

Ping Hu

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Google Scholar

Working Experience

- **University of Electronic Science and Technology of China** **Sichuan, China**
Professor *1/2024 – Present*
- **Boston University** **MA, USA**
Postdoc Associate *1/2023 – 12/2023*
 - Collaborated with Prof. Kate Saