Jianxiang Dong

PhD Candidate · Computer Science

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Education

Stony Brook University — *Stony Brook, NY*

PhD Candidate in Computer Science — *08/2020 - 05/2026 (expected)*

- Advisor: Dr. Zhaozheng Yin

George Washington University — *Washington, DC*

MS in Computer Science — *08/2018 - 07/2020*

- GPA: 4.0/4.0

Northeastern University (China) — *Shenyang, China*

BS in Automation — *10/2014 - 07/2018*

- GPA: 3.4/4.0

Research Interests

Multimodal deep learning for vision–language tasks, focusing on language-based video retrieval and temporal grounding; large-scale vision–language models (e.g., multimodal LLMs); applications in biomedical image analysis.

Publications

Jianxiang Dong, Zhaozheng Yin. (2022). Boundary-aware Temporal Sentence Grounding with Adaptive Proposal Refinement. In Proceedings of the Asian Conference on Computer Vision (ACCV).

Jianxiang Dong, Zhaozheng Yin, Dale Kreitler, Herbert J. Bernstein and Jean Jakoncic. (2024). Bragg Spot Finder (BSF): a new machine-learning-aided approach to deal with spot finding for rapidly filtering diffraction pattern images. Journal of Applied Crystallography (JAC), 57(3).

Jianxiang Dong, Zhaozheng Yin. (2024). Graph-based Dense Event Grounding with Relative Positional Encoding. Computer Vision and Image Understanding (CVIU), 104257

Jianxiang Dong, Zhaozheng Yin. (2025). Weakly Semi-supervised Temporal Sentence Grounding in Videos with Point Annotations. IEEE Transactions on Multimedia (TMM), accepted.

Jianxiang Dong, Zhaozheng Yin. Annotation-efficient Hybrid Learning for Temporal Sentence Grounding, under minor revision, revised and resubmitted to IEEE Transactions on Circuits and Systems for Video Technology (TCSVT).

Jianxiang Dong, Zhaozheng Yin. Multi-scale Token-aware Contrastive Learning with Hard Negatives Mining for Long Video Temporal Sentence Grounding, under review at IEEE Transactions on Multimedia (TMM).

Jianxiang Dong, Zhaozheng Yin. RoCon: Relieving Over-concentration Problems via Plug-and-play Modules for Partially Relevant Video Retrieval, submitted to the 40th Annual AAAI Conference on Artificial Intelligence (AAAI 2026).

Experience

Graduate Teaching Assistant — *Stony Brook, NY*

Stony Brook University — *09/2020 - 12/2021*

Graduate Teaching Assistant for JAVA Programming course and Computer Network course.

Graduate Research Assistant *Stony Brook, NY*

Stony Brook University *01/2022 - present*

- Develop deep learning models for video temporal grounding using natural language queries to align text descriptions with video temporal moments.
- Conduct research on annotation-efficient learning for temporal sentence grounding, including weakly-supervised, semi-supervised, and active learning approaches.
- Design deep learning models for text-to-video retrieval, optimizing performance on large-scale benchmarks with language-guided video retrieval.
- Build an efficient deep learning–based Bragg spot detection system for diffraction images.

Student Mentor in CSIRE Program *Stony Brook, NY*

Stony Brook University *05/2024 - 08/2024*

Mentored a high school student by designing deep learning projects and providing research experience and insights into computer science and informatics. Guided the student in designing deep learning models for bragg spot detection and conducting performance and efficiency analysis.

Projects

Stony Brook University – Brookhaven National Laboratory (SBU-BNL) Project: Lossy Data Compression *Stony Brook, NY*

Advisor: Dr. Zhaozheng Yin *03/2025 - present*

Designing ML based data compression and reconstruction system (AI model) for macromolecular crystallography diffraction images.

Stony Brook University – Brookhaven National Laboratory (SBU-BNL) Project: Bragg Spot Detection *Stony Brook, NY*

Advisor: Dr. Zhaozheng Yin *04/2022 - 12/2023*

Designing a segmentation model for bragg spot detection in crystal images with rich ice ring artifacts

Blood Oxygen Monitoring using Hyperspectral Images *Washington, DC*

Advisor: Dr. Murray H. Loew *03/2020 - 06/2020*

Designing a deep-learning based model for blood oxygen monitoring using hyperspectral images.

A Novel Brain Computer Interface (BCI) Using EEG Signals for Robot Navigation *Shenyang, China*

Advisor: Dr. Fei Wang *01/2018 - 06/2018*

Developed an EEG-based BCI control system for robot navigation using MATLAB and ROS (Undergraduate Thesis).

Technical Skills

Software: Pytorch, Tensorflow, Robot Operating System (ROS), Git.

Programming: Python, JAVA, C, Matlab.

Awards & Honors

2013 **National Second Prize in 2013 National High School Mathematics League**,

2015 **Third Prize Academic Award (top 15% academic achievers)**,

2016 **Honorable Mention in 2016 Mathematical Contest in Modeling**,
The Second Prize of Liaoning Province in 2016 China Mathematical Contest in Modeling,