

# Yang Li

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Google Scholar: [Open Link](#)

I am an Associate Professor at the School of AI, The Chinese University of Hong Kong, Shenzhen. I lead the **Trustworthy AI Lab**, which is dedicated to **improving the robustness, adaptability, and interpretability of neural learning systems through theory-driven and geometry-aware approaches**.

A key contribution of my work is **transferability estimation**, which uses statistical and information-theoretic principles to **quantify knowledge transfer** among models and tasks. This line of research has led to a unified framework for **reliable AI adaptation** in both multi-expert ensemble transfer and continual learning settings. It has also been successfully applied to **safety-critical interdisciplinary applications**, such as medical image processing and battery health management, yielding significant reduction in data annotation costs and enhanced robustness in different environments.

## Education

Ph.D. in **Computer Science**, Stanford University, 2011 - 2017. GPA: 3.752

*Dissertation: Exploiting Shared Structures in Large GPS Trajectory Datasets under Uncertainty*  
*Advisor: Leonidas J. Guibas*

B.A. Double major in **Computer Science** and **Mathematics**, Smith College, 2007 - 2011. GPA: 3.91

*Honors Thesis: Inverse Kinematics Methods for the Protein Loop Closure Problem*  
*Advisor: Ileana Streinu*

## Research Interests

- **Adaptive machine learning**: Transferability estimation, domain adaptation and generalization, continual learning
- **Intreptable representation learning**: Dictionary learning, compositional sequence representation
- Adaptive and interpretable learning for **2D/3D medical data**

## Funding Highlights

### *National Projects*

**National Natural Science Foundation of China, General Program**, “Optimizing Transfer Strategies for Medical Images via Latent Structure Learning among Heterogeneous Tasks” (62371270), **Principle Investigator**, 500,000 CNY, 01/2024 – 12/2027. (On-going)

**National Natural Science Foundation of China, Young Scholar Program**, “Heterogeneous Multi-Task Transfer Learning for Medical Image Understanding” (62001266), **Principle Investigator**, 240,000 CNY, 01/2021 – 12/2023 (Completed)

## Industry & Regional Projects

**China Unicom, Online Industry Intelligent Agent Key Technology Research and Application Demonstration Project**, “Industry Intelligent Agent Module”, **Principle Investigator**, 4,748,800 CNY, 07/2024- 1/2026 (Completed)

**Meituan Scholar Program: International Collaboration Project**, “Automation and Resilience in Construction Site Surveillance (ARCS2)”, **Principle Investigator**, 500,000, 04/2023 - 12/2025 (Completed) *In collaboration with the Civil & Environmental Engineering Department, U.C. Berkeley*

**Beijing Gaode Yuntu Technology Ltd.**, “Multi-scale Ride-hailing Demand Forecasting based on Multi-task Learning”, **Principle Investigator**, 497,200 CNY, 05/2022- 05/2023 (Completed)

**Shenzhen Municipal Government (via Audaque Data Technology Ltd.)**, “Intelligent Resume Analysis Platform”, **Principle Investigator**, 2,000,000 CNY, 01/2022 – 06/2024 (Completed)

**Shenzhen Municipal Government**, “Data Analytics for Anti-Pandemic Pioneers APP”, **Principle Investigator**, 125,000 CNY, 10/2020 – 04/2022 (Completed)

## Research & Work Experience

Associate Professor **Feb 2026 - Present**  
*School of Artificial Intelligence,*  
*The Chinese University of Hong Kong, Shenzhen*

Associate Professor **Jan 2023 - Jan 2026**  
*Institute of Data and Information,*  
*Tsinghua Shenzhen International Graduate School*

Visiting Research Affiliate **Oct 2023 - Jan 2024**  
*Computer Science Department, University of Texas, Austin*

Assistant Professor **October 2019 - Dec 2022**  
*Data Science and Information Technology Research Center, Tsinghua-Berkeley Shenzhen Institute,*  
*Tsinghua Shenzhen Graduate International School*

Postdoctoral Researcher **September 2017 - September 2019**  
*IoT and Cyber-Physical System Lab, Tsinghua-Berkeley Shenzhen Institute.*  
 Principal Investigators: Lin Zhang, Khalid Mosalam

