

Wei-Chih Hung (Wayne)

Curriculum Vitae

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📄 <https://hfslyc.github.io/>

Education

- 2016–Present **Ph.D. Student**, *University of California, Merced, CA, USA.*
Electrical Engineering and Computer Science
Vision and Learning Lab [📄 link](#)
- 2014–2016 **Masters of Science**, *University of Southern California, CA, USA.*
Electrical Engineering
- 2011–2013 **Masters of Science**, *National Taiwan University, Taipei, Taiwan.*
Communication Engineering
- 2007–2011 **Bachelor of Science**, *National Taiwan University, Taipei, Taiwan.*
Electrical Engineering

Research Interests

Computer Vision, Machine Learning

Publications [\(📄 Google Scholar profile\)](#)

- CVPR 2018 **Learning to Adapt Structured Output Space for Semantic Segmentation.**
(spotlight) Yi-Hsuan Tsai*, [Wei-Chih Hung*](#) (*indicates equal contribution), and Ming-Hsuan Yang
IEEE Conference on Computer Vision and Pattern Recognition, 2018 [📄 paper](#) [📄 project](#)
- CVPR 2018 **Fast and Accurate Online Video Object Segmentation via Tracking Parts.**
(spotlight) Jingchun Chen, Yi-Hsuan Tsai, [Wei-Chih Hung](#), Shengjin Wang, and Ming-Hsuan Yang
IEEE Conference on Computer Vision and Pattern Recognition, 2018
- Arxiv **Adversarial Learning for Semi-Supervised Semantic Segmentation.**
[Wei-Chih Hung](#), Yi-Hsuan Tsai, and Ming-Hsuan Yang
[📄 paper](#) [📄 project](#)
- ICCV 2017 **Scene Parsing with Global Context Encoding.**
[Wei-Chih Hung](#), Yi-Hsuan Tsai, Xiaohui Shen, Zhe Lin, Kalyan Sunkavalli, Xin Lu, and Ming-Hsuan Yang
IEEE International Conference on Computer Vision, 2017 [📄 paper](#) [📄 project](#)
- CVPR 2017 Workshop **Learning to Segment Instances in Videos with Spatial Propagation Network.**
Jingchun Cheng, Sifei Liu, Yi-Hsuan Tsai, [Wei-Chih Hung](#), Shalini De Mello, Jinwei Gu, Jan Kautz, Shengjin Wang, Ming-Hsuan Yang
IEEE Conference on Computer Vision and Pattern Recognition Workshop, 2017 [📄 paper](#)
[📄 demo code](#)
- ECCV 2016 **Unsupervised Visual Representation Learning by Graph-Based Consistent Constraints.**
Dong Li, [Wei-Chih Hung](#), Jia-Bin Huang, Shengjin Wang, Narendra Ahuja, Ming-Hsuan Yang
IEEE European Conference on Computer Vision, 2016 [📄 paper](#) [📄 project](#)

GlobalComm 2013 **Iterative decoding for uncompressed wireless video transmission.**
Wei-Ting Lin*, Wei-Chih Hung* (*indicates equal contribution), Kuan-Yu Lin, Ping-Cheng Yeh
IEEE Global Communications Conference, 2013

WCNC 2012 **Dynamic source-channel rate-distortion control under time-varying complexity constraint for wireless video transmission.**

Tsu-Hao Kuo*, Po-Hsuan Chen*, Wei-Chih Hung, Chih-Yu Huang, Chia-han Lee, and Ping-Cheng Yeh
IEEE Wireless Communications and Networking Conference, 2012

Research Experience

Aug. 2016 – Present **Research Assistant, EECS, University of California, Merced.**

Advisor: Prof. Ming-Hsuan Yang

- Adversarial Domain Adaptation of Semantic Segmentation
- Adversarial Learning for Semi-Supervised Semantic Segmentation
- Scene Parsing with Global Context Encoding (Collaborate with Adobe Research)
- Unsupervised Learning by Graph-Based Consistent Constraints

