functional interaction patterns for characterization of ADHD. *Human brain Mapping*. 2014;35(10):5262.
- 7 Sabatinelli D, Frank D, Wanger T, Dhamala M, Adhikari B, **Li X**. The timing and directional connectivity of human frontoparietal and ventral visual attention networks in emotional scene perception. *Neuroscience*. 2014;277:229.
- 8 Zhang J\*, **Li X\***, Li C, Lian Z, Huang X, Zhong G, Zhu D, Li K, Jin C, Hu X, Han J, Guo L, Hu X, Li L, Liu T. Inferring functional interaction and transition patterns via dynamic bayesian variable partition models. *Human Brain Mapping*. 2014;35(7):3314.
- 9 Zhang X\*, **Li X\***, Jin C, Chen H, Li K, Zhu D, Jiang X, Zhang T, Lv J, Hu X, Han J, Zhao Q, Guo L, Liu T. Identifying and characterizing resting state networks in temporally dynamic functional connectomes. *Brain Topography*. 2014;27(6):747.
- 10 Jiang X, **Li X**, Lv J, Zhang T, Zhang S, Guo L, Liu T. Sparse representation of HCP grayordinate data reveals novel functional architecture of cerebral cortex. *Human Brain Mapping*. 2015;36(12):5301.
- 11 Lv J\*, Jiang X\*, **Li X\***, Zhu D, Chen H, Zhang T, Zhang S, Hu X, Han J, Huang H, Zhang J, Guo L, Liu T. Sparse representation of whole-brain fMRI signals for identification of functional networks. *Medical Image Analysis*. 2015;20(1):112.
- 12 Lv J\*, Jiang X\*, **Li X\***, Zhu D, Zhang S, Zhao S, Chen H, Zhang T, Hu X, Han J, Ye J, Guo L, Liu T. Holistic atlases of functional networks and interactions reveal reciprocal organizational architecture of cortical function. *IEEE Transactions on Biomedical Engineering*. 2015;62(4):1120.
- 13 Lv J, Jiang X, **Li X**, Zhu D, Zhao S, Zhang T, Hu X, Han J, Guo L, Li Z, Coles C, Hu X, Liu T. Assessing effects of prenatal alcohol exposure using group-wise sparse representation of fMRI data. *Psychiatry Research: Neuroimaging*. 2015;233(2):254.
- 14 Makkie M, Zhao S, Jiang X, Lv J, Zhao Y, Ge B, **Li X**, Han J, Liu T. HAFNI-enabled largescale platform for neuroimaging informatics (HELPNI). *Brain Informatics*. 2015;2(4):225.
- 15 Ou J, Xie L, Jin C, **Li X**, Zhu D, Jiang R, Chen Y, Zhang J, Li L, Liu T. Characterizing and differentiating brain state dynamics via hidden Markov models. *Brain Topography*. 2015;28(5):666.
- 16 Ou J, Xie L, **Li X**, Zhu D, Terry DP, Puente AN, Jiang R, Chen Y, Wang L, Shen D, Zhang J, Miller LS, Liu T. Atomic connectomics signatures for characterization and differentiation of mild cognitive impairment. *Brain Imaging and Behavior*. 2015;9(4):663.
- 17 Hou Y, Xiao T, Zhang S, Jiang X, **Li X**, Hu X, Han J, Guo L, Miller LS, Neupert R, Liu T. Predicting Movie Trailer Viewer's "Like/Dislike" via Learned Shot Editing Patterns. *IEEE Transactions on Affective Computing*. 2016;7(1):29.
- 18 Zhang S\*, **Li X\***, Lv J, Jiang X, Guo L, Liu T. Characterizing and differentiating task-based and resting state fMRI signals via two-stage sparse representations. *Brain Imaging and Behavior*. 2016;10(1):21.