Graduate Research Assistant **July 2012 - December 2016**  
*Geometric Computing Lab, Stanford University.* **September 2011 - March 2012**  
 Advisor: Leonidas J. Guibas

Graduate Research Assistant **April 2012 - June 2012**  
*First Year Research Rotation Program, Computer Science Department, Stanford University.*  
 Advisor: Kenneth Salisbury

Undergraduate Fellow **May 2009 - April 2011**  
*Mellon Mays Undergraduate Research Fellowship Program, Smith College*  
 Faculty mentor: Ileana Streinu

## Representative Publications

\*: Corresponding author, \_: Student first author, †: Co-first author

## Reliable Transfer Learning and Robust Representation Learning

Enming Zhang, Liwen Cao, Yanru Wu, Zijie Zhao, Guan Wang, **Yang Li\***, Learning Optimal Prompt Ensemble for Multi-source Visual Prompt Transfer, *The 38th Annual AAAI Conference on Artificial Intelligence (AAAI'26)*, 2026 (Accepted) **(CCF-A)**

Yanru Wu, Xiangyu Chen, Jianning Wang, Enming Zhang, Hanbing Liu and **Yang Li\***, Exploiting Task Relationships for Continual Learning using Transferability-Aware Task Embeddings, *Advances in Neural Information Processing Systems (NeurIPS'25)*, 2025 (Accepted) **(CCF-A)**

Qingyue Zhang, Haohao Fu, Guanbo Huang, Yaoyuan Liang, Chang Chu, Tianren Peng, Yanru Wu, Qi Li, **Yang Li\***, Shao-Lun Huang\*, A High-Dimensional Statistical Method for Optimizing Transfer Quantities in Multi-Source Transfer Learning, *Advances in Neural Information Processing Systems 2025 (NeurIPS'25)*, 2025 (Accepted) **(CCF-A)**

Yang Tan, **Yang Li\***, Shao-Lun Huang, and Xiao-Ping Zhang, Transferability-Guided Cross-Domain Cross-Task Transfer Learning, in *IEEE Transactions on Neural Networks and Learning Systems*, 36:2, 2025 **(IF: 14.25, Citation: 21)**

Jingge Wang, Liyan Xie, Yao Xie, Shao-Lun Huang and **Yang Li\***, Generalizing to Unseen Domains with Wasserstein Distributional Robustness under Limited Source Knowledge, in *IEEE Journal of Selected Topics in Signal Processing*, 14: 8, 2024 **(IF: 13.7)**

Jingge Wang, Yang Tan, Haohua Wang, **Yang Li\***, Generalizing towards the future: Discovering Dynamics among Evolving Domains via Disentangled Variational Autoencoders, *Journal of the Franklin Institute*, 2025. **(IF:4.2)**

Jiahao Lai, Jiagi Li, Jian Xu, Yanru Wu, Boshi Tang, Siqi Chen, Yongfeng Huang, Wenbo Ding, and **Yang Li\***, pFedGPA: Diffusion-based Generative Parameter Aggregation for Personalized Federated Learning, In *Proceedings of the 38th Annual AAAI Conference on Artificial Intelligence (AAAI'25)*, 2025. **(CCF-A)**

Yanru Wu, Jianning Wang, Weida Wang and **Yang Li\***. H-ensemble: An Information Theoretic Approach to Reliable Few-Shot Multi-Source-Free Transfer. In *Proceedings of the 38th AAAI Conference on Artificial Intelligence (AAAI'24)*, 2024. **(CCF-A)**

Dexu Kong, Anping Zhang, **Yang Li\***, Learning Persistent Community Structures in Dynamic Networks via Topological Data Analysis, in *Proceedings of the 38th Annual AAAI Conference on Artificial Intelligence (AAAI'24)*, 2024. **(CCF-A)**

Yang Tan, **Yang Li\*** and Shao-lun Huang. OTCE: A Transferability Metric for Cross-Domain Cross-Task Representations. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR'21)*, pp. 15779-15788. 2021. **(CCF-A, Oral Presentation, Citation: 95 )**

