

YUN-CHUN CHEN

Email: yunchunchen.work@gmail.com

Website: <https://yunchunchen.github.io>

RESEARCH INTERESTS

World Models, Generative AI, Multimodal LLMs, Agentic AI, Foundation Models, Computer Vision.

EDUCATION

University of Toronto, Toronto, ON, Canada Sep 2020 - May 2025

Ph.D. in Computer Science

Advisor: Alec Jacobson

National Taiwan University, Taipei, Taiwan Sep 2014 - Jun 2018

B.S. in Electrical Engineering

WORK EXPERIENCE

Adobe Firefly Foundry, San Jose, CA, USA May 2026 - Present

- Building Generative AI and World Models.

Amazon AWS, Mountain View, CA, USA Sep 2025 - May 2026

Position: Applied Scientist II

- Worked on Multimodal Large Language Models and AI Agents.

Meta Reality Labs, Burlingame, CA, USA May 2024 - Jan 2025

Position: Research Scientist Intern

- Worked on Dynamic Gaussian Splatting.

Adobe Research, Seattle, WA, USA Jun 2023 - Sep 2023

Position: Research Scientist Intern

Mentors: Matheus Gadelha, Vova Kim, Zhiqin Chen

- Worked on controllable text-to-3D generation with diffusion models.

Adobe Research, Toronto, ON, Canada Jun 2022 - Jan 2023

Position: Research Scientist Intern

Mentors: Vova Kim, Noam Aigerman

- Worked on level-of-detail representations for mesh compression and transmission.
- Filed a patent.

NVIDIA Seattle Robotics Lab, Seattle, WA, USA

May 2021 - Feb 2022

Position: Research Intern (remote)

Mentors: Adithya Murali, Balakumar Sundaralingam, Dieter Fox

- Worked on robotic grasping and motion planning.
- Filed a patent.

University of California, Merced, CA, USA

Jan 2020 - Jun 2020

Position: Short-term Visiting Scholar

Mentor: Ming-Hsuan Yang

- Worked on 3D human pose and shape estimation from videos.

Virginia Tech, Blacksburg, VA, USA

Apr 2019 - Jul 2019

Position: Short-term Visiting Scholar

Mentor: Jia-Bin Huang

- Worked on neural architecture search for image restoration and synthesis.

Academia Sinica, Taipei, Taiwan

Jul 2017 - Jan 2019

Position: Research Assistant

Mentors: Yen-Yu Lin, Jia-Bin Huang, Ming-Hsuan Yang

- Worked on unsupervised domain adaptation for dense prediction tasks.
- Worked on weakly supervised semantic matching and object co-segmentation.

SELECTED PUBLICATIONS

Google Scholar Profile: <https://scholar.google.com/citations?user=TiCSofEAAAAJ&hl=en>

Conference and Journal Papers

14. **Text-guided Controllable Mesh Refinement for Interactive 3D Modeling.**

Yun-Chun Chen, Selena Ling, Zhiqin Chen, Vladimir G. Kim, Matheus Gadelha, Alec Jacobson.
ACM SIGGRAPH Asia, 2024.

13. **Neural Progressive Meshes.**

Yun-Chun Chen, Vladimir G. Kim, Noam Aigerman, Alec Jacobson.
ACM SIGGRAPH, 2023.

Filed a patent.

12. **Breaking Bad: A Dataset for Geometric Fracture and Reassembly.**

Silvia Sellán*, **Yun-Chun Chen***, Ziyi Wu*, Animesh Garg, Alec Jacobson. (*joint first author)
Neural Information Processing Systems (NeurIPS) Datasets and Benchmarks Track, 2022.

Featured Paper Presentation.

