

Chen Li

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Research Interests Uncertainty estimation, Generative models, especially diffusion models, Large language models and reinforcement learning for alignment, and data-efficient AI.

Education

- **Stony Brook University,**
Department of Biomedical Informatics, USA
Ph.D. Candidate, Jan. 2020 - Now
- **Stony Brook University,**
Department of Applied Mathematics & Statistics, USA
Master of Science , Sep. 2018 - Jul. 2020
- **Jilin University,**
School of Mathematics, China
Bachelor of Science, Sep. 2014 - Jul. 2018

Publications (* indicates equal contribution)

- [1] ORCE: Order-Aware Alignment of Verbalized Confidence in Large Language Models.
Chen Li, Xiaoling Hu, Songzhu Zheng, Jiawei Zhou, Chao Chen
ArXiv preprint, 2026
- [2] Multi-Channel Uncertainty-Weighted Score Matching for Conditional Diffusion in Medical UDA
Chen Li, Meilong Xu, Xiaoling Hu, Weimin Lyu, Chao Chen
European Conference on Computer Vision (ECCV), 2026
- [3] Topology-Based Biomarkers Accurately Predict Breast Cancer Outcome and Survival.
Sandeep Singhal*, **Chen Li***, Andrew Aukerman, Mathieu Carrière, Michael Miller, Hanina Hibshoosh, Jasmine McDonald, Joy Winfield, Sai Tun Hein Aung, Gustavo Martinez-Delgado, Ziv Frankenstein, Young-Ho Lee, Raul Rabadan, Joel Saltz, Chao Chen, Kevin Gardner
Cancer Research, 2026
- [4] Spatial Diffusion for Cell Layout Generation
Chen Li, Xiaoling Hu, Shahira Abousamra, Meilong Xu, Chao Chen
International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), 2024
- [5] Calibrating Uncertainty for Semi-Supervised Crowd Counting
Chen Li, Xiaoling Hu, Shahira Abousamra, Chao Chen
International Conference on Computer Vision (ICCV), 2023
- [6] Confidence Estimation Using Unlabeled Data.
Chen Li, Xiaoling Hu, Chao Chen
International Conference on Learning Representations (ICLR), 2023
- [7] Spatial Transcriptomic Analysis Reveals Associations between Genes and Cellular Topology in Breast and Prostate Cancers.
Lujain Alsaleh, **Chen Li**, Justin L. Couetil, Ze Ye, Kun Huang, Jie Zhang, Chao Chen, Travis S. Johnson
Cancers, 2022

- [8] Match: Multi-faceted adaptive topo-consistency for semi-supervised histopathology segmentation
Meilong Xu, Xiaoling Hu, Shahira Abousamra, **Chen Li**, Chao Chen
Advances in Neural Information Processing Systems (NeurIPS), 2025
- [9] TopoCellGen: Generating Histopathology Cell Topology with a Diffusion Model.
Meilong Xu, Saumya Gupta, Xiaoling Hu, **Chen Li**, Shahira Abousamra, Dimitris Samaras, Prateek Prasanna, Chao Chen
The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2025
- [10] Uncertainty estimation for tumor prediction with unlabeled data.
Juyoung Yun, Shahira Abousamra, **Chen Li**, Rajarsi Gupta, Tahsin Kurc, Dimitris Samaras, Alison Van Dyke, Joel Saltz, Chao Chen
The IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), 2024

**Selected
Honors and
Awards**

- Third Class Academic Scholarship, Jilin University, 2016 (20%)
- Second Class Academic Scholarship, Jilin University, 2015 (15%)

Experiences

Stony Brook University, Department of BMI, USA **Sep. 2020 - Present**
Research Assistant
 Advisor: *Prof.* Chao Chen

- Conducted research on uncertainty estimation and calibration in deep learning, with publications at ICLR and ICCV.
- Developed semi-supervised learning frameworks leveraging unlabeled data for improved model reliability.
- Designed and implemented diffusion-based generative models for medical image segmentation and cross-domain adaptation.
- Led multiple research projects from idea formulation to publication (ICLR, ICCV, MICCAI).

United Imaging Intelligence America **Jun. 2024 - Sep. 2024**
Research Intern
 Advisor: *Dr.* Xiao Chen

- Developed pseudo-labeling-driven cross-domain generation methods using conditional diffusion models for cardiac MRI.
- Improved robustness of medical image synthesis under domain shift.
- Collaborated with industry researchers to design scalable generative modeling pipelines.

Project: Pseudo-labeling driven cross-domain CMR image generation using conditional diffusion model.

Skills

- **Languages:** C, Matlab, Python
- **OS:** Linux, Windows
- **Tools:** PyTorch, HuggingFace Transformers, OpenRLHF, vLLM, OpenCV, NumPy, Matplotlib