Yajie Bao<sup>†</sup>, **Yang Li<sup>†</sup>**, Shao-Lun Huang, Lin Zhang, Lizhong Zheng, Amir R. Zamir, and Leonidas Guibas. An Information-Theoretic Metric to Transferability for Task Transfer Learning. In *Proceedings of the 26th IEEE International Conference on Image Processing (ICIP'19)*, 2019. (<sup>†</sup>Joint first author). **(Oral Presentation, Citation: 188)**

## Interdisciplinary Highlights

Shengyu Tao<sup>†</sup>, Mengtian Zhang<sup>†</sup>, Zixi Zhao<sup>†</sup>, Haoyang Li, Ruifei Ma, Yunhong Che, Xin Sun, Lin Su, Chongbo Sun, Xiangyu Chen, Heng Chang, Shiji Zhou, Zepeng Li, Hanyang Lin, Yaojun Liu, Wenjun Yu, Zhongling Xu, Han Hao, Scott Moura, Xuan Zhang\*, **Yang Li\***, Xiaosong Hu\* and Guangmin Zhou\*, Non-destructive degradation pattern decoupling for early battery trajectory prediction via physics-informed learning, *Energy & Environmental Science*, 18, 1544-1559, 2025 **(IF: 32.4, Cover Article)**

Hu, Fan, Weihong Zhang, Huazhen Huang, Wang Li, **Yang Li**, and Peng Yin, A Transferability-Based Method for Evaluating the Protein Representation Learning, in *IEEE Journal of Biomedical and Health Informatics*, 2024 (**JCR Q1, IF: 6.7**)

Anping Zhang, Ke Zhang, Wanda Li, Yue Wang, **Yang Li\*** and Lin Zhang. Optimising Self-Organised Volunteer Efforts in Response to the COVID-19 Pandemic, *Humanities and Social Sciences Communications*, 9:134, 2022. (**SJR Q1, IF:3.7**)

Zhoulei Li<sup>†</sup>, Feifan He<sup>†</sup>, Ruonan Zhang<sup>†</sup>, Shanshan Zhu<sup>†</sup>, Qinxian Chen, Shuntian Wu, Fei Meng, Siqi Chen, Cicong Hu, Yangdi Wang, Jinjiang Lin, Weikai Zheng, Jixin Meng, Yuqin Lin, Dan-Chai Chen, Canhui Sun, Zhenpeng Peng, Ren Ma, Li Shi\*, Shi-Ting Feng\*, **Yang Li\***, Xuehua Li\*, Human Knowledge-Enhanced Large Language Model Agent for Prediction of Intestinal Disease Progression in Patients With Crohn's Disease: A Multicenter Retrospective Study, *Meta-Radiology*, 2025 (Accepted)

See [Full Publication List](#) for a complete list of my publications.

## Invited Talks

*Tutorial: Information-Theoretic Measures for Multi-Expert Foundation Model Adaptation, Conference on Lifelong Agents (CoLLAs)*, Philadelphia, United States, 2025

*Trustworthy Multi-Expert Knowledge Transfer via Transferability Estimation, University of Texas, Austin*, April 18, 2025

*Trustworthy Multi-Expert Knowledge Transfer via Transferability Estimation, City University of Hong Kong*, April 3, 2025

*Transferability-guided Transfer Learning for Foundation Models, The Hong Kong University of Science and Technology (Guangzhou)*, February 22, 2024

*Transferability Guided Transfer Learning, National and Kapodistrian University of Athens*, June 12, 2023.

*A Data Science Perspective on Social Self-Organization, TEDxShenzhen Conference*, Aug 15th, 2022.

*Measuring Transferability in Transfer Learning, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences*, Dec 12th, 2021

*Using Maximal Correlation for Task Transferability Estimation and Multi-Modal Learning, The 2nd TBSI Workshop on Data Science*, Dec 18th, 2019

*Using Maximal Correlation for Task Transferability Estimation and Multi-Modal Learning, Qian Xuesen Laboratory for Space Technology, CASC*, Oct 11th, 2019

*Using Maximal Correlation for Task Transferability Estimation and Multi-View Learning, Texas A&M University, College Station*, July 10th, 2019

*Exploiting Shared Structures in GPS Trajectory Data under Uncertainty, Smith College*, Nov 12th, 2018