11. **Grasp'D: Differentiable Contact-rich Grasp Synthesis for Multi-fingered Hands.**
 Dylan Turpin, Liquan Wang, Eric Heiden, **Yun-Chun Chen**, Miles Macklin, Stavros Tsogkas, Sven Dickinson, Animesh Garg.
European Conference on Computer Vision (ECCV), 2022.
Oral Presentation.
10. **Neural Shape Mating: Self-Supervised Object Assembly with Adversarial Shape Priors.**
Yun-Chun Chen, Haoda Li, Dylan Turpin, Alec Jacobson, Animesh Garg.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
9. **Learning by Watching: Physical Imitation of Manipulation Skills from Human Videos.**
 Haoyu Xiong, Quanzhou Li, **Yun-Chun Chen**, Homanga Bharadhwaj, Samarth Sinha, Animesh Garg.
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2021.
8. **Show, Match and Segment: Joint Weakly Supervised Learning of Semantic Matching and Object Co-segmentation.**
Yun-Chun Chen, Yen-Yu Lin, Ming-Hsuan Yang, Jia-Bin Huang.
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2021.
7. **Self-Attentive 3D Human Pose and Shape Estimation from Videos.**
Yun-Chun Chen, Marco Piccirilli, Robinson Piramuthu, Ming-Hsuan Yang.
Computer Vision and Image Understanding (CVIU), 2021.
6. **NAS-DIP: Learning Deep Image Prior with Neural Architecture Search.**
Yun-Chun Chen*, Chen Gao*, Esther Robb, Jia-Bin Huang. (*joint first authors)
European Conference on Computer Vision (ECCV), 2020.
5. **Learning to Learn in a Semi-Supervised Fashion.**
Yun-Chun Chen, Chao-Te Chou, Yu-Chiang Frank Wang.
European Conference on Computer Vision (ECCV), 2020.
4. **Recover and Identify: A Generative Dual Model for Cross-Resolution Person Re-Identification.**
 Yu-Jhe Li*, **Yun-Chun Chen***, Yen-Yu Lin, Xiaofei Du, Yu-Chiang Frank Wang. (*joint first authors)
IEEE International Conference on Computer Vision (ICCV), 2019.
3. **CrDoCo: Pixel-level Domain Transfer with Cross-Domain Consistency.**
Yun-Chun Chen, Yen-Yu Lin, Ming-Hsuan Yang, Jia-Bin Huang.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019.
2. **Learning Resolution-Invariant Deep Representations for Person Re-Identification.**
Yun-Chun Chen*, Yu-Jhe Li*, Xiaofei Du, Yu-Chiang Frank Wang. (*joint first authors)
AAAI Conference on Artificial Intelligence (AAAI), 2019.
Oral Presentation.
1. **Deep Semantic Matching with Foreground Detection and Cycle-Consistency.**
Yun-Chun Chen, Po-Hsiang Huang, Li-Yu Yu, Jia-Bin Huang, Ming-Hsuan Yang, Yen-Yu Lin.
Asian Conference on Computer Vision (ACCV), 2018.

Workshop Papers

3. **Neural Motion Fields: Encoding Grasp Trajectories as Implicit Value Functions.**

Yun-Chun Chen*, Adithyavairavan Murali*, Balakumar Sundaralingam*, Wei Yang, Animesh Garg, Dieter Fox. (*joint first authors)

RSS 2022 Workshop on Implicit Representations for Robotic Manipulation, 2022.

Spotlight Talk & Filed a patent.

2. **Learning by Watching: Physical Imitation of Manipulation Skills from Human Videos.**

Haoyu Xiong, Quanzhou Li, **Yun-Chun Chen**, Homanga Bharadhwaj, Samarth Sinha, Animesh Garg.

RSS 2021 Workshop on Visual Learning and Reasoning for Robotics, 2021.

Spotlight Talk.

1. **Learning by Watching: Physical Imitation of Manipulation Skills from Human Videos.**

Haoyu Xiong, Quanzhou Li, **Yun-Chun Chen**, Homanga Bharadhwaj, Samarth Sinha, Animesh Garg.

ICML 2021 Workshop on Human in the Loop Learning, 2021.