- 19 Jiang X, **Li X**, Lv J, Zhao S, Zhang S, Zhang W, Zhang T, Han J, Guo L, Liu T. Temporal dynamics assessment of spatial overlap pattern of functional brain networks reveals novel functional architecture of cerebral cortex. *IEEE Transactions on Biomedical Engineering*. 2016;65(6):1183.
- 20 Ge B, Makkie M, Wang J, Zhao S, Jiang X, **Li X**, Lv J, Zhang S, Zhang W, Han J, Guo L, Liu T. Signal sampling for efficient sparse representation of resting state fMRI data. *Brain Imaging and Behavior*. 2016;10:1206.
- 21 Li Y, Chen H, Jiang X, **Li X**, Lv J, Li M, Peng H, Tsien JZ, Liu T. Transcriptome Architecture of Adult Mouse Brain Revealed by Sparse Coding of Genome-Wide In Situ Hybridization Images. *Neuroinformatics*. 2017;15(3):285.
- 22 Li Y, Chen H, Jiang X, **Li X**, Lv J, Peng H, Tsien JZ, Liu T. Discover mouse gene coexpression landscapes using dictionary learning and sparse coding. *Brain Structure and Function*. 2017;222(9):4253.
- 23 Yuan J, **Li X**, Zhang J, Luo L, Dong Q, Lv J, Zhao Y, Jiang X, Zhang S, Zhang W, Liu T. Spatio-temporal modeling of connectome-scale brain network interactions via time-evolving graphs. *NeuroImage*. 2017;180:350.
- 24 Ge B, **Li X**, Jiang X, Sun Y, Liu T. A Dictionary Learning Approach for Signal Sampling in Task-based fMRI for Reduction of Big Data. *Frontiers in Neuroinformatics*. 2018;12.
- 25 Makkie M\*, **Li X\***, Quinn S, Lin B, Ye J, Mon G, Liu T. A Distributed Computing Platform for fMRI Big Data Analytics. *IEEE Transactions on Big Data*. 2018;5(2):109.
- 26 Thrall JH, **Li X**, Li Q, Cruz C, Do S, Dreyer K, Brink J. Artificial Intelligence and Machine Learning in Radiology: Opportunities, Challenges, Pitfalls, and Criteria for Success. *Journal of the American College of Radiology*. 2018;15(3):504.
- 27 Zhang W, Lv J, **Li X**, Zhu D, Jiang X, Zhang S, Zhao Y, Guo L, Ye J, Hu D, Liu T. Experimental Comparisons of Sparse Dictionary Learning and Independent Component Analysis for Brain Network Inference from fMRI Data. *IEEE Transactions on Biomedical Engineering*. 2018;66(1):289.
- 28 Guo Z\*\*, **Li X\***, Huang H, Guo N, Li Q. Deep Learning-based Image Segmentation on Multi-modal Medical Imaging. *IEEE Transactions on Radiation and Plasma Medical Sciences*. 2019;3(2):162.
- 29 **Li X**, Guo N, Li Q. Functional Neuroimaging in the New Era of Big Data. *Genomics Proteomics and Bioinformatics*. 2019; 17(4):393.
- 30 Wang H, Xie K, Xie L, **Li X**, Li M, Lyu C, Chen H, Chen Y, Liu X, Tsien J, Liu T. Functional Brain Connectivity Revealed by Sparse Coding of Large-Scale Local Field Potential Dynamics. *Brain Topography*. 2019;32(2):255.
- 31 Zhao Y\*, **Li X\***, Huang H, Zhang W, Zhao S, Makkie M, Zhang M, Li Q, Liu T. 4D Modeling of fMRI Data via Spatio-Temporal Convolutional Neural Networks (ST-CNN). *IEEE Transactions on Cognitive and Developmental Systems*. 2019;12(3):451.
- 32 **Li X**, Thrall JH, Digumarthy SR, Kalra MK, Pandharipande PV, Zhang B, Nitiwarangkul C, Singh R, Khara RD, Li Q. Deep learning-enabled system for rapid pneumothorax screening on chest CT. *European Journal of Radiology*. 2019;120:108692.
- 33 Wang X, Zhang L, Yang X, Tang L, Zhao J, Chen G, **Li X**, Yan S, Li S, Yang Y, Kang Y, Li Q, Wu N. Deep learning combined with radiomics may optimize the prediction in differentiating high-grade lung adenocarcinomas in ground glass opacity lesions on CT scans. *European Journal of Radiology*. 2020;129:109150.
- 34 Jeong S\*, **Li X\***, Yang J, Li Q, Tarokh V. Sparse Representation-Based Denoising for High-Resolution Brain Activation and Functional Connectivity Modeling: A Task fMRI Study. *IEEE Access*. 2020;8:36728.
- 35 Zhang M\*\*, **Li X\*** Xu M, Li Q. Automated Semantic Segmentation of Red Blood Cells for Sickle Cell Disease. *IEEE Journal of Biomedical and Health Informatics*. 2020;24:3095.
- 36 Wang P, Jiang X, Chen H, Zhang S, **Li X**, Cao Q, Sun L, Liu L, Yang B, Wang Y. Assessing Fine-Granularity Structural and Functional Connectivity in Children with Attention Deficit Hyperactivity Disorder. *Frontiers in Human Neuroscience*. 2020;14:481.

