# YU-YING YEH

## EDUCATION

**University of California San Diego (UCSD)** — La Jolla, CA
*Ph.D. Student, Computer Science and Engineering, Overall GPA: 3.91/4.00* — *Sep. 2019 - Present*
*Master's Student, Computer Science and Engineering* — *Sep. 2018 - Jun. 2019*

**National Tsing Hua University** & **National Chiao Tung University** — Hsinchu, Taiwan
*Non-matriculated Status, Computer Science, Overall GPA: 4.30/4.30* — *Sep. 2016 - Jan. 2017*

**National Taiwan University (NTU)** — Taipei, Taiwan
*B.Sc. in Physics and B.A. in Economics, Overall GPA: 3.80/4.30* — *Sep. 2010 - Jun. 2015*

## RESEARCH EXPERIENCE

**Center of Visual Computing, University of California, San Diego** — La Jolla, CA
*Graduate Research Assistant, Supervised by Prof. Manmohan Chandraker* — *Sep. 2018 - Present*

· **Transparent Shape Reconstruction [1]:** Built a physically-based network to recover 3D shape information from transparent object 2D images

**Adobe Research** — San Jose, CA
*Research Intern, Supervised by Dr. Kalyan Sunkavalli* — *Jun. 2020 - Sep. 2020*

· **Material Enhancement:** Hallucinate physically-based rendering (PBR) materials for augmented reality applications to enable more photorealistic rendering results.

**National Taiwan University and Academia Sinica** — Taipei, Taiwan
*Research Assistant, Supervised by Prof. Yu-Chiang Frank Wang* — *Oct. 2016 - Aug. 2018*

· **Video Generation/Inference [2]:**
Generated full-length videos given frames occurring on specific timing;
Leveraged image-based and temporal-based deep generative models and recurrent neural networks

· **Feature Disentanglement** & **Multi-Domain Image Translation/Manipulation [3]:** Learned domain-invariant representation with a unified architecture for multi-domain image translation and manipulation

· **Cross-Domain Image Synthesis** & **Disentangled Representation Learning [4]:**
First work to address adaptation of feature disentanglement and learn cross-domain disentangled representation
Conducted cross-domain image synthesis and translation given attribute information

· **Award:** First Place Award in GAN Project Competition 2017, Ministry of Science and Technology, Taiwan

## PUBLICATION

[1] **Y.-Y. Yeh***, Z. Li*, M. Chandraker. Through the Looking Glass: Neural 3D Reconstruction of Transparent Shapes. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020. (**Oral**) (*equal contribution)

[2] **Y.-Y. Yeh**, Y.-C. Liu, W.-C. Chiu, Y.-C. F. Wang. Static2Dynamic: Video Inference from a Deep Glimpse. In *IEEE Transactions on Emerging Topics in Computational Intelligence*, 2020.

[3] A. Liu, Y.-C. Liu, **Y.-Y. Yeh**, Y.-C. F. Wang. A Unified Feature Disentangler for Multi-Domain Image Translation and Manipulation. In *Conference on Neural Information Processing Systems (NeurIPS)*, 2018.

[4] Y.-C. Liu, **Y.-Y. Yeh**, T.-C. Fu, S.-D. Wang, W.-C. Chiu, & Y.-C. F. Wang. Detach and Adapt: Learning Cross-Domain Disentangled Deep Representation. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018. (**Spotlight Presentation**)

[5] Y.-J. Li, F.-E. Yang, Y.-C. Liu, **Y.-Y. Yeh**, X. Du, & Y.-C. F. Wang. Adaptation and Re-Identification Network: An Unsupervised Deep Transfer Learning Approach to Person Re-Identification. In *IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPR workshop)*, 2018.

## ACADEMIC SERVICE

**Conference Reviewer** : *ICCV'19, AAAI'20, CVPR'20, ECCV'20, NeurIPS'20*

## TEACHING EXPERIENCE

**Domain Adaptation in Computer Vision, University of California, San Diego** Jan. 2020 - Mar. 2020
*Teaching Assistant, Instructed by Prof. Manmohan Chandraker* *La Jolla, CA*

**Intro to Computer Vision, University of California, San Diego** Apr. 2019 - Jun. 2019
*Teaching Assistant, Instructed by Prof. David Kriegman* *La Jolla, CA*

**Intro to Computer Vision, University of California, San Diego** Jan. 2019 - Mar. 2019
*Teaching Assistant, Instructed by Prof. Manmohan Chandraker* *La Jolla, CA*

**Deep Learning Crash Course for New Lab Members, National Taiwan University** Jul. 2018
*Lecturer of Introduction to Neural Network and Convolutional Neural Network* *Taipei, Taiwan*

**Deep Learning for Computer Vision, National Taiwan University** Mar. 2018 - Jun. 2018
*Teaching Assistant, Instructed by Prof. Yu-Chiang Frank Wang* *Taipei, Taiwan*

**Algorithms, National Taiwan University** Sep. 2017 - Jan. 2018
*Teaching Assistant, Instructed by Prof. Yu-Chiang Frank Wang* *Taipei, Taiwan*

## SELECTED PROJECTS

**Machine Learning meets Geometry** Jan. 2020 - Mar. 2020
*Course project, Instructed by Prof. Hao Su* *Dept. of Computer Science and Engineering, UCSD*

· Implement PyTorch version of Isospectralization, an optimization method for shape deformation, style transfer, and shape matching. Apply the algorithm to large shape repository, ShapeNet.

**Selected Topics in Graphics** Sep. 2018 - Dec. 2018
*Course project, Instructed by Prof. Ravi Ramamoorthi* *Dept. of Computer Science and Engineering, UCSD*

· Implement Tensorflow version of recurrent denoising autoencoder from scratch for interactively reconstruction of Monte Carlo image sequence.

**Operating Systems** Sep. 2016 - Jan. 2017
*Course project, Instructed by Prof. Jerry Chou* *Dept. of Computer Science, NTHU*

· Improved NachOS, implemented by C++, by adding system call, supporting multi-programming, implementing process scheduling algorithm and supporting file system

## WORK EXPERIENCE

**Cathay United Bank** Aug. 2015 - Jun. 2016
*Assistant Structured Product Manager* *Taipei, Taiwan*

· Developed structured products to satisfy clients demand by analyzing market trend
· Built automatic cash flow calculator for products from Reuters database with Excel VBA

## POSITION OF RESPONSIBILITY

**NTU Physics Volleyball Team** Feb. 2012 - Jun. 2013
*Captain* *Taipei, Taiwan*

· Scheduled training courses and instructed core knowledge of volleyball to members
· Led team in college-wide games held in different cities in Taiwan

**Night of Physics: an annual department-wide performance** Sep. 2011 - Mar. 2012
*Director* *Taipei, Taiwan*

· Spearheaded a team of 70 people to successfully conduct 4-hour performance in student center with more than 300 attendees. Efficiently organized meetings with group leaders and communicated among groups.

## TECHNICAL STRENGTHS

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|---|---|
| **Computer Languages** | C/C++, Python(TensorFlow), Octave/Matlab, VBA |
| **Software & Tools** | Stata, HTML, Excel, LaTeX |
| **Languages** | Chinese Mandarin (Native), English (Fluent), Japanese (Basic) |