



## Jinxi Xiang

Postdoctoral Scholar, Radiation Physics

### Bio

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#### BIO

Jinxi Xiang (Derek) is a Postdoctoral Researcher at Stanford University School of Medicine, working with Prof. Ruijiang Li on AI for precision oncology. He earned his Ph.D. from Tsinghua University in 2021 and previously served as a Senior Researcher at Tencent AI Lab, where he led computational pathology projects deployed in clinical settings.

His long-term vision is to build AI systems that can read the full complexity of a tumor, including its molecular programs, spatial architecture, and evolutionary dynamics, directly from data collected in routine clinical care. Realizing this vision requires bridging the gap between the richness of modern omics technologies and what is practically accessible at the point of care.

Dr. Xiang pursues this through multimodal foundation models that integrate histopathology images, spatial transcriptomics, proteomics, and clinical text, enabling comprehensive tumor characterization without relying on costly or specialized assays. The broader ambition is not merely to improve individual predictions, but to construct a new computational layer for oncology — one that transforms how tumors are understood, classified, and ultimately treated across diverse patient populations.

#### PROFESSIONAL EDUCATION

- Bachelor of Engineering, Wuhan University (2016)
- Doctor of Philosophy, Tsinghua University (2021)
- Visiting PhD, University of Edinburgh, UK , Medical Imaging (2020)

#### STANFORD ADVISORS

- Ruijiang Li, Postdoctoral Faculty Sponsor

#### PATENTS

- Jinxi Xiang, S Yang, J Zhang, D Jiang, Y Hou, X Han. "United States Patent US App. 18/378,405 Image detection method and apparatus", Tencent
- Z Yang, S Yang, Jinxi Xiang, J Zhang, X Han. "United States Patent US App. 18/626,165 Method and apparatus for training image recognition model, device, and medium", Tencent
- Z Yang, S Yang, Jinxi Xiang, J Zhang, X Han. "United States Patent US App. 18/641,184 Method for determining lesion region, and model training method and apparatus", Tencent
- S Yang, Jinxi Xiang, J Zhang, X Han. "United States Patent US App. 18/642,802 Image encoder training method and apparatus, device, and medium", Tencent
- G Yonghang, K Tian, Jinxi Xiang, J Zhang. "United States Patent US App. 18/816,556 Video compression method and apparatus, video decompression method and apparatus, computer device, and storage medium", Tencent

- F Luo, Jinxi Xiang, K Tian, J Zhang. "United States Patent US App. 18/931,813 Video compression method, video decoding method, and related apparatuses", Tencent
- Lv Yue, Jinxi Xiang, J Zhang, X Han. "United States Patent US App. 19/089,142 Image compression method and apparatus, electronic device, computer program product, and storage medium", Tencent
- K Tian, J Zhang, Jinxi Xiang, Y Guan. "United States Patent US App. 19/217,091 Data encoding method and apparatus, data decoding method and apparatus, computer device, and storage medium", Tencent
- Jinxi Xiang, F Luo, J Zhang. "United States Patent US App. 19/226,621 Image processing method and apparatus, computer device, and computer-readable storage medium", Tencent
- K Tian, J Zhang, Jinxi Xiang. "United States Patent US App. 19/228,298 Video encoding and decoding processing method and apparatus, computer device, and storage medium", Tencent
- F Luo, Jinxi Xiang, J Zhang. "United States Patent US App. 19/328,727 Image enhancement method and apparatus, electronic device, computer-readable storage medium, and computer program product", Tencent
- S Yang, Jinxi Xiang, J Zhang, X Han. "United States Patent US Patent 12,499,150 Image encoder training method and apparatus, device, and medium", Tencent

## LINKS

- My personal site: <https://jinxiang.com/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

I develop machine learning methods to automate the digital pathology.

## Publications

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### PUBLICATIONS

- **Cellular architecture and neighborhood-informed virtual spatial tumor profiling from histopathology.** *Cell*  
Li, Y., Li, Z., Quinton, R., Ji, Y., Zhang, X., Xiang, J., Wang, X., Yang, S., Eweje, F., Chen, Y., Luo, X., Li, Y., Mulholland, et al  
2026
- **AI-enabled virtual spatial proteomics from histopathology for interpretable biomarker discovery in lung cancer.** *Nature medicine*  
Li, Z., Li, Y., Xiang, J., Wang, X., Yang, S., Zhang, X., Eweje, F., Chen, Y., Luo, X., Li, Y., Mulholland, J., Bergstrom, C., Kim, et al  
2026
- **Pancancer outcome prediction via a unified weakly supervised deep learning model.** *Signal transduction and targeted therapy*  
Yuan, W., Chen, Y., Zhu, B., Yang, S., Zhang, J., Mao, N., Xiang, J., Li, Y., Ji, Y., Luo, X., Zhang, K., Xing, X., Kang, et al  
2025; 10 (1): 285
- **Foundation Model for Predicting Prognosis and Adjuvant Therapy Benefit From Digital Pathology in GI Cancers.** *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*  
Wang, X., Jiang, Y., Yang, S., Wang, F., Zhang, X., Wang, W., Chen, Y., Wu, X., Xiang, J., Li, Y., Jiang, X., Yuan, W., Zhang, et al  
2025: JCO2401501
- **Deep Learning-Enabled Integration of Histology and Transcriptomics for Tissue Spatial Profile Analysis.** *Research (Washington, D.C.)*  
Ge, Y., Leng, J., Tang, Z., Wang, K., U, K., Zhang, S. M., Han, S., Zhang, Y., Xiang, J., Yang, S., Liu, X., Song, Y., Wang, et al  
2025; 8: 0568
- **A vision-language foundation model for precision oncology.** *Nature*  
Xiang, J., Wang, X., Zhang, X., Xi, Y., Eweje, F., Chen, Y., Li, Y., Bergstrom, C., Gopaulchan, M., Kim, T., Yu, K. H., Willens, S., Olguin, et al  
2025
- **Deep learning-based diagnosis and survival prediction of patients with renal cell carcinoma from primary whole slide images.** *Pathology*  
Chen, S., Wang, X., Zhang, J., Jiang, L., Gao, F., Xiang, J., Yang, S., Yang, W., Zheng, J., Han, X.  
2024
- **Towards Real-Time Neural Video Codec for Cross-Platform Application Using Calibration Information**

Tian, K., Guan, Y., Xiang, J., Zhang, J., Han, X., Yang, W., ACM  
ASSOC COMPUTING MACHINERY.2023: 7961-7970