- 37 Zhong A\*, **Li X\***, Wu D, Ren H\*\*, Kim K, Kim Y, Buch V, Neumark N, Bizzo B, Tak WY, Park SY, Lee YR, Kang MK, Park JG, Kim, BS, Chung WJ, Guo N, Dayan I, Kalra MK, Li Q. Deep metric learning-based image retrieval system for chest radiograph and its clinical applications in COVID-19. *Medical Image Analysis*. 2021;70:101993.
- 38 Xue W, Li J, Hu Z, Kerfoot E, Clough J, Oksuz I, Xu H, Grau V, Guo F, Ng M, **Li X**, Li Q, Liu L, Ma J, Grinias E, Tziritas G, Yan W, Labrador AMA, Garreau M, Jang Y, Debus A, Ferrante E, Yang G, Hua T, Li S. Left Ventricle Quantification Challenge: A Comprehensive Comparison and Evaluation of Segmentation and Regression for Mid-ventricular Short-axis Cardiac MR Data. *IEEE Journal of Biomedical and Health Informatics*. 2021;25(9):3541.
- 39 Dayan I, Roth H R, Zhong A, Harouni A, Gentili A, Abidin A Z, Liu A, Costa A B, Wood B J, Tsai C-S, Wang C-H, Hsu C-N, Lee C K, Ruan P, Xu D, Wu D, Huang E, Kitamura F C, Lacey G, de Antônio Corradi G C, Nino G, Shin H-H, Obinata H, Ren H\*\*, Crane J C, Tetreault J, Guan J, Garrett J W, Kaggie J D, Park J G, Dreyer K, Juluru K, Kersten K, Rockenbach M A B C, Linguraru M G, Haider M A, AbdelMaseeh M, Rieke N, Damasceno P F, e Silva P M C, Wang P, Xu S, Kawano S, Sriswasdi S, Park S Y, Grist T M, Buch V, Jantarabenjakul W, Wang W, Tak W Y, **Li X**, Lin X, Kwon Y J, Quraini A, Feng A, Priest A N, Turkbey B, Glicksberg B, Bizzo B, Kim B S, Tor-Díez C, Lee C-C, Hsu C-J, Lin C, Lai C-L, Hess C P, Compas C, Bhatia D, Oermann E K, Leibovitz E, Sasaki H, Mori H, Yang I, Sohn J H, Murthy K N K, Fu L-C, de Mendonça M R F, Fralick M, Kang M K, Adil M, Gangai N, Vateekul P, Elnajjar P, Hickman S, Majumdar S, McLeod S L, Reed S, Gräf S, Harmon S, Kodama T, Puthanakit T, Mazzulli T, de Lavor V L, Rakvongthai Y, Lee Y R, Wen Y, Gilbert F J, Flores M G, Li Q. Federated learning for predicting clinical outcomes in patients with COVID-19. *Nature Medicine*. 2021;27:1735.
- 40 You P\*\*, **Li X\***, Wang Z, Wang H, Dong B, Li Q. Characterization of Brain Iron Deposition Pattern and Its Association with Genetic Risk Factor in Alzheimer's Disease Using Susceptibility-Weighted Imaging. *Frontiers in Human Neuroscience*. 2021;15.
- 41 You P\*\*, **Li X\***, Zhang F, Li Q. Connectivity-based Cortical Parcellation via Contrastive Learning on Spatial-Graph Convolution. *BME Frontiers*. 2022;Article ID 9814824.
- 42 Manubens-Gil L, Zhou Z, Chen H, Ramanathan A, Liu X, Liu Y, Bria A, Gillette T, Ruan Z, Yang J, Radojević M, Zhao T, Cheng L, Qu L, Liu S, Bouchard K E, Gu L, Cai W, Ji S, Roysam B, Wang C-W, Yu H, Sironi A, Iascone D M, Zhou J, Bas E, Conde-Sousa E, Aguiar P, **Li X**, Li Y, Nanda S, Wang Y, Muresan L, Fua P, Ye B, He H-y, Staiger J F, Peter M, Cox D N, Simonneau M, Oberlaender M, Jefferis G, Ito K, Gonzalez-Bellido P, Kim J, Rubel E, Cline H T, Zeng H, Nern A, Chiang A-S, Yao J, Roskams J, Livesey R, Stevens J, Liu T, Dang C, Guo Y, Zhong N, Tourassi G, Hill S, Hawrylycz M, Koch C, Meijering E, Ascoli G A, Peng H. BigNeuron: a resource to benchmark and predict performance of algorithms for automated tracing of neurons in light microscopy datasets. *Nature Methods*. 2023; In Press.
- 43 Wang Z, He M, Lv Y, Ge E, Zhang S, Qiang N, Liu T, Zhang F, **Li X**, Ge B. Accurate Corresponding Fiber Tract Segmentation via FiberGeoMap Learner with Application to Autism. *Cerebral Cortex*. 2023; In Press.

**Other peer-reviewed scholarship: \*indicates co-first authorship, \*\*indicates my mentee**

**Full-length proceedings of meetings which have undergone a formal peer-review process**

- 44 **Li X**, Li K, Guo L, Lim C, Liu T. Fiber-centered granger causality analysis. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2011.
- 45 Lim C\*, **Li X\***, Li K, Guo L, Liu T. Brain State Change Detection via Fiber-centered Functional Connectivity Analysis. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2011.
- 46 Zhang X, Guo L, **Li X**, Zhu D, Li K, Sun Z, Jin C, Hu X, Han J, Zhao Q. Characterization of task-free/task-performance brain states. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2012.

- 47 Zhang S, **Li X**, Lv J, Jiang X, Zhu D, Chen H, Zhang T, Guo L, Liu T. Sparse representation of higher-order functional interaction patterns in task-based fMRI data. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2013.
- 48 Zhang S, Lv J, **Li X**, Jiang X, Guo L, Liu T. Activated Cliques: Network-based Activation Detection in Task-based fMRI. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2013.
- 49 Lv J, **Li X**, Zhu D, Jiang X, Zhang X, Hu X, Zhang T, Guo L, Liu T. Sparse representation of group-wise fMRI signals. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2013.
- 50 Lv P, Guo L, Hu X, **Li X**, Jin C, Han J, Li L, Liu T. Modeling dynamic functional information flows on large-scale brain networks. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2013.
- 51 Wang P, Zhu D, **Li X**, Chen H, Jiang X, Sun L, Cao Q, An L, Liu T, Wang Y. Identifying Functional Connectomics Abnormality in Attention Deficit Hyperactivity Disorder. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2013.
- 52 **Li X**, Zhu D, Jiang X, Jin C, Guo L, Li L, Liu T, Discovering Common Functional Connectomics Signatures. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2013.
- 53 Zhu D, **Li X**, Jiang X, Chen H, Shen D, Liu T. Exploring High-order Functional Interactions via Structurally-weighted LASSO Models. *International Conference on Information Processing in Medical Imaging (IPMI)* 2013.
- 54 Lian Z\*, **Li X\***, Xing J, Lv J, Jiang X, Zhu D, Zhang S, Xu J, Potenza M, Liu T, Zhang J. Exploring Functional Brain Dynamics via a Bayesian Connectivity Change Point Model. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 55 Lian Z, Lv J, Xing J, **Li X\***, Jiang X, Zhu D, Xu J, Potenza M, Liu T, Zhang J. Generalized fMRI Activation Detection via Bayesian Magnitude Change Point Model. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 56 Lian Z\*, **Li X\***, Zhang H, Kuang H, Xie K, Xing J, Zhu D, Tsien J, Liu T, Zhang J. Detecting Cell Assembly Interaction Patterns via Bayesian-based Change-point Detection and Graph Inference Model. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 57 Lian Z\*, **Li X\***, Young T, Hao Y, Xing J, Lv J, Jiang X, Zhu D, Liu T, Zhang J. Dynamic Network Partition via Bayesian Connectivity Bi-Partition Change Point Model. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 58 Zhang S, Hu X, Lv J, Zhang T, **Li X**, Jiang X, Guo L, Liu T. Learning fMRI-guided Predictor of Video Shot Changes. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 59 Lv C, Hu X, Han J, Cheng G, **Li X**, Guo L, Liu T. Exploring Consistent Functional Brain Networks During Free Viewing of Videos via Sparse Representation. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 60 Zhu D, **Li X**, Liu T. Sparse Representation of Working Memory Processes based on fMRI Data. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 61 Jiang X, Lv J, Zhu D, Zhang T, **Li X**, Hu X, Guo L, Liu T. Discovering Network-level Functional Interactions from Working Memory fMRI Data. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2014.
- 62 **Li X**, Zhou Z, Keller P, Zeng H, Liu T, Peng H. Interactive exemplar-based segmentation toolkit for biomedical image analysis. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2015.
- 63 Ge B, Wang J, Lv J, Zhang S, Zhao S, Zhang W, Zhao Q, **Li X**, Jiang X, Han J, Guo L, Liu T. Signal Sampling for Efficient Sparse Representation of Resting-state fMRI Data. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2015.
- 64 Zhang S\*, **Li X\***, Lv J, Jiang X, Ge B, Guo L, Liu T. Characterizing and Differentiating Task-based and Resting-state fMRI Signals via Two-stage Dictionary Learning. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2015.

- 65 Jiang X, **Li X**, Lv J, Zhao S, Zhang S, Zhang W, Zhang T, Liu T. Modeling Functional Dynamics of Cortical Gyri and Sulci. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2016.
- 66 **Li X**, Makkie M, Lin B, Fazli M, Davidson I, Ye J, Liu T, Quinn S. Scalable Fast Rank-1 Dictionary Learning for fMRI Big Data Analysis. *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)* 2016.
- 67 **Li X**, Lin B, Lv J, Ye J, Liu T. Modeling Functional Network Dynamics via Multi-scale Dictionary Learning and Network Continuums. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2016.
- 68 **Li X**, Dong Q, Jiang X, Lv J, Liu T. Multiple-demand System Identification and Characterization via Sparse Representations of fMRI Data. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2016.
- 69 Lyu C, **Li X\***, Lv J, Hu X, Han J, Quo L, Liu T. Identifying Group-wise Consistent Sub-networks via Spatial Sparse Representation of Natural Stimulus fMRI Data. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2016.
- 70 Makkie M, **Li X\***, Liu T, Quinn S, Lin B, Ye J. Distributed Rank-1 Dictionary Learning: Towards Fast and Scalable Solutions for fMRI Big Data Analytics. *IEEE International Conference on Big Data* 2016.
- 71 Zhang S, **Li X\***, Guo L, Liu T. Exploring Human Brain Activation via Nested Sparse Coding and Functional Operators. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2017.
- 72 Zhao Y\*, **Li X\***, Makkie M, Quinn S, Lin B, Ye J, Liu T. Template-guided Functional Network Identification via Supervised Dictionary Learning. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2017.
- 73 **Li X**, Zhong A, Lin M, Guo N, Sun M, Sitek A, Ye J, Thrall J, Li Q. Self-paced Convolutional Neural Network for Computer Aided Detection in Medical Imaging Analysis. *International Workshop on Machine Learning in Medical Imaging (MLMI)* 2017.
- 74 Jeong S\*, **Li X\***, Yang J, Li Q, Tarokh V. Dictionary Learning and Sparse Coding-based Denoising for High-Resolution Task Functional Connectivity MRI Analysis. *International Workshop on Machine Learning in Medical Imaging (MLMI)* 2017.
- 75 Jiasha Liu\*, **Li X\***, Ren H\*\*, Li Q. Multi-estimator Full Left Ventricle Quantification Through Ensemble Learning. *International Workshop on Statistical Atlases and Computational Models of the Heart (STACOM)* 2018.
- 76 Guo Z\*\*, **Li X\***, Huang H, Guo N, Li Q. Medical Image Segmentation based on Multi-modal Convolutional Neural Network: Study on Image Fusion Schemes. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2018.
- 77 Zhao Y\*, **Li X\***, Zhang W, Zhao S, Makkie M, Zhang M\*\*, Li Q, Liu T. Modeling 4D fMRI Data via Spatio-Temporal Convolutional Neural Networks (ST-CNN). *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2018.
- 78 Zhang M\*\*, **Li X\***, Xu M, Li Q. Image Segmentation and Classification for Sickle Cell Disease using Deformable U-Net. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2018.
- 79 Wu D, Gong K, Kim K, **Li X**, Li Q. Consensus Neural Network for Medical Image Denoising with Only Noisy Training Samples. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2019.
- 80 Zhou Z, Guo N, Cui J, Meng X, Hu Y, Bao H, **Li X**, Li Q. Novel Radiomic Features Based on Graph Theory for PET Image Analysis. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2019.
- 81 Zhao X\*\*, **Li X\***, Guo N, Zhou Z, Meng X, Li Q. Multi-Size Computer-Aided Diagnosis Of Positron Emission Tomography Images Using Graph Convolutional Networks. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2019.

- 82 Bao H, Ren H\*\*, Zhou Z, **Li X**, Guo N, Li Q. 3D Regional Shape Analysis of Left Ventricle Using MR Images: Abnormal Myocardium Detection and Classification. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2019.
- 83 Guo J\*\*, Qiu W, **Li X**, Zhao X, Guo N, Li Q. Predicting Alzheimer's Disease by Hierarchical Graph Convolution from Positron Emission Tomography Imaging. *IEEE International Conference on Big Data* 2019.
- 84 Qiu W, Guo J\*\*, **Li X**, Xu M, Zhang M\*\*, Guo N, Li Q. Multi-label Detection and Classification of Red Blood Cells in Microscopic Images. *IEEE International Conference on Big Data* 2020.
- 85 Dong Q\*\*, Qiang N, Lv J, **Li X**, Dong L, Liu T, Li Q. A Novel fMRI Representation Learning Framework with GAN. *International Workshop on Machine Learning in Medical Imaging (MLMI)* 2020.
- 86 Zhang M\*\*, Zhao J\*, **Li X**\*, Zhang L, Li Q. ASCNet: Adaptive-Scale Convolutional Neural Networks for Multi-Scale Feature Learning. *IEEE International Symposium on Biomedical Imaging (ISBI)* 2020.
- 87 Dong Q\*\*, Qiang N, Lv J, **Li X**, Liu T, Li Q. Spatiotemporal Attention Autoencoder (STAAE) for ADHD Classification. *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2020.
- 88 Dong Q\*\*, Qiang N, Lv J, **Li X**, Liu T, Li Q. Discovering Functional Brain Networks with 3D Residual Autoencoder (ResAE). *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)* 2020.
- 89 Charton J\*\*, Ren H\*\*, Khambhati J, DeFrancesco J, Cheng J, Waheed A, Marciniak S, Moura F, Cardoso R, Lima B, Steen E, Samset E, Picard M, **Li X**, Li Q. View Classification of Color Doppler Echocardiography via Automatic Alignment Between Doppler and B-Mode Imaging. *International Workshop on Advances in Simplifying Medical Ultrasound (ASMUS)* 2022.
- 90 Rezayi S, Dai H, Liu Z\*\*, Wu Z, Hebbar A, Burns A, Zhao L, Zhu D, Li Q, Liu W, Li S, Liu T, **Li X**. ClinicalRadioBERT: Knowledge-Infused Few-Shot Learning for Clinical Notes Named Entity Recognition. *International Workshop on Machine Learning in Medical Imaging (MLMI)* 2022.

#### **Thesis:**

Title: **Machine Learning Approaches towards Holistic Brain Functional Space Discovery from fMRI Big Data**

by Xiang Li Ph.D., University of Georgia, August 2016

Advisor: Distinguished Prof. Tianming Liu

School: University of Georgia, Department of Computer Science

Source Type: Ph. D.

Subjects: Medical Image Analysis, Machine Learning, Big Data, Neuroimaging

Citation (including journal papers in the thesis): >1000

#### **Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings:**

- 1 Ren H\*\*, Yu S, **Li X**, Qiu W, Zhong A, Guo N, Li Q. Personalized Treatment for Heart Failure with Preserved Ejection Fraction Using Deep Reinforcement Learning. *Annual Meeting of American Heart Association (AHA)* 2019.
- 2 Wang X\*, **Li X**\*, Chen Q, Wu N, Li Q. Transition Patterns between N1 and N2 Stations Discovered from Data-driven Lymphatic Metastasis Study in Non-Small Cell Lung Cancer. *World Conference on Lung Cancer (WCLC)* 2019.



- 3 **Li X**, Ren H\*\*, Charton J, Khambhati J, Gonzalez C, Kelley-Cogdell A, Hong V, Steen E, Samset E, Kaneko T, Picard M, Li Q. Machine Learning Model for Aortic Stenosis Patient Outcome Prediction. *AMIA Clinical Informatics Conference* 2023.