CHEN WEI

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EDUCATION

Johns Hopkins University, Baltimore, MD — 2019 - 2024
Ph.D. in Computer Science
Advised by Bloomberg Distinguished Professor Alan L. Yuille

Peking University, Beijing, China — 2015 - 2019
B.Sc. in Computer Science
Graduated with Department Honors

EMPLOYMENT

Rice University, Assistant Professor — 2025 -

Fundamental AI Research (FAIR), Meta, Postdoc — 2024 - 2025
Host: Christoph Feichtenhofer

Google DeepMind, Student Researcher — Summer 2023
Mentors: Chenxi Liu, Zhishuai Zhang, Siyuan Qiao, Jiahui Yu
Multi-modal learning and generative models.

Fundamental AI Research (FAIR), Meta, Research Intern — Summer 2022
Mentors: Christoph Feichtenhofer, Yanghao Li, Po-Yao Huang
Foundation models and self-supervised learning for images and videos.

Facebook AI Research (FAIR), Research Intern — Summer 2021
Mentors: Christoph Feichtenhofer, Saining Xie, Chao-Yuan Wu, Haoqi Fan
Foundation models and self-supervised learning for images and videos.

Google Cloud AI, Research Intern — Summer 2020
Mentors: Kihyuk Sohn,Clayton Mellina, Fan Yang
Class-imbalanced and semi-supervised learning.

Johns Hopkins University, Research Intern — Summer 2018
Advisors: Lingxi Xie, Alan Yuille
Self-supervised learning for images.

Peking University, Research Intern — 2017 - 2019

Advisors: Wenhan Yang, Jiaying Liu
Restoration and reconstruction of low quality images.

Google Beijing, Engineering Practicum Summer 2017
Mentors: Xiangyu Luo

HONORS

CVPR Doctoral Consortium 2024

EECS Rising Stars 2023

Most Influential CVPR Papers [link] 2023

ECCV Outstanding Reviewer 2022

Most Cited BMVC Papers over the Last Five Years [link] 2021

Outstanding Graduates, Peking University 2019

Fangzheng Scholarship 2018

Outstanding Students, Peking University 2016, 2018

China National Scholarship 2016

PUBLICATIONS & PREPRINTS [Google Scholar]

[1] Junyang Wu*, Xianhang Li*, **Chen Wei**, Huiyu Wang, Alan Yuille, Yuyin Zhou, Cihang Xie. Unleashing the Power of Visual Prompting At the Pixel Level. In *Transactions on Machine Learning Research (TMLR)*, 2024.

[2] **Chen Wei**, Chenxi Liu, Siyuan Qiao, Zhishuai Zhang, Alan Yuille, Jiahui Yu. De-Diffusion Makes Text a Strong Cross-Modal Interface. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

[3] Qi Chen, Xiaoxi Chen, Haorui Song, Alan Yuille, Zhiwei Xiong, **Chen Wei**, Zongwei Zhou. Towards Generalizable Tumor Synthesis. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

[4] Zihao Wei, **Chen Wei**, Jieru Mei, Yutong Bai, Zeyu Wang, Xianhang Li, Hongru Zhu, Huiyu Wang, Alan Yuille, Yuyin Zhou, and Cihang Xie. Masked Autoencoders are Secretly Efficient Learners. *Efficient Deep Learning for Computer Vision (ECV) Workshop at IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

[5] Haoqin Tu*, Bingchen Zhao*, **Chen Wei**, Cihang Xie. Tuning LayerNorm in Attention: Towards Efficient Multi-Modal LLM Finetuning. In *International Conference on Learning Representations (ICLR)*, 2024. **Spotlight**

[6] Haoqin Tu*, Bingchen Zhao*, **Chen Wei**, Cihang Xie. Sight Beyond Text: Multi-Modal Training Enhances LLMs in Truthfulness and Ethics. In *Instruction Workshop at Neural Information Processing Systems (NeurIPS)*, 2023.