## Community Service

### *Professional Societies*

- Image, Video, and Multidimensional Signal Processing Technical Committee (IVMSP TC) Member, IEEE Signal Processing Society

- IEEE Member, Signal Processing Society, Computing Society
- ACM Member

#### *Editorial Service*

- **Publicity Editor**, IEEE Journal on Selected Topics in Signal Processing, 2025-Present
- **Associated Editor**, Franklin Open, 2024-Present
- **Editorial Board Member**, Digital Signal Processing, 2024-Present

#### *Conference & Workshops*

- **Technical Program Co-Chair**, 15th IEEE Image, Video, and Multidimensional Signal Processing Workshop, June 13-17, Shenzhen, China, 2026 (In Preparation)
- **Program Committee Member**, 40th Annual AAAI Conference on Artificial Intelligence, Singapore, 2026
- **Local Arrangement Co-Chair**, 2024 IEEE Workshop on Information Theory, Nov 11-14, Shenzhen, China, 2024
- **General Chair**, 2nd IDI International Workshop on Learning and Information Theory, Shenzhen, China, Aug 19-20, 2024
- **Competition Area Chair**, IEEE 33rd International Workshop on Machine Learning for Signal Processing (MLSP), Rome, Italy, September 17-20, 2023
- **General Co-Chair**, 1st TBSI Workshop on Data Science, Shenzhen, China, Dec 17-19, 2019
- **Publicity Chair**, 2nd TBSI Workshop on Learning Theory, Shenzhen, China, July 20-22, 2020
- **Program Committee Member**, 26th International Conference on Neural Information Processing, Sydney, Australia, Dec 12-15, 2019

#### *Reviewer*

IEEE Transaction on Multimedia, Digital Signal Processing, IEEE Transactions on Intelligent Transportation Systems, ACM Computing Surveys, ACM Transactions on Spatial Algorithms and Systems, IEEE Transactions on Circuits and Systems for Video Technology, European Journal of Control, IEEE International Conference on Image Processing, International Conference on Artificial Intelligence and Statistics, IEEE Intelligent Transportation Systems Conference, International Conference on Learning Representations, Conference on Neural Information Processing Systems, International Conference on Computer Vision and etc.

## Teaching Experience

All courses are taught in English.

Lecturer: Predictive Machine Learning  
Tsinghua Shenzhen International Graduate School

**Spring 2025**

Lecturer: Learning from Data  
Tsinghua Shenzhen International Graduate School

**Fall 2019-2022, Spring 2024, Fall 2024**

Lecturer: Compressive Sensing and Sparse Modeling: Theory, Algorithm and Applications  
Tsinghua Shenzhen International Graduate School

**Summer 2024**

Lecturer: Seminar in Data Science – Advanced Learning Representations <i>Tsinghua Shenzhen International Graduate School</i>	<b>Spring 2022-2024</b>
Lecturer: Introduction to Transfer Learning <i>Tsinghua Shenzhen International Graduate School</i>	<b>Summer 2021, Spring 2022-2023</b>
Lecturer: Data Mining: Theory and Applications <i>Tsinghua Shenzhen International Graduate School</i>	<b>Fall 2020</b>
Guest Lecturer: Introduction to Environmental Science, Energy and Information <i>Tsinghua-Berkeley Shenzhen Institute</i>	<b>Fall 2019</b>
Co-Lecturer: Learning from Data <i>Tsinghua-Berkeley Shenzhen Institute</i>	<b>Fall 2017</b>
Guest Lecturer: Hybrid Design and Smart City <i>Tsinghua-Berkeley Shenzhen Institute</i>	<b>Summer 2017</b>

## Student Supervision

### *Current Students*

- Advising 7 Ph.D. students as the sole advisor, and co-advising 2 additional Ph.D. students at Pengcheng Lab (primary advisor) and Tencent (secondary advisor), respectively.
- Advising 10 Master of Science students.

### *Graduated Students*

- Advised 3 Ph.D. graduates as the sole advisor.
- Advised 16 Master of Science graduates as the sole advisor, and co-advised 2 Master of Science graduates, for whom I served as the secondary advisor (two advisors in total).

