Jingxi Chen

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Education

- **The University of Maryland - College Park** — Maryland, USA
  Ph.D. Student *in Computer Science Department* — *Fall 2022 - 2026 (Expected)*
- **The University of Maryland - College Park** — Maryland, USA
  B.S. & M.S. *in Computer Science* — *Fall 2017 - Spring 2022*

Research Interest

- **Computer Vision, Generative Modeling, 3D Vision, Robotics, Computational Imaging**

Publications

[1] Haoming Cai*, **Jingxi Chen***, Brandon Y. Feng, Weiyun Jiang, Mingyang Xie, Kevin Zhang, Cornelia Fermuller, Yiannis Aloimonos, Ashok Veeraraghavan, Christopher Metzler, "Temporally Consistent Atmospheric Turbulence Mitigation with Neural Representations", Accepted by **The Thirty-Eighth Annual Conference on Neural Information Processing Systems (NeurIPS), 2024**.

[2] **Jingxi Chen**, Botao He, Chahat Deep Singh, Cornelia Fermuller, Yiannis Aloimonos, "Active Human Pose Estimation via an Autonomous UAV Agent", Accepted by **IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024**. [PDF, Project]

[3] Sachin Shah, Matthew Chan, Haoming Cai, **Jingxi Chen**, Sakshum Kulshrestha, Chahat Deep Singh, Yiannis Aloimonos, Christopher Metzler, "CodedEvents: Optimal Point-Spread-Function Engineering for 3D-Tracking with Event Cameras", Published in **Conference on Computer Vision and Pattern Recognition (CVPR), 2024**. [PDF]

[4] Botao He, Ze Wang, Yuan Zhou, **Jingxi Chen**, Chahat Deep Singh, Cornelia Fermuller, Yiannis Aloimonos, Chao Xu and Fei Gao, "Microsaccade-inspired Event Camera for Robotics", Published in **Science Robotics, 2024** [PDF, Project]

[5] Manav Mishra, Prithvi Poddar, Rajat Agrawal, **Jingxi Chen**, Pratap Tokekar and P. B. Sujit, "Multi-Agent Deep Reinforcement Learning for Persistent Monitoring With Sensing, Communication, and Localization Constraints", Published in **IEEE Transactions on Automation Science and Engineering, 2024**. [PDF]

[6] Vishnu Dutt Sharma, **Jingxi Chen**, Pratap Tokekar, "ProxMaP: Proximal Occupancy Map Prediction for Efficient Indoor Robot Navigation", Published in **IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2023**. [PDF, Project]

[7] **Jingxi Chen***, Amrish Baskaran*, Zhongshun Zhang, and Pratap Tokekar, "Multi-Agent Reinforcement Learning for Visibility-based Persistent Monitoring", Published in **IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2021**. [PDF]

Manuscripts

[8] **Jingxi Chen**, Brandon Y. Feng, Haoming Cai, Mingyang Xie, Christopher Metzler, Cornelia Fermüller, Yiannis Aloimonos, "TimeRewind: Rewinding Time with Image-and-Events Video Diffusion", **Under Review, 2024**. [PDF, Project]

Research Service & Awards

- **NeuroPAC Fellowship*** - Supported by the NSF grant "AccelNet: Accelerating Research on Neuromorphic Perception, Action, and Cognition." 2024
- **Ph.D. Dean Fellowship*** - University of Maryland-College Park 2022 - 2023
- **John D. Gannon Endowed Scholarship ***
- **Capital One Bank Dean's Scholarship Fund in Computer Science ***
- **Conference Reviewer** - ICRA 2021 & 2023 & 2024, IROS 2021 & 2022 & 2024
- **Journal Reviewer** - IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

Working Experience

Dolby Laboratories, Inc. — Sunnyvale, CA
PhD Research Intern — *Summer 2024*

- With two patents submitted on Neural Event Data Compression and a novel Neural Video Codec.

Brain Corp — San Diego, CA
Robotics Software Engineer — *Jun. 2021 - Aug. 2021*

- Working in the projects for real-world robotic applications, for robots deployed in Walmart and Sam's Club.
- Working in the Shelf-Scanning team on mobile-robot information sensing tasks for real-world retail store environments
- Debugging and testing the Navigation Stack of mobile robots (Perception, SLAM, Motion Planning)