

Yun-Chun Chen

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🌐 YunChunChen

Research Interests

My research interests lie in the intersection of **computer vision** and **deep learning**.

- Unsupervised domain adaptation
- Representation learning
- Few-shot learning

Education

Sept. 2014 **Bachelor of Science**, *National Taiwan University*, Taipei, Taiwan.
– Jun. 2018 Department of Electrical Engineering
GPA: 4.13/4.30 (Last 60 units), 4.10/4.30 (CS related)

Publications

- NeurIPS 2019 **Anonymous Title**.
Yun-Chun Chen*, Chen Gao*, Esther Robb, and Jia-Bin Huang
Advances in Neural Information Processing Systems (under review), Vancouver, Canada, December, 2019
- PAMI **Show, Match and Segment: Joint Learning of Semantic Matching and Object Co-segmentation**.
Yun-Chun Chen, Yen-Yu Lin, Ming-Hsuan Yang, and Jia-Bin Huang
IEEE Transactions on Pattern Analysis and Machine Intelligence (under review), 2019
- ICCV 2019 **Anonymous Title**.
Yun-Chun Chen*, Yu-Jhe Li*, Yen-Yu Lin, Xiaofei Du, and Yu-Chiang Frank Wang
International Conference on Computer Vision (under review), Seoul, Korea, October, 2019
- CVPR 2019 **CrDoCo: Pixel-level Domain Transfer with Cross-Domain Consistency**.
Yun-Chun Chen, Yen-Yu Lin, Ming-Hsuan Yang, and Jia-Bin Huang
IEEE Conference on Computer Vision and Pattern Recognition, Long Beach, California, June, 2019
- AAAI 2019 **Learning Resolution-Invariant Deep Representations for Person Re-Identification**.
Yun-Chun Chen*, Yu-Jhe Li*, Xiaofei Du, and Yu-Chiang Frank Wang
Association for the Advancement of Artificial Intelligence, Honolulu, Hawaii, January, 2019
Oral Presentation
- ACCV 2018 **Deep Semantic Matching with Foreground Detection and Cycle-Consistency**.
Yun-Chun Chen, Po-Hsiang Huang, Li-Yu Yu, Jia-Bin Huang, Ming-Hsuan Yang, and Yen-Yu Lin
Asian Conference on Computer Vision, Perth, Australia, December, 2018
- IEEE VIP Cup
ICIP 2018 Jih-Yuan Lin, Min-Sheng Wu, Yu-Cheng Chang, **Yun-Chun Chen**, Chao-Te Chou, Chun-Ting Wu, and Winston H. Hsu
IEEE International Conference on Image Processing, Athens, Greece, October, 2018
IEEE Video and Image Processing (VIP) Cup **Third Place**
- ICASSP 2019 **Saliency Aware: Weakly Supervised Object Localization**.
Yun-Chun Chen and Winston H. Hsu
IEEE International Conference on Acoustics, Speech and Signal Processing, Brighton, UK, May, 2019

Research Experiences

Vision and Learning Lab, Virginia Tech, VA, USA

Apr. 2019 **Short-term Visiting Scholar**.

– Present Advisor: Prof. Jia-Bin Huang [📄 link](#)

Neural Architecture Search for Learning Structured Image Prior.

- Proposed a decomposition for the upsampling layer.
- Developed a search space for cross-scale residual connections.
- Paper is submitted to **NeurIPS 2019**.

Computer Vision Lab, Academia Sinica, Taipei, Taiwan

Jul. 2017 **Research Assistant.**

– Mar. 2019 Advisors: Dr. Yen-Yu Lin [link](#), Prof. Jia-Bin Huang [link](#), and Prof. Ming-Hsuan Yang [link](#)

Weakly Supervised Joint Semantic Correspondence and Object Co-segmentation.

- Proposed an end-to-end trainable network and a cross-task consistency algorithm.
- Paper is submitted to **PAMI 2019**.

Unsupervised Domain Adaptation with Cross-Domain Consistency.

- Proposed an end-to-end trainable network and a cross-domain consistency algorithm.
- Applications range from semantic segmentation, depth prediction, to optical flow estimation.
- Paper is accepted to **CVPR 2019**.

Weakly Supervised Semantic Matching.

- Developed a weakly-supervised learning framework for semantic matching.
- Paper is accepted to **ACCV 2018**.

Vision and Learning Lab, National Taiwan University, Taipei, Taiwan

Jul. 2018 **Undergraduate Researcher.**

– Mar. 2019 Advisor: Prof. Yu-Chiang Frank Wang [link](#)

Cross-Resolution Generative Modeling.

- Proposed a cross-resolution generative adversarial network.
- Proposed a cross-modal network for cross-resolution person re-identification.
- Paper is submitted to **ICCV 2019**.

Resolution-Invariant Representation Learning.

- Proposed an adversarial learning algorithm for resolution mismatch problem.
- Paper is accepted to **AAAI 2019** and selected as an **oral** presentation.

Communication and Multimedia Lab, National Taiwan University, Taipei, Taiwan

Nov. 2016 **Undergraduate Researcher.**

– Oct. 2018 Advisor: Prof. Winston H. Hsu [link](#)

Lung Cancer Radiomics-Tumor Region Segmentation.

- Developed an end-to-end trainable network for 3D lung tumor segmentation.
- Won the **third place** in IEEE Video and Image Processing (VIP) Cup.

Weakly Supervised Object Localization.

- Proposed an algorithm for weakly-supervised object localization using unsupervised saliency detection.
- Paper is accepted to **ICASSP 2019**.

Image-Based Voxel Segmentation.

- Leveraged 2D semantic segmentation to bypass the learning of the complex voxel segmentation.

Cross-Domain Image-Based 3D Shape Retrieval.

- Proposed an algorithm to establish connections across images of different viewpoints and domains.

Honors and Awards

Mar. 2019 **Scholarship**, Appier.

Dec. 2018 **Travel Grant**, Academia Sinica.

Oct. 2018 **Third Place**, IEEE Video & Image Processing (VIP) Cup.

Oct. 2017 **China Technical Consultants Incorporation Scholarship.**
Awarded to top 15 students among 40+ competitors.

Sept. 2017 **Second Prize**, Undergraduate Innovation Award.

Jun. 2017 **Scholarship**, NTUEE.

Academic Services

Reviewer ICCV 2019, BMVC 2019, ICIP 2019, CVPR Workshop 2019