[7] **Chen Wei**, Karttikeya Mangalam, Po-Yao Huang, Yanghao Li, Haoqi Fan, Hu Xu, Huiyu Wang, Cihang Xie, Alan Yuille, Christoph Feichtenhofer. Diffusion Models as Masked Autoencoders. In *International Conference on Computer Vision (ICCV)*, 2023.

[8] Yuanze Lin, **Chen Wei**, Huiyu Wang, Alan Yuille, Cihang Xie. SMAUG: Sparse Masked Autoencoder for Efficient Video-Language Pre-training. In *International Conference on Computer Vision (ICCV)*, 2023.

[9] Chaitanya Ryali, Yuan-Ting Hu, Daniel Bolya, **Chen Wei**, Haoqi Fan, Po-Yao Huang, Vaibhav Aggarwal, Arkabandhu Chowdhury, Omid Poursaeed, Judy Hoffman, Jitendra Malik, Yanghao Li, Christoph Feichtenhofer. Hiera: A Hierarchical Vision Transformer without the Bells-and-Whistles. In *International Conference on Machine Learning (ICML)*, 2023. **Oral**

[10] Yutong Bai, Zeyu Wang, Junfei Xiao, **Chen Wei**, Huiyu Wang, Alan Yuille, Yuyin Zhou, Cihang Xie, Masked Autoencoders Enable Efficient Knowledge Distillers. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

[11] Feng Wang, Huiyu Wang, **Chen Wei**, Alan Yuille, Wei Shen. CP2: Copy-Paste Contrastive Pretraining for Semantic Segmentation. In *European Conference on Computer Vision (ECCV)*, 2022.

[12] Xianhang Li, Huiyu Wang, **Chen Wei**, Jieru Mei, Alan Yuille, Yuyin Zhou, Cihang Xie. In Defense of Image Pre-Training for Spatiotemporal Recognition. In *European Conference on Computer Vision (ECCV)*, 2022.

[13] **Chen Wei**, Haoqi Fan, Saining Xie, Chao-Yuan Wu, Alan Yuille, Christoph Feichtenhofer. Masked Feature Prediction for Self-Supervised Visual Pre-Training. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022. **Most Influential CVPR Papers**

[14] Jinghao Zhou, **Chen Wei**, Huiyu Wang, Wei Shen, Cihang Xie, Alan Yuille, Tao Kong. iBOT: Image BERT Pre-Training with Online Tokenizer. In *International Conference on Learning Representations (ICLR)*, 2022. **Most Cited ICLR Papers**

[15] **Chen Wei**, Kihyuk Sohn, Clayton Mellina, Alan Yuille, Fan Yang. CReST: A Class Rebalancing Self-Training Framework for Imbalanced Semi-Supervised Learning. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021.

[16] **Chen Wei**, Huiyu Wang, Wei Shen, Alan Yuille. CO2: Consistent Contrast for Unsupervised Visual Representation Learning. In *International Conference on Learning Representations (ICLR)*, 2021.

[17] **Chen Wei**, Lingxi Xie, Xutong Ren, Yingda Xia, Chi Su, Jiaying Liu, Qi Tian, Alan Yuille. Iterative Reorganization with Weak Spatial Constraints: Solving Arbitrary Jigsaw Puzzles for Unsupervised Representation Learning. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.

[18] **Chen Wei***, Wenjing Wang*, Wenhan Yang and Jiaying Liu. Deep Retinex Decomposition for Low-Light Enhancement. In *British Machine Vision Conference (BMVC)*, 2018. **Oral**, **Most Cited BMVC Papers**

[19] Wenjing Wang*, **Chen Wei***, Wenhan Yang, Jiaying Liu. GLADNet: Low-Light Enhancement Network with Global Awareness. In *IEEE International Conference on Automatic Face and Gesture Recognition (FG)*, 2018.

