

## EDUCATION

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

## RESEARCH EXPERIENCE

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<b>Vision and Image Understanding Lab, JHU</b> Research Assistant, with Prof. Vishal M. Patel (Ph.D. advisor) <ul style="list-style-type: none"><li>– Adversarial robustness: [1, 2, 4]</li><li>– Adversarial attack: [3]</li></ul>	Baltimore, MD Aug. 2019 –Present
<b>Communication Electronics and Signal Processing Lab, NCTU</b> Research Assistant, with Prof. Hsueh-Ming Hang (M.S. advisor) <ul style="list-style-type: none"><li>– Real-time semantic segmentation: [5, 8]</li><li>– Compressed-domain semantic segmentation: [6]</li><li>– Deep learning-based lane detection: [7, 9]</li></ul>	Hsinchu, Taiwan Sep. 2017 –Jun. 2019

## PUBLICATIONS

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- [1] **Shao-Yuan Lo** and Vishal M. Patel. “Error Diffusion Halftoning Against Adversarial Examples.” *arXiv:2101.09451*, 2021.
- [2] **Shao-Yuan Lo**, Jeya Maria Jose Valanarasu, and Vishal M. Patel. “Overcomplete Representations Against Adversarial Videos.” *arXiv:2012.04262*, 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. “Defending Against Multiple and Unforeseen Adversarial Videos.” *arXiv:2009.05244*, 2020.
- [5] **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]
- [6] **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]
- [7] **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]

- [8] 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]
- [9] 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

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- **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

## ACADEMIC SERVICES

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- **Journal Reviewer:** Pattern Recognition, T-SMC
- **Conference Reviewer:** WACV 2021

## PROGRAMMING SKILLS

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

## LEADERSHIP

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