

# JIALI CUI

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## RESEARCH INTERESTS

I'm currently a Ph.D. student in the Department of Computer Science at Stevens Institute of Technology under the supervision of [Dr. Han](#). My research interests can be summarized:

- Probabilistic Generative Model (Latent variable generative model, Energy-based model)
- Unsupervised Learning / Semi-supervised Learning (Maximum likelihood learning, Joint learning)
- Representation Learning (Hierarchical representation learning, disentanglement learning)

## EDUCATION

### Stevens Institute of Technology

Ph.D. in Computer Science

Hoboken, NJ

2021 – Now

- **Teaching Assistant:** CS583. Deep Learning

### Stevens Institute of Technology

M.S. in Computer Science

Hoboken, NJ

2019 – 2021

- **Course Assistant:** CS559. Machine Learning, CS515. Fundamentals of Computing

### Harbin Institute of Technology

B.S. in Computer Science

Harbin, China

2015 – 2019

- **Thesis:** Colorizing Gray Image via Self-Attention Generative Adversarial Network
- **Selected Courses:** Programming Languages (Java, Python, R, etc.), Deep Learning, Machine Learning, Statistical Machine Learning

## PUBLICATIONS

- **Jiali Cui**, Tian Han. **Learning Energy-based Model via Dual-MCMC Teaching**. *The 37th Conference on Neural Information Processing Systems (@ NeurIPS 2023)*
- **Jiali Cui**, Ying Nian Wu, Tian Han. **Learning Hierarchical Features with Joint Latent Space Energy-Based Prior**. *The IEEE/CVF International Conference on Computer Vision (@ ICCV 2023)*
- **Jiali Cui**, Ying Nian Wu, Tian Han. **Learning Joint Latent Space EBM Prior Model for Multi-layer Generator**. *The IEEE/CVF Conference on Computer Vision and Pattern Recognition 2023 (@ CVPR 2023)*
- Bo Pang, Erik Nijkamp, **Jiali Cui**, Tian Han, Ying Nian Wu. **Semi-supervised learning by latent space energy-based model of symbol-vector coupling**. *Workshop on I Can't Believe It's Not Better (ICBINB) @ NeurIPS, 2020*

## SELECTED UNIVERSITY PROJECTS

### Colorizing Gray Image via SAGAN

Harbin Institute of Technology

2018

- The self-attention blocks of SAGAN aim to better colorize the latent representations of gray images by jointly training with an encoder model.

### Latent Defense via Latent Space Energy-based Prior Model for Adversarial Attack

Stevens Institute of Technology

2020

- The latent space EBM prior model serves as the purification model for classifiers under multiple settings of adversarial attack.
- **Adversarial Attack (white-box):** BPDA, PGD, FGSM, Rand-FGSM, CW.
- **Defense Model:** latent space EBM prior, MCMC purification.

## SKILLS

**Programming** Python, R, etc.

**Machine Learning** Pytorch, Tensorflow, sklearn, Pandas, etc.

## SERVICE

**Reviewer** ECCV'22, AAAI'22, CVPR'23, NeurIPS'23, AAAI'24, ICLR'24