May. 2017 - Aug. 2017 **Research Intern, Computer Vision Group, Adobe Research, San Jose, CA.**

Mentors: Jianming Zhang, Zhe Lin, Xiaohui Shen, and Joon-Young Lee

- Creative Photo Blending with Reinforcement Learning

May. 2016 - Aug. 2016 **Research Intern, Computer Vision Lab, GE Research, Niskayuna, NY.**

Mentors: Xiao Bian and Ser Nam Lim

- Instance Semantic Segmentation by Learning Pairwise Affinity

Jul. 2014 - Jul. 2016 **Research Assistant, Media Communication Lab, University of Southern California.**

Advisor: C.-C. Jay Kuo

- Object Verification for Pedestrian Detection.
- Data Driven Indoor Scene 3D Layout Understanding.
- Remote Mentoring System based on Smart Glasses for Aircraft Maintenance.

Jul. 2011 - Jun. 2013 **Research Assistant, Multimedia Communication Lab, National Taiwan University, Taipei, Taiwan.**

Advisor: Ping-Cheng Yeh

- Iterative 3D-MRF based Decoder for Uncompressed Wireless Video Transmission.
- Joint Research on 3GPP LTE and LTE-Advanced Physical Layer with HTC Cooperation.

Jul. 2010 - Jun. 2011 **Research Assistant, Wireless Communication Lab, Academia Sinica, Taipei, Taiwan.**

Advisor: Chia-Han Lee

- Joint Source-Channel Rate-Distortion Control under Dynamic Complexity Constraint for Wireless Video Transmission.
- Software-defined Radio based Wireless H.264 Video Streaming System.

Jul. 2011 - Sep. 2011 **Software Intern, Qualcomm, Taipei, Taiwan.**

Multimedia Group

- Rendering performance analysis of mobile GPU chipsets.

Teaching Experience

Aug. 2016 – Present **EECS, University of California, Merced.**

- CSE 160 Computer Networks (Fall 2017)
- CSE 031 Computer Organization and Assembly Language (Spring 2017)
- CSE 020 Introduction to Computing [Java Programming] (Fall 2016)

Awards

- Oct. 2017 **Third PLace**, [📄 VisDA Segmentation Challenge](#).
Domain adaptation for semantic segmentation in ICCV' 17 workshop.
- July. 2017 **Sixth PLace**, [📄 DAVIS Challenge](#).
Video object segmentation challenge in CVPR' 17 workshop.
- Feb. 2011 **First Place**, Nvidia Parallel Computing Contest 2011.
Develop a real-time indoor sound simulation system with CUDA.
- Oct. 2010 **Undergraduate Student Research Grant**, Academia Sinica, Taipei, Taiwan.
Lead a research project on wireless video transmission system.

Technical Skills

Deep Learning Libraries Pytorch, Caffe, Torch
Programming C/C++, Python, Java
Toolbox / Software MATLAB, OpenCV, CUDA

References

- Ph.D. Advisor **Ming-Hsuan Yang**, *Associate Professor*, University of California, Merced.
✉ mhyang@ucmerced.edu [📄 homepage](#)
- Research Mentor **Yi-Hsuan Tsai**, *Research Scientist*, NEC Laboratories America.
✉ ytsai@nec-labs.com [📄 homepage](#)
- Research Mentor **Jianming Zhang**, *Research Scientist*, Adobe Research.
✉ jianmzha@adobe.com [📄 homepage](#)
- M.S. Advisor **C.-C. Jay Kuo**, *Dean's Professor*, University of Southern California, Los Angeles.
✉ cckuo@sipi.usc.edu [📄 homepage](#)
- M.S. Advisor **Ping-Cheng Yeh**, *Professor*, National Taiwan University, Taiwan.
✉ pcyeh@ntu.edu.tw [📄 homepage](#)