Preprint

1. **Cross-Resolution Adversarial Dual Network for Person Re-Identification and Beyond.**

Yu-Jhe Li*, **Yun-Chun Chen***, Yen-Yu Lin, Yu-Chiang Frank Wang. (*joint first authors)

arXiv preprint arXiv:2002.09274

PATENTS

2. **Progressively Generating Fine Polygon Meshes.**

Vladimir G. Kim, **Yun-Chun Chen**, Noam Aigerman, Alec Jacobson.

US Patent Application No. 18/355,995.

1. **Techniques for Robot Control using Neural Implicit Value Functions.**

Adithyavairavan Murali, Balakumar Sundaralingam, **Yun-Chun Chen**, Dieter Fox, Animesh Garg.

US Patent No. 12,318,935.

HONORS AND AWARDS

Ph.D. Conference Travel Grant for ACM SIGGRAPH Asia 2024.	2024
Faculty of Arts and Science Program-level Fellowship, University of Toronto.	2023
Ph.D. Conference Travel Grant for NeurIPS 2022.	2022
Faculty of Arts and Science Program-level Fellowship, University of Toronto.	2022
Vector Institute Research Grant.	2022
University of Toronto Mississauga Travel Grant for CVPR 2022.	2022
Faculty of Arts and Science Program-level Fellowship, University of Toronto.	2021
Vector Institute Research Grant.	2021

Top 25% of Program Committee Members of AAAI 2021.	2021
Faculty of Arts and Science Program-level Fellowship, University of Toronto.	2020
Appier AI Scholarship for ICCV 2019.	2019
Appier AI Scholarship for CVPR 2019.	2019
Appier AI Scholarship for AAAI 2019.	2019

ACADEMIC SERVICE

Senior Program Committee

International Joint Conference on Artificial Intelligence (IJCAI)	2021
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Program Committee / Conference Reviewer

Neural Information Processing Systems (NeurIPS)	2020, 2021, 2022, 2023, 2024, 2025
NeurIPS Datasets and Benchmarks Track	2022, 2023, 2024
International Conference on Learning Representations (ICLR)	2021, 2022, 2023, 2024, 2025
International Conference on Machine Learning (ICML)	2021, 2022, 2023, 2024, 2025
IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	2020 – 2025
IEEE International Conference on Computer Vision (ICCV)	2019, 2021, 2023, 2025
European Conference on Computer Vision (ECCV)	2020, 2022, 2024
International Conference on 3D Vision (3DV)	2022
British Machine Vision Conference (BMVC)	2019, 2020, 2021, 2022, 2023, 2024, 2025
Asian Conference on Computer Vision (ACCV)	2020, 2022, 2024
IEEE Winter Conference on Applications of Computer Vision (WACV)	2021, 2022, 2023, 2024, 2025
ACM SIGGRAPH	2024
ACM SIGGRAPH Asia	2022, 2024
Eurographics	2025
IEEE International Conference on Robotics and Automation (ICRA)	2021
Conference on Robot Learning (CoRL)	2020
International Symposium on Robotics Research (ISRR)	2022
International Joint Conference on Artificial Intelligence (IJCAI)	2022, 2023, 2024, 2025
AAAI Conference on Artificial Intelligence (AAAI)	2020, 2021, 2022, 2023, 2024, 2025
Conference on Lifelong Learning Agents (CoLLAs)	2023, 2024
Learning on Graphs Conference (LoG)	2023, 2024
International Conference on Artificial Intelligence and Statistics (AISTATS)	2023, 2024, 2025
IEEE International Conference on Image Processing (ICIP)	2019
Gordon Research Conference/Seminar in Robotics (GRS)	2022

Journal Reviewer

ACM Transactions on Graphics (TOG)
International Journal of Computer Vision (IJCV)
Image and Vision Computing (IVC)
IET Computer Vision
IEEE Robotics and Automation Letters (RA-L)
IEEE Transactions on Image Processing (TIP)

Volunteer

International Conference on Learning Representations (ICLR) 2021
International Conference on Machine Learning (ICML) 2021

Mentor

SIGGRAPH Grad School Application Mentorship Program 2022
Toronto Graduate Application Assistance Program 2022, 2023, 2024