Graduated students have proceeded to Ph.D. programs at leading institutions such as **Harvard, Yale, Tsinghua University, and the University of Hong Kong**, or to R&D roles in major technology companies and research institutes such as **Huawei, Tencent, Baidu, ByteDance and Queen Mary University of London**.

*Note:* The Master of Science program at TBSI/Tsinghua SIGS follows a 3-year structure.

## Honors, Awards & Fellowships

- Best Paper Award, *Joint Mobility Pattern Mining with Urban Region Partitions*, EAI International Conference on Mobile and Ubiquitous Systems (2018);
- Stanford Graduate Fellowship in Science and Engineering, Stanford University (2012);
- Highest Honors Thesis in Computer Science, Smith College (2011);

## Patents

### Issued Patents:

Xi Guo, Zhenbo Wang, Guan Wang, **Yang Li**, Liye Zhang, *A Multi-Turn Dialogue Processing Method and System based on RAG and Knowledge Graph*, March 4, 2025, China, ZL202411368822.1

Xi Guo, Zhenbo Wang, Guan Wang, **Yang Li**, Liye Zhang, *A Reinforcement Learning-based Adversarial Training Method and System for Dialogue Generation*, granted on December 27, 2024, China, ZL202411229238.1

Zhiwei Liu, Yongchi Zhu, Qiqi Chen, **Yang Li**, Lin Zhang, Dexu Kong, Zhiyuan Peng, Ke Li, *A Decision Support Method and System for Personnel Appointment based on Large Resume Data*, Tsinghua Shenzhen International Graduate School, July 19, 2021, China, ZL202110813044.6

### Patents Applications:

Zhiyuan Peng, Xiangyu Chen, **Yang Li**, Haomin Wen, *Travel Demand Prediction Method, Device, and Electronic Equipment*, January 12, 2024, China, 202410052270.0

## Full Publication List

\*: Corresponding author, -: Student first author, †: Co-first author

### Preprints

Zihui Zhao, Yuanbo Tang, Jieyu Ren, Xiaoping Zhang, **Yang Li**\*, A Unified Probabilistic Framework for Dictionary Learning with Parsimonious Activation, arXiv preprint arXiv:2509.25690

### Journal Papers

Zhiyuan Peng, Naifan Zhang, Yuanbo Tang, and **Yang Li**\*. Dy-mer: An Explainable DNA Sequence Representation Scheme using Dictionary Learning. *Journal of the Franklin Institute* (2025): 108-307, 2025.

Zhoulei Li<sup>†</sup>, Feifan He<sup>†</sup>, Ruonan Zhang<sup>†</sup>, Shanshan Zhu<sup>†</sup>, Qinxian Chen, Shuntian Wu, Fei Meng, Siqi Chen, Cicong Hu, Yangdi Wang, Jinjiang Lin, Weikai Zheng, Jixin Meng, Yuqin Lin, Dan-Chai Chen, Canhui Sun, Zhenpeng Peng, Ren Ma, Li Shi\*, Shi-Ting Feng\*, **Yang Li**\*, Xuehua Li\*, Human Knowledge-Enhanced Large Language Model Agent for Prediction of Intestinal Disease Progression in Patients With Crohn's Disease: A Multicenter Retrospective Study, *Meta-Radiology*, 2025 (Accepted)

Zihui Zhao, Yifei Zhang, Zheng Wang, **Yang Li**, Kui Jiang, Zihan Geng and Chia-Wen Lin, S2ML: Spatio-Spectral Mutual Learning for Depth Completion, *IEEE Transactions on Multimedia*, 2025 (Accepted)

Jingge Wang, Yang Tan, Haohua Wang, **Yang Li**\*, Generalizing towards the future: Discovering Dynamics among Evolving Domains via Disentangled Variational autoencoders, *Journal of the Franklin Institute*, 2025

Shengyu Tao<sup>†</sup>, Mengtian Zhang<sup>†</sup>, Zixi Zhao<sup>†</sup>, Haoyang Li, Ruifei Ma, Yunhong Che, Xin Sun, Lin Su, Chongbo Sun, Xiangyu Chen, Heng Chang, Shiji Zhou, Zepeng Li, Hanyang Lin, Yaojun Liu, Wenjun Yu, Zhongling Xu, Han Hao, Scott Moura, Xuan Zhang\*, **Yang Li**\*, Xiaosong Hu\* and Guangmin Zhou\*, Non-Destructive Degradation Pattern Decoupling for Early Battery Trajectory Prediction via Physics-Informed Learning, *Energy & Environmental Science*, 18, 1544-1559, 2025

Taurai Muvunza, **Yang Li**, and Ercan E. Kuruoglu, Cauchy Graph Convolutional Networks, *International Journal of Approximate Reasoning*, 109517, 2025.