Preprints

[20] Jiang Liu, **Chen Wei**, Yuxiang Guo, Heng Yu, Alan Yuille, Soheil Feizi, Chun Pong Lau, Rama Chellappa. Instruct2Attack: Language-Guided Semantic Adversarial Attacks. arXiv, 2023. In submission

[21] Sucheng Ren, **Chen Wei**, Hongru Zhu, Yijiang Li, Alan Yuille, Cihang Xie. VideoGPT: Generative Video Transformers for Video Self-Supervised Learning. 2023. In submission.

ACADEMIC TALKS

[1] **Learning Generalized Knowledge for AI with Limited Supervision**

Meta AI	Sep. 2024
Bytedance Research	Apr. 2024
Google Research	Apr. 2024
University of California, Irvine	Apr. 2024
CogAI Reading Group, Stanford	Apr. 2024
University of Virginia	Mar. 2024
Nvidia Research	Mar. 2024
Berkeley Artificial Intelligence Research (BAIR)	Mar. 2024
Purdue University	Mar. 2024
University of California, Davis	Feb. 2024
Rice University	Feb. 2024

[2] **De-Diffusion Makes Text a Strong Cross-Modal Interface**

TechBeat	Dec. 2023

Google DeepMind Oct. 2023

[3] **Generalizable Visual Understanding through Inverse Generation**

Vision Reading Group, Google Research Jan. 2024

External Speaker Series, UIUC Vision Group Jan. 2024

Cornell Graphics and Vision Group, Cornell University Dec. 2023

MIT Visual Computing Seminar Oct. 2023

The Computational Vision and Learning Lab, UCLA Oct. 2023

[4] **Masked Image Modeling: A New Opportunity of Visual Self-Supervised Learning**

Visual Informatics Group, University of Texas at Austin Jan. 2022

[5] **Deep Retinex Decomposition for Low-Light Enhancement**

Britich Machine Vision Conference (BMVC) Sep. 2018

MENTORSHIP

Research Mentorship

Kai Cheng 2023

Undergrad at Peking University, now PhD student at Purdue University
Topic: Generative diffusion model for semantic segmentation.

Yuanze Lin 2022 - 2023

Master at University of Washington, now PhD student at University of Oxford
Topic: Video-language pre-training.
Accomplishment: ICCV 2023

Xianhang Li 2022

PhD student at University of California Santa Cruz
Topic: Video understanding.
Accomplishment: ECCV 2022

Feng Wang 2021-2022

Master at Tsinghua University, now PhD student at Johns Hopkins University
Topic: Self-supervised pre-training for semantic segmentation.
Accomplishment: ECCV 2022

Jinghao Zhou 2021-2022

Undergraduate student, now PhD student at University of Oxford
Topic: Self-supervised pre-training for robust image understanding.

Accomplishment: ICLR 2022 (cited 800+ times)

Career Counseling

Women Mentoring Whiting Program 2023 - 2024
Whiting Engineering School, Johns Hopkins University

TEACHING

University of California, Santa Cruz *Guest Lecturer* Spring 2024
Instructor: Yuyin Zhou
Course: Neural Computation
Lecture: Learning Generalized Knowledge for AI with Limited Supervision

Johns Hopkins University *Teaching Assistant* Fall 2022
Instructor: Alan Yuille
Course: Probabilistic Models of the Visual Cortex
Lectures: GANs, StyleGANs and Autoencoders

Peking University *Teaching Assistant* Fall 2018
Instructor: Jiaying Liu
Course: Introduction to Programming and Computing

SERVICE

Conference Reviewer

International Conference on Computer Vision (ICCV)	2021-2023
IEEE Conferene on Computer Vision and Pattern Recognition (CVPR)	2022-2024
European Conference on Computer Vision (ECCV)	2022-2024
International Conference on Machine Learning (ICML)	2023-2024
Conference on Neural Information Processing Systems (NeurIPS)	2023-2024
International Conference on Learning Representations (ICLR)	2024

Journal Reviewer

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)	2023
International Journal of Computer Vision (IJCV)	2022-2023
IEEE Transactions on Multimedia (TMM)	2021-2023
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)	2021-2023
Neurocomputing	2020-2023