Homepage Google Scholar
Urbana, Illinois, USA

XIAODAN HU

217-979-8149
xiaodan9377@gmail.com

EDUCATION

- **University of Illinois at Urbana-Champaign (UIUC) | ECE** — **Urbana, USA**
  Ph.D. candidate, Computer Vision and Robotics Laboratory, GPA 3.91/4 — *Sep. 2019-now*
  Courses: CS547 Deep Learning, ECE544 Pattern Recognition, CS543 Computer Vision
- **University of Waterloo (UW) | System Design Engineering** — **Waterloo, Canada**
  MAS.c., Vision and Image Processing Lab, GPA 90/100 (A+) — *May 2017-Apr. 2019*
  Courses: SYDE780 Graphical Deep Learning, CS685 Machine Learning, SYDE672 Stat. Image Proc.
- **New York University (NYU) | Tandon School of Engineering** — **New York, USA**
  MS, Computer Engineering, GPA 3.53/4 — *Sep.2015-Jan. 2017*
- **Beijing University of Posts and Telecommunications (BUPT)** — **Beijing, China**
  B.Eng., Telecommunication Eng., GPA 87/100 (A) — *Sep. 2011-July 2015*

PUBLICATIONS

- Zilong Zhong, Zhong Qiu Lin, Rene Bidart, **Xiaodan Hu**, Ibrahim Ben Daya, Zhifeng Li, Wei-Shi Zheng, Jonathan Li, Alexander Wong, "Squeeze-and-Attention Networks for Semantic Segmentation", accepted by CVPR 2020.
- **Xiaodan Hu**, Pengfei Yu, Kevin Knight, Heng Ji, Bo Li, Honghui Shi, "MUSE: Illustrating Textual Attributes by Portrait Generation", arXiv 2020.
- **Xiaodan Hu**, Mohamed A. Naiel, Zohreh Azimifar, Ibrahim Ben Daya, Mark Lamm and Paul Fieguth, "Projector Resolution Enhancement Using a Non-stationary Content-Adaptive Scheme", Journal of Image and Vision Computing, in review.
- **Xiaodan Hu**, Paul Fieguth, Mohamed A. Naiel and Alexander Wong, "ClearGAN: Photo-Realistic High-Resolution Text-to-Image Synthesis via Joint Inter-modal and Intra-modal Attention Modeling", Language and Vision Workshop at CVPR 2019, accepted as a poster and spotlight.
- **Xiaodan Hu**, Mohamed A. Naiel, Alexander Wong, Mark Lamm and Paul Fieguth, "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**, Audrey Chung, Paul Fieguth and Alexander Wong, "ProstateGAN: Mitigating Data Bias via Prostate Diffusion Imaging Synthesis with Generative Adversarial Networks," accepted as a poster presentation at the Machine Learning for Health Workshop at NeurIPS 2018
- **Xiaodan Hu**, Mohamed A. Naiel, Zohreh Azimifar, Ibrahim Ben Daya, Mark Lamm and Paul Fieguth, "Device, System and Method for Enhancing One or More of High Contrast Regions and Text Regions in Projected Images", US patent 16829441
- **Xiaodan Hu**, Mohamed A. Naiel, Zohreh Azimifar, Mark Lamm and Paul Fieguth, "Robust Visual Enhancement of Moving Contents in Projected Imagery", accepted as a poster presentation at 2019 Society for Information Display Display Week Symposium
- **Xiaodan Hu**, Mohamed A. Naiel, Zohreh Azimifar, Ibrahim Ben Daya, Mark Lamm and Paul Fieguth, "Text Enhancement in Projected Imagery", accepted as poster presentation at the CVIS 2018
- **Xiaodan Hu**, Avery Ma, Ahmed Gawish, Mark Lamm and Paul Fieguth, "Motion Detection in High-Resolution Enhancement", accepted as poster presentation at the CVIS 2017

RESEARCH EXPERIENCE

- **Dance Robot: Dance Video Recognition and Dance Video Synthesis** *Sep. 2019-now* **UIUC**
  - Dance identification and synthesis given videos recordings of on-stage dance videos
- **Livestock Systems** *Oct. 2020-now* **UIUC**
  - Identification, tracking and counting of pigs; estimation and prediction of pig health status
- **Automatic Speech Recognition** *Sep.-Dec. 2020* **UIUC**
  - Recognize the speech by incorporating context information.
- **Paint Robot: Portrait Generation from Multimedia Attributes** *Jan.-Apr. 2020* **UIUC**
  - A portrait generation approach that captures the subject from text description and attributes.
- **Image Captioning with Context Information** *Jan.-Apr. 2020* **UIUC**
  - A comparison between image captioning with and without context information.
- **ClearGAN: Fine-Grained Text to High Resolution Image Generation** *May 2018-2019* **UW**
  - Upgrade perceptual quality of generated image and increase the resolution of synthesis

EMPLOYMENT EXPERIENCE

- **Research Assistant** - *University of Illinois at Urbana-Champaign, US* *Sep. 2019-Present*
  - Work with Prof. Narendra Ahuja on computer vision and multi-modal deep learning.
- **Research Assistant** - *University of Illinois at Urbana-Champaign, US* *May-Sep. 2020*
  - Work with Prof. Heng Ji on attribute acquisition by portrait generation.
- **Research Associate** - *University of Waterloo, CA* *May-Aug. 2019*
  - Work with Prof. Paul Fieguth and Prof. Alex Wong on text-based image generation.
- **Research Assistant** - *University of Waterloo, CA* *May 2017-Aug. 2019*
  - Work with Prof. Paul Fieguth to develop an intelligent system for resolution enhancement.
- **Research Engineer Intern** - *Christie Digital Systems Inc., Kitchener, CA* *Mar. 2017-Apri. 2019*
  - Content-adaptive high-resolution enhancement using one/multiple low-resolution projector(s)
- **Software Engineer -** *SnagTag Inc., New York, US* *May-Aug. 2016*
  - Developed a system to integrate retail information and present to customers when triggered.

AWARDS AND ACTIVITIES

- Annual Conference on Vision and Intelligent Systems 2020, Session Chair
- Annual Conference on Vision and Intelligent Systems 2019-2020, Technical Program Committee
- New In ML at NeurIPS 2020, Reviewer
- ISCAS 2020, Reviewer
- 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
- Received the Provost's Doctoral Entrance Award for Women, UW 2019
- Certificate of Completion of the Fundamentals of University Teaching Program, UW 2018
- Graduate Research Studentship (GRS), International Masters Student Award UW 2017-2019
- Faculty of Engineering Graduate Scholarship, UW 2018, 2019

SKILLS

- Tools and Languages: Pytorch, FastAI, Python, Java, Matlab, Google Cloud, JavaScript, C++
- Skils: Computer Vision, Deep Learning, Natual Language Generation, Audio Signal Processing