

Yi-Wen Chen

Curriculum Vitae

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Education

- Ph.D. Student **University of California, Merced**, CA, USA.
2019 – Present, Electrical Engineering and Computer Science
Vision and Learning Lab [link](#)
Advisor: Prof. Ming-Hsuan Yang
- Master of Science **National Taiwan University**, Taipei, Taiwan.
2017 – 2019, Communication Engineering
GPA: 3.98/4.30
- Bachelor of Science **National Taiwan University**, Taipei, Taiwan.
2013 – 2017, Electrical Engineering
GPA: 3.85/4.30

Research Interests

My research interests lie in **computer vision** and **deep learning**.
◦ Vision and Language ◦ Video Object Segmentation ◦ Representation Learning

Publications ([Google Scholar profile](#)) (* equal contribution)

- Submitted to **Understanding Synonymous Referring Expressions via Contrastive Features.**
IJCV Yi-Wen Chen, Yi-Hsuan Tsai, and Ming-Hsuan Yang
International Journal of Computer Vision [paper](#)
- WACV 2022 **Video Salient Object Detection via Contrastive Features and Attention Modules.**
Yi-Wen Chen, Xiaojie Jin, Xiaohui Shen, and Ming-Hsuan Yang
IEEE Winter Conference on Applications of Computer Vision, 2022 [paper](#)
- NeurIPS 2021 **End-to-end Multi-modal Video Temporal Grounding.**
Yi-Wen Chen, Yi-Hsuan Tsai, and Ming-Hsuan Yang
Neural Information Processing Systems, 2021 [paper](#)
- ACCV 2020 **Regularizing Meta-Learning via Gradient Dropout.**
Hung-Yu Tseng*, Yi-Wen Chen*, Yi-Hsuan Tsai, Sifei Liu, Yen-Yu Lin, and Ming-Hsuan Yang
Asian Conference on Computer Vision, 2020 [paper](#)
- IJCV 2020 **VOSTR: Video Object Segmentation via Transferable Representations.**
Yi-Wen Chen, Yi-Hsuan Tsai, Yen-Yu Lin, and Ming-Hsuan Yang
International Journal of Computer Vision, 2020 [paper](#)
- BMVC 2019 **Referring Expression Object Segmentation with Caption-Aware Consistency.**
Yi-Wen Chen, Yi-Hsuan Tsai, Tiantian Wang, Yen-Yu Lin, and Ming-Hsuan Yang
British Machine Vision Conference, 2019 [paper](#)
- ACCV 2018 **Unseen Object Segmentation in Videos via Transferable Representations.**
Oral Yi-Wen Chen, Yi-Hsuan Tsai, Chu-Ya Yang, Yen-Yu Lin, and Ming-Hsuan Yang
Asian Conference on Computer Vision, 2018 [paper](#)
Best Student Paper Honorable Mention

Research and Work Experience

- Research Intern **Snap Research**, Santa Monica, CA, USA.
May 2021 – Aug. 2021
Mentors: Hsin-Ying Lee, Jian Ren, and Sergey Tulyakov
Project: Complex Scene Generation

Research Intern **ByteDance AI Lab**, Mountain View, CA, USA.

May 2020 – Dec. 2020

Mentors: Xiaojie Jin, Xiaohui Shen, and Jianwei Li

Project: Video Saliency Detection

- Developed a framework for video salient object detection by learning contrastive features with non-local self-attention and cross-level co-attention.

Research Intern **ASUS Intelligent Cloud Services**, Taipei, Taiwan.

May 2019 – Jul. 2019

Mentors: Allen Kao and Cheng-Hsien Han

Project: Pose-Guided Face Rotation

- Developed a generative adversarial network (GAN) to generate yaw-rotated facial images based on facial landmarks.

Research Assistant **Computer Vision Lab, CITI Academia Sinica**, Taipei, Taiwan.

Jun. 2017 – Jun. 2019

Mentors: Yen-Yu Lin, Yi-Hsuan Tsai, and Ming-Hsuan Yang

Project: Referring Expression Object Segmentation

- Developed the spatial-aware dynamic filters to bridge the visual and language domains for referring expression object segmentation.
- Proposed an end-to-end trainable network for joint referring expression comprehension and generation via caption-aware consistency.
- Paper is accepted to **BMVC 2019**.

Project: Unseen Object Segmentation in Videos

- Developed a self-supervised learning framework to transfer knowledge from seen objects in images to unseen objects in videos.
- Papers are accepted to **ACCV 2018** and **IJCV 2020**.

Honors and Awards

2021 **Fred and Mitzie Ruiz Fellowship**, *University of California, Merced*.

A campus-wide fellowship [link](#)

Dec. 2018 **Best Student Paper Honorable Mention**, *ACCV 2018*.

For our work “Unseen Object Segmentation in Videos via Transferable Representations”

Professional Activities

Journal Reviewer ○ International Journal of Computer Vision (IJCV)

○ IEEE Transactions on Image Processing (TIP)

Conference Reviewer ○ IEEE International Conference on Computer Vision (ICCV), 2021

○ International Joint Conference on Artificial Intelligence (IJCAI), 2021

○ IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021

○ AAAI Conference on Artificial Intelligence (AAAI), 2021, 2022

○ IEEE Winter Conference on Applications of Computer Vision (WACV), 2020, 2022

○ IEEE International Conference on Advanced Video and Signal-based Surveillance (AVSS), 2019

Teaching Experience

Teaching Assistant **EECS, University of California, Merced**.

○ CSE 106: Exploratory Computing (Fall 2021)

○ CSE 185: Introduction to Computer Vision (Spring 2021)

○ CSE 015: Discrete Mathematics (Fall 2020)

○ CSE 031: Computer Organization (Spring 2020)

○ CSE 020: Introduction to Computing [Java Programming] (Fall 2019)

Selected Courses

○ Machine Learning and Having it Deep and Structured ○ Deep Learning for Computer Vision

○ Digital Visual Effects ○ Digital Speech Processing ○ Advanced Digital Signal Processing

Skills

Programming Python, C/C++
Toolbox/Software PyTorch, TensorFlow, Caffe, MATLAB, OpenCV

References

Ph.D. Advisor **Ming-Hsuan Yang**, *Professor*, University of California, Merced, CA, USA.
✉ mhyang@ucmerced.edu [🌐 homepage](#)

Internship Mentor **Hsin-Ying Lee**, *Research Scientist*, Snap Research, CA, USA.
✉ hlee5@snap.com [🌐 homepage](#)

Research Mentor **Yi-Hsuan Tsai**, *Research Scientist*, Phiar, CA, USA.
✉ wasidennis@gmail.com [🌐 homepage](#)

Research Mentor **Yen-Yu Lin**, *Professor*, National Chiao Tung University, Hsinchu, Taiwan.
✉ lin@cs.nctu.edu.tw [🌐 homepage](#)