Jingge Wang, Liyan Xie, Yao Xie, Shao-Lun Huang and **Yang Li\***, Generalizing to Unseen Domains with Wasserstein Distributional Robustness under Limited Source Knowledge, in *IEEE Journal of Selected Topics in Signal Processing*, 14: 8, 2024

Yang Tan, **Yang Li\***, Shao-Lun Huang, and Xiao-Ping Zhang, Transferability-Guided Cross-Domain Cross-Task Transfer Learning, in *IEEE Transactions on Neural Networks and Learning Systems*, 36:2, 2024

Shengyu Tao, Ruifei Ma, Zixi Zhao, Guangyuan Ma, Lin Su, Heng Chang, Yuou Chen, Haizhou Liu, Zheng Liang, Tingwei Cao, Haocheng Ji, Zhiyuan Han, Minyan Lu, Huixiong Yang, Zongguo Wen, Jianhua Yao, Rong Yu, Guodan Wei, **Yang Li**, Xuan Zhang, Tingyang Xu and Guangmin Zhou, Generative learning assisted state-of-health estimation for sustainable battery recycling with random retirement conditions, *Nature Communications*, vol 15, no. 1, 2024

Zhuojun Cai, Qihang Wang, Yubin Deng, Peng Zhang, Gai Zhou, **Yang Li**, and Faisal Nadeem Khan, Domain adversarial adaptation framework for few-shot QoT estimation in optical networks, *Journal of Optical Communications and Networking*, vol 16, no. 11, 2024: 1133-1144.

Hu, Fan, Weihong Zhang, Huazhen Huang, Wang Li, **Yang Li**, and Peng Yin, A Transferability-Based Method for Evaluating the Protein Representation Learning, in *IEEE Journal of Biomedical and Health Informatics*, 2024

Xinlei Chen, Baining Zhao, Xuzhe Wang, Tianyu Zhang, Rongye Shi, Fengli Xu, Fanhang Man, Erbing Chen, **Yang Li**, Yong Li, and Tao Sun, Estimating and modelling spontaneous mobility changes during the COVID-19 pandemic without stay-at-home orders, *Humanities and Social Sciences Communications*, 11: 591, 2024

Taurai Muvunza and **Yang Li\***, Session-based Recommendation with Temporal Dynamics for Large Volunteer Networks, *Journal of Intelligent Information Systems*, 2023

Qihang Wang, Zhuojun Cai, Alan Pak Tao Lau, **Yang Li**, and Faisal Nadeem Khan, Invariant convolutional neural network for robust and generalizable QoT estimation in fiber-optic networks, *Journal of Optical Communications and Networking*, 15:7, 431-441, 2023

Shuailei Zhang, Kai Keng Ang, Dezhi Zheng, Qianxin Hui, Xinlei Chen, **Yang Li**, Ning Tang, Effie Chew, Rosary Yuting Lim, and Cuntai Guan. Learning EEG Representations With Weighted Convolutional Siamese Network: A Large Multi-Session Post-Stroke Rehabilitation Study. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 30: 2824-2833, 2022.

Anping Zhang, Ke Zhang, Wanda Li, Yue Wang, **Yang Li\*** and Lin Zhang. Optimising Self-Organised Volunteer Efforts in Response to the COVID-19 Pandemic, *Humanities and Social Sciences Communications*, 9:134, 2022.

Fei Ma, **Yang Li**, Shiguang Ni, Shao-Lun Huang, and Lin Zhang. Data Augmentation for Audio-Visual Emotion Recognition with an Efficient Multimodal Conditional GAN, *Applied Sciences* 12, no. 1: 527. 2022

Dashuai Wang, Runfeng Cao, Shaogang Hao, Chen Liang, Guangyong Chen, Pengfei Chen, **Yang Li**, and Xiaolong Zou. Accelerated prediction of Cu-based single-atom alloy catalysts for CO<sub>2</sub> reduction by machine learning, *Green Energy & Environment*, 2021

Jing Lian, **Yang Li**, Weixi Gu, Shao-Lun Huang, Lin Zhang. Mining Regional Mobility Patterns for Urban Dynamic Analytics. *Mobile Networks and Applications*, 25(2): 459-473, 2020

**Yang Li**, Dimitrios Gunopulos, Cewu Lu and Leonidas Guibas, Personalized Travel Time Prediction using a Small Number of Probe Vehicles, *ACM Transactions on Spatial Algorithms and Systems*, Special Issue on Urban Mobility: Algorithms and Systems, 2019.

### Conference Papers

Yuanbo Tang, Yan Tang, Naifan Zhang, Meixuan Chen and **Yang Li\***, Specialization through Collaboration: Understanding Expert Interaction in Mixture-of-Expert Large Language Models, The 18th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2026), 2026 (Accepted)

Yuanbo Tang, Yan Tang, Zixuan Zhang, Zihui Zhao and **Yang Li\***, Data-Efficient and Robust Trajectory Generation through Pathlet Dictionary Learning, The 3rd Conference on Parsimony and Learning (CPAL 2026), 2026 (Accepted)

Zixi Zhao, Jiahao Lai, Siqi Chen, **Yang Li\*** and Xiao-Ping Zhang, Adaptive topological constraint enhanced pedestrian trajectory prediction, IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2026 (Accepted)

Enming Zhang, Zhengyu Li, Yanru Wu, Jingge Wang, Yang Tan, Ruizhe Zhao, Xiao-Ping Zhang and **Yang Li\***, Transferable Mask Transformer: Cross-domain Semantic Segmentation with Region-adaptive Transferability Estimation, IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2026 (Accepted)

Enming Zhang, Liwen Cao, Yanru Wu, Zijie Zhao, **Yang Li\***, Learning Optimal Prompt Ensemble for Multi-source Visual Prompt Transfer, The 38th Annual AAAI Conference on Artificial Intelligence (AAAI'26), 2026

Yanru Wu, Xiangyu Chen, Jianning Wang, Enming Zhang, Hanbing Liu and **Yang Li\***, Exploiting Task Relationships for Continual Learning using Transferability-Aware Task Embeddings, Advances in Neural Information Processing Systems (NeurIPS'25), 2025

Qingyue Zhang, Haohao Fu, Guanbo Huang, Yaoyuan Liang, Chang Chu, Tianren Peng, Yanru Wu, Qi Li, **Yang Li\*** and Shao-Lun Huang\*, A High-Dimensional Statistical Method for Optimizing Transfer Quantities in Multi-Source Transfer Learning, Advances in Neural Information Processing Systems (NeurIPS'25), 2025

Siqi Chen, Guoqing Zhang, Jiahao Lai, Bingzhi Shen, Sihong Zhang, Caixia Dong, Xuejin Chen and **Yang Li\***, Hierarchical Part-based Generative Model for Realistic 3D Blood Vessel, The 28th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'25), 2025

Guoqing Zhang, Jingyun Yang and **Yang Li\***, Hierarchical Feature Learning for Medical Point Clouds via State Space Model, The 28th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'25), 2025

Jingge Wang, Puhua Jiang, Jingyun Yang, Haohua Wang and **Yang Li\***, Multimodal Progression-Aware Chest X-ray Image Generation via Controllable Latent Diffusion Model, 6th International Workshop on Predictive Intelligence in Medicine (PRIME'25) in Conjunction with MICCAI, 2025

Jingyun Yang, Guoqing Zhang, Jingge Wang, and **Yang Li\***, Learning What is Worth Learning: Active and Sequential Domain Adaptation for Multi-modal Gross Tumor Volume Segmentation, 1st MICCAI Workshop on Human-AI Collaboration (HAIC) in Conjunction with MICCAI, 2025 (**Spotlight, Best Presentation Award**)

