

EDUCATION

Johns Hopkins University (JHU) Ph.D. in Electrical and Computer Engineering	Baltimore, MD Aug. 2019 –Present
National Chiao Tung University (NCTU) M.S. in Electronics Engineering B.S. in EECS Undergraduate Honors Program	Hsinchu, Taiwan Sep. 2017 –Jun. 2019 Sep. 2013 –Jun. 2017
University of Illinois at Urbana-Champaign (UIUC) Exchange Program in Electrical and Computer Engineering	Champaign, IL Aug. 2016 –Dec. 2016

EXPERIENCES

Vision and Image Understanding Lab, JHU Graduate Research Assistant, with Prof. Vishal M. Patel (Ph.D. advisor) <ul style="list-style-type: none">– Adversarial robustness: [1 - 5]	Baltimore, MD Aug. 2019 –Present
Amazon Lab126 Applied Scientist Intern, with Wei Wang and Jim Thomas <ul style="list-style-type: none">– Domain adaptive monocular depth estimation	Bellevue, WA May 2021 –Aug. 2021
Communication Electronics and Signal Processing Lab, NCTU Graduate Research Assistant, with Prof. Hsueh-Ming Hang (M.S. advisor) <ul style="list-style-type: none">– Real-time semantic segmentation: [6, 9]– Compressed-domain semantic segmentation: [7]– Deep learning-based lane detection: [8, 10]	Hsinchu, Taiwan Sep. 2017 –Jun. 2019

PUBLICATIONS

- [1] **Shao-Yuan Lo**, Poojan Oza, and Vishal M. Patel. “Adversarially Robust One-class Novelty Detection.” *arXiv:2108.11168*, 2021.
- [2] **Shao-Yuan Lo** and Vishal M. Patel. “Defending Against Multiple and Unforeseen Adversarial Videos.” *arXiv:2009.05244*, 2020.
- [3] **Shao-Yuan Lo** and Vishal M. Patel. “MultAV: Multiplicative Adversarial Videos.” *arXiv:2009.08058*, 2020.
- [4] **Shao-Yuan Lo** and Vishal M. Patel. “Error Diffusion Halftoning Against Adversarial Examples.” In *IEEE International Conference on Image Processing (ICIP)*, 2021.
- [5] **Shao-Yuan Lo**, Jeya Maria Jose Valanarasu, and Vishal M. Patel. “Overcomplete Representations Against Adversarial Videos.” In *IEEE International Conference on Image Processing (ICIP)*, 2021.
- [6] **Shao-Yuan Lo**, Hsueh-Ming Hang, Sheng-Wei Chan, and Jing-Jhih Lin. “Efficient Dense Modules of Asymmetric Convolution for Real-Time Semantic Segmentation.” In *ACM International Conference on Multimedia in Asia (MMAsia)*, 2019. [Best Paper Award]
- [7] **Shao-Yuan Lo** and Hsueh-Ming Hang. “Exploring Semantic Segmentation on the DCT Representation.” In *ACM International Conference on Multimedia in Asia (MMAsia)*, 2019. [Oral]

- [8] **Shao-Yuan Lo**, Hsueh-Ming Hang, Sheng-Wei Chan, and Jing-Jhih Lin. “Multi-Class Lane Semantic Segmentation using Efficient Convolutional Networks.” In *IEEE International Workshop on Multimedia Signal Processing (MMSP)*, 2019. [Oral]
- [9] Shang-Wei Hung, **Shao-Yuan Lo**, and Hsueh-Ming Hang. “Incorporating Luminance, Depth and Color Information by a Fusion-based Network for Semantic Segmentation.” In *IEEE International Conference on Image Processing (ICIP)*, 2019. [Oral]
- [10] Ping-Rong Chen*, **Shao-Yuan Lo***, Hsueh-Ming Hang, Sheng-Wei Chan, and Jing-Jhih Lin. “Efficient Road Lane Marking Detection with Deep Learning.” In *IEEE International Conference on Digital Signal Processing (DSP)*, 2018. [Oral]

AWARDS

- **Government Scholarship to Study Abroad**, Ministry of Education, Taiwan 2020
- **Best Paper Award**, ACM MMAsia 2019 2019
- **Best Master Thesis Award**, Chinese Image Processing and Pattern Recognition Society 2019
- **Students’ Outstanding Contribution Award** (highest honor of graduation), NCTU 2019
- **Dean’s List**, EECS Honors Program, NCTU 2017
- **Scholarship for Outbound Exchange**, NCTU 2016
- **WINTEK Outstanding Freshman Scholarship**, WINTEK Corp. and NCTU 2013

INVITED TALKS

- June 19, 2021: “Adversarial Attacks and Defenses in Videos.” In CVPR 2021 Tutorial on Adversarial Machine Learning in Computer Vision, Virtual.

ACADEMIC SERVICES

- **Journal Reviewer:** IEEE T-CSVT, IEEE T-SMC, Pattern Recognition
- **Conference Reviewer:** ICCV (2021), WACV (2021, 2022), AVSS (2021)
- **Teaching Assistant:** Deep Learning (EN.520.638), JHU, Spring 2021

PROGRAMMING SKILLS

- **Programming Languages:** Python, MATLAB, C/C++
- **Deep Learning Libraries:** PyTorch, TensorFlow, Caffe
- **Hardware Design Tools:** Verilog, HSPICE, Cadence Virtuoso

LEADERSHIP

- Vice President, JHU Taiwanese Student Association 2020 –Present
- Secretary, NCTU EECS Student Association 2015 –2016
- Treasurer, NCTU Chinese Chess Club 2014 –2015
- Arts Chair, NCTU EECS Summer Camp for High School Students 2014 –2015