

Chia-Hsiang Kao

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Ithaca, New York (14850)

Vision and Interest

My research vision is to build systems that infer and learn the hidden dynamics of real-world interactions. Specifically, I am interested in Video Reasoning, Controlled Video Generation, and 3D World Modeling. I am currently a Student Researcher at Meta. Prior to that I received a Cornell Foundational AI PhD Fellowship in 2025 and was an Applied Scientist Intern at Amazon.

Education

Cornell University, Ithaca, NY

2023 - Present

- Ph.D. Student in Computer Science
- Advisor: Professor [Bharath Hariharan](#)

National Yang-Ming Chiao-Tung University, Taipei, Taiwan

2015 - 2022

- Doctor of Medicine

Work Experience

Student Researcher, Meta; New York City

Jan 2026 - May 2027

- Develop video-to-video editing system for controlling and changing the real-world physics and motion in the video.
- Develop 3D world modeling technique

Applied Scientist Intern, Amazon; Sunnyvale, CA

May 2025 - Aug. 2025

- Developed VLMs that fully reconstructs the real-world rigid-body dynamics in MuJoCo simulator.
- Leveraged language as a structural visual representation and enhanced performance with event reasoning.

Publications

[U.1] **Video, Ergo Genero: Unifying Video Tasks via Spatiotemporal Analogy**

Under submission

[C.7] **Dynamics: Language-Based Representation for Inferring Rigid-Body Dynamics From Videos**

[Chia Hsiang Kao](#), Cong Phuoc Huynh, Chien-Yi Wang, Noranart Vesdapunt, Stefan Stojanov, Bharath Hariharan, Oleksandr Obiednikov, Ning Zhou

CVPR 2026

[S.2] **Towards LLM Agents for Earth Observation.**

[Chia-Hsiang Kao](#), Wenting Zhao, Shreelekha Revankar, Samuel Speas, Snehal Bhagat, Rajeev Datta, Cheng Perng Phoo, Utkarsh Mall, Carl Vondrick, Kavita Bala, Bharath Hariharan

ICML 2025 workshop

[C.6] **Counter-Current Learning: A Biologically Plausible Dual Network Approach for Deep Learning**

[Chia-Hsiang Kao](#), Bharath Hariharan

NeurIPS 2024

[C.5] **AllClear: A Comprehensive Dataset and Benchmark for Cloud Removal in Satellite Imagery**

[Chia-Hsiang Kao](#)*, Hangyu Zhou*, Cheng Perng Phoo, Utkarsh Mall, Bharath Hariharan, Kavita Bala

NeurIPS Datasets and Benchmarks Track 2024

[C.4] **Caduceus: Bi-Directional Equivariant Long-Range DNA Sequence Modeling**

Yair Schiff, [Chia-Hsiang Kao](#), Aaron Gokalsan, Tri Dao, Albert Gu, Volodymyr Kuleshov

[C.3] **Advancing DNA Language Models: The Genomics Long-Range Benchmark**

Chia-Hsiang Kao*, Evan Trop*, McKinley Polen*, Yair Schiff*, Bernardo P. de Almeida, Aaron Gokaslan,
Thomas Pierrot, Volodymyr Kuleshov
AAAI (workshop) 2023

[S.1] **FedBug: A Bottom-Up Gradual Unfreezing Framework for Federated Learning**

Chia-Hsiang Kao, Yu-Chiang Frank Wang
Preprint

[C.2] **MAML Is a Noisy Contrastive Learner in the Classification**

Chia-Hsiang Kao, Wei-Chen Chiu, Pin-Yu Chen
ICLR 2022

[C.1] **Demystifying T1-MRI to FDG18-PET Image Translation via Representational Similarity**

Chia-Hsiang Kao, Yong-Sheng Chen, Li-Fen Chen, Wei-Chen Chiu
MICCAI 2021

Honors & Awards

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|---|------|
| • Foundational AI PhD Fellowship, Cornell | 2025 |
| • Student Travel Award, MICCAI | 2021 |
| • Undergraduate Research Fellowship, <i>National Science and Technology Council, Taiwan</i> | 2020 |
| • Undergraduate Research Fellowship, <i>National Science and Technology Council, Taiwan</i> | 2018 |
| • Summer Research Fellowship, <i>National Health Research Institutes</i> | 2018 |

Services

Conference Reviewer: AAAI[25], AISTATS[25], AutoML[22], ICML[25], ICLR[25],
NeurIPS[21,24,25,26], ICLR [25, 26], COLM [26], ECCV [26]

Journal Reviewer: CVIU (2022), Comput. Electr. Eng. (2024), IEEE TETCI (2024)