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XIAODAN HU

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EDUCATION

- **University of Illinois at Urbana-Champaign(UIUC) | ECE** — **Waterloo, Canada**
  Ph.D., Computer Vision and Robotics Laboratory — *Sep. 2019-Apr. 2024*
- **University of Waterloo(UW) | System Design Engineering** — **Waterloo, Canada**
  MAS.c., Vision and Image Proc. Lab, GPA: 90/100 (A+) — *May 2017-Apr. 2019*
  Courses: SYDE780 Graphical Deep Learning, CS685 Machine Learning: Statistical and Computational Fdn., SYDE522 Machine Intelligence, SYDE675 Pattern Recognition, SYDE672 Statistical 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

- **Xiaodan Hu**, Paul Fieguth, and Alexander Wong, "ClearGAN: Fine-Grained Text to High-Resolution Image Generation", Language and Vision Workshop at CVPR 2019, accepted as poster and spotlight.
- **Xiaodan Hu**, Paul Fieguth, and Alexander Wong, "Non-Stationary Super Resolution Enhancement Networks", accepted as 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 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, "Non-stationary Content-adaptive Projector Resolution Enhancement", filed provisional patent
- **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 Imaging, manuscript in prep.
- **Xiaodan Hu**, Mohamed A. Naiel, Zohreh Azimifar, Mark Lamm, and Paul Fieguth, "Visual Enhancement of Moving Content in Projected Imagery", accepted as 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 Conf. on Vision and Imaging Systems 2018, published in Journal of Computational Vision and Imaging Systems
- **Xiaodan Hu**, Avery Ma, Ahmed Gawish, Mark Lamm, and Paul Fieguth, "Motion Detection in High-Resolution Enhancement", accepted as poster presentation at the Conference on Vision and Imaging Systems 2017, published in Journal of Computational Vision and Imaging Systems
- Shixiong Hu, He Jin, **Xiaodan Hu**, and Yuannan Long, "Application of modular approach in GIS-based hydrological modeling", accepted by 2014 22nd International Conference on Geoinformatics

RESEARCH EXPERIENCE

- **ProstateGAN:Mitigate Data Bias by Prostate Diffusion Imaging Synthesis** — *Sep.-Oct. 2018* **UW**

- Augment the prostate imaging datasets and increase the accuracy of prostate cancer classification by using conditional GAN to estimate the distribution of prostate images based on Gleason score.

◆ **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

◆ **Motion Estimation for High Resolution Enhancement** *May 2017-2018* **UW**

- Improve spatial pyramid network based on temporal convolutional network for motion estimation.

◆ **Weight Quantization on Accuracy in Mobilenets** *Jan.-Apr. 2018* **UW**

◆ **Feature Fusion for Different Face Recognition** *Sep.-Dec. 2017* **UW**

TEACHING EXPERIENCE

◆ **Teaching Assistant** - *BME 393 Digital Systems* *Jan.-Apr. 2019* **UW**

- Run tutorials sessions. Evaluate assignments/reports, tutor student projects and hold office hours.

EMPLOYMENT EXPERIENCE

◆ **Research Associate** **Waterloo, Canada**

University of Waterloo *May-Aug. 2019*

- Work full-time with Prof. Paul Fieguth to develop an intelligent system for projector projection.

◆ **Research Engineer Intern** **Kitchener, Canada**

Christie Digital Systems Inc. - Advanced Technologies Group *Mar. 2017-Apri. 2019*

- Content-adaptive high-resolution enhancement using one/multiple low-resolution projector(s)

◆ **Software Engineer** **New York, USA**

SnagTag Inc. *May-Aug. 2016*

- Developed a system to integrate retail information and present to customers when triggered.

AWARDS AND CERTIFICATES

- 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
- Certificate of Completion of the Fundamentals of University Teaching Program, UW 2018
- Graduate Research Studentship (GRS), UW 2017-2019
- International Masters Student Award, UW 2017-2019
- Faculty of Engineering Graduate Scholarship, UW 2018, 2019
- Excellent top 1% bachelor thesis, 2015
- The Second Prize Scholarship for academic excellence, BUPT 2013-2014
- Merit Students Award, BUPT 2013
- The first prize in May Flowers chorus competition in BUPT, May 2013

EXTRACURRICULAR ACTIVITIES

◆ **Student Volunteers Association of BUPT -** *President* *2011- 2013,* **BUPT**

- Responsible for the overall management. Organize community service & cooperate with local NPOs.

SKILLS

- Tools: Pytorch, Torch, TensorFlow, Keras, FastAI, Sklearn, Amazon EC2, Google Cloud, MangoDB
- Languages: Python, Matlab, Java, Mysql, JavaScript, C++