Homepage Google Scholar
Urbana, Illinois, USA

XIAODAN HU

217-979-8149
xiaodan8@illinois.edu

RESEARCH PROJECTS

- **Multimodal Hierarchical Video Understanding and Synthesis** *Sep. 2019-now* **UIUC**
  - Dance video recognition by tracking, 2D pose estimation, and unsupervised 3D pose estimation.
  - Hierarchical human complex activity parsing and generation
  - Vision and language alignment and fusion

EMPLOYMENT EXPERIENCE

- **Applied Scientist Intern** - *Amazon.com Services LLC, Seattle, US* *Jan.-Aug. 2022*
  - Open-vocabulary human activity recognition generalizable to new scenes, activities or objects
  - Video commonsense reasoning by prompting on large language models.

EDUCATION

- **University of Illinois at Urbana-Champaign (UIUC) | ECE** **Urbana, USA**
  Ph.D. candidate, Computer Vision and Robotics Laboratory, GPA 3.95/4 *Sep. 2019-May 2024*
  Courses: Deep Learning, Pattern Recog., Computer Vision, Adv. Topics in NLP, Adv. Info. Retrieval

PUBLICATIONS

- Jiangong Lia, Angela R. Green-Miller, **Xiaodan Hu**, … "Barriers to Computer Vision Applications in Pig Production Facilities", in Journal of Computer and Electronics in Agriculture 2022
- **Xiaodan Hu**, Narendra Ahuja, "Unsupervised 3D Pose Estimation for Hierarchical Dance Video Recognition", in ICCV 2021.
- Aniket Shirke, Jiangong Li, Tawni Williams, **Xiaodan Hu**, …, Tracking Grow-Finish Pigs Across Large Pens Using Multiple Cameras", accepted as an oral presentation at CV4Animals at CVPR 2021.
- Zilong Zhong, Zhong Qiu Lin, Rene Bidart, **Xiaodan Hu**, …, "Squeeze-and-Attention Networks for Semantic Segmentation", in CVPR 2020.
- **Xiaodan Hu** et al., "MUSE: Illustrating Textual Attributes by Portrait Generation", in MIPR 2021.
- **Xiaodan Hu** et al., "Non-Stationary Content-Adaptive Projector Resolution Enhancement", in Journal of Signal Processing: Image Communication, September 2021
- Manling Li et al. (17th of 40 authors), "GAIA at SMKBP 2020-a dockerlized multi-media multi-lingual knowledge extraction, clustering, temporal tracking and hypothesis generation system", TAC 2020
- **Xiaodan Hu** et al., "ClearGAN: Photo-Realistic High-Resolution Text-to-Image Synthesis via Joint Inter-modal and Intra-modal Attention Modeling", in Language and Vision Workshop at CVPR 2019.
- **Xiaodan Hu** et al., "RUNet: A Robust UNet Architecture for Image Super-Resolution", accepted as an oral presentation at Women in Computer Vision Workshop at CVPR 2019
- **Xiaodan Hu** et al., "ProstateGAN: Mitigating Data Bias via Prostate Diffusion Imaging Synthesis with Generative Adversarial Networks," in ML4H Workshop at NeurIPS 2018
- **Xiaodan Hu** et al., "Device, System and Method for Enhancing One or More of High Contrast Regions and Text Regions in Projected Images", US patent US-9728142-B2
- **Xiaodan Hu** et al., "Robust Visual Enhancement of Moving Contents in Projected Imagery", SID 2019
- **Xiaodan Hu** et al., "Text Enhancement in Projected Imagery", in CVIS 2018
- **Xiaodan Hu** et al., "Motion Detection in High-Resolution Enhancement", in CVIS 2017

AWARDS AND ACTIVITIES

- Yunni and Maxine Pao Memorial Fellowship, 2023-2024
- Amazon Fellowship, 2022-2023
- Rambus Computer Engineering Fellowship for 2022-2023, ECE UIUC
- Selected as a Mavis Future Faculty Fellows (MF3) and receive the fellowship, 2022-2023
- CVPR 2023 Reviewer; WACV 2023 Reviewer; ICLR 2023 Reviewer
- EMNLP 2023 Reviewer, ACL 2023 Reviewer, ACL Demo 2023 Reviewer, EACL 2023 Demos Reviewer
- ECCV 2022 Reviewer; NAACL 2022 Reviewer; EMNLP 2022 Demo Reviewer
- ACL 2021 Demo Reviewer; ACL 2022 Demo Reviewer; ACL ARR 2022 Reviewer
- Annual Conference on Vision and Intelligent Systems '19-'21, Session Chair & Program Committee
- Received a travel award to attend and present the work at WiCV at CVPR 2019
- Received a student travel grant to attend and present the work at SID Display Week 2019
- Graduate Research Studentship (GRS), International Masters Student Award UW 2017-2019
- Faculty of Engineering Graduate Scholarship, UW 2018, 2019

SKILLS

- Coding: Pytorch, Python, Java
- Research Field: Video Understanding, Activity Recognition, Language and Vision