Peiwen Li, Xin Wang, Zeyang Zhang, Yijian Qin, Ziwei Zhang, Jialong Wang, **Yang Li**, and Wenwu Zhu. Causal-aware graph neural architecture search under distribution shifts. ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (ACM KDD'25), 2025

Shutong Chen, Zhengze Rong and **Yang Li\***, Estimating Individual Dose-Response Curves under Unobserved Confounders from Observational Data, International Joint Conference on Neural Networks (IJCNN), 2025

Hanbing Liu, Huijie Li, Xuan Zhang and **Yang Li\***, Enhancing Battery Capacity Estimation in Electric Vehicles through Continuous Domain Adaptation, In Proceedings of the IEEE Conference on Artificial Intelligence (IEEE CAI'25), 2025

Xiangyu Chen, Yanru Wu, Jian Xu, Wenhao Guo, **Yang Li\***, and Xiaoping Zhang, Transferability Prediction for Model Recommendation: A Graph Learning Method. In Proceedings of the IEEE Conference on Artificial Intelligence (IEEE CAI'25), 2025

Jingyun Yang, Guoqing Zhang, Jingge Wang, and **Yang Li\***, Adapting foundation models for few-shot medical image segmentation tasks: Actively and sequentially, In Proceedings of the 2025 IEEE International Symposium on Biomedical Imaging (ISBI). IEEE, 2025

Yifan Xie, Jingge Wang, Tao Feng, Fei Ma\*, and **Yang Li\***, CCIS-Diff: a Generative Model With Stable Diffusion Prior for Controlled Colonoscopy Image Synthesis, In Proceedings of the 2025 IEEE International Symposium on Biomedical Imaging (ISBI). IEEE, 2025

Jiahao Lai, Jiagi Li, Jian Xu, Yanru Wu, Boshi Tang, Siqi Chen, Yongfeng Huang, Wenbo Ding, and **Yang Li\***, pFedGPA: Diffusion-based Generative Parameter Aggregation for Personalized Federated Learning, in Proceedings of the 38th Annual AAAI Conference on Artificial Intelligence (AAAI'25), 2025

Shutong Duan, Jingyun Yang, Yang Tan, Guoqing Zhang, **Yang Li\***, and Xiao-Ping Zhang, Transfer Risk Map: Mitigating Pixel-level Negative Transfer in Medical Segmentation. In 2025 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'25). IEEE, 2025

Hanbing Liu, Huaze Tang, Yanru Wu, **Yang Li\***, Xiao-Ping Zhang. Reinforced Domain Selection for Continuous Domain Adaptation. In 2025 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'25). IEEE, 2025.

Jingyun Yang, Jingge Wang, Guoqing Zhang, and **Yang Li\***, Graph-guided Sequential Transfer for Medical Image Segmentation." 2024 IEEE International Conference on Bioinformatics and Biomedicine (BIBM'24). IEEE, 2024

Jingyun Yang, Jingge Wang, Guoqing Zhang, and **Yang Li\***, Selecting the Best Sequential Transfer Path for Medical Image Segmentation with Limited Labeled Data, International Conference on Neural Information Processing (ICONIP'24), 2024

Peiwen Li, Xin Wang, Zeyang Zhang, Yuan Meng, Fang Shen, Yue Li, Jialong Wang, **Yang Li**, Wenwu Zhu, RealTCD: Temporal Causal Discovery from Interventional Data with Large Language Model, ACM International Conference on Information & Knowledge Management (CIKM'24), 2024

Liyan Chen, Yan Zheng, **Yang Li**, Lohit A. Jagarapu, Haoxiang Li, Hao Kang, Gang Hua and Qixing Huang, Enhancing Implicit Shape Generators Using Topological Regularizations, 2024 International Conference on Machine Learning (ICML'24), 2024

Guoqing Zhang and **Yang Li\***. A Geometric Algorithm for Blood Vessel Reconstruction from Skeletal Representation. The 20th International Symposium on Bioinformatics Research and Applications (ISBRA), 2024

Hanbing Liu, Jingge Wang, Xuan Zhang, Ye Guo, and **Yang Li\***. Enhancing Continuous Domain Adaptation with Multi-Path Transfer Curriculum. The 28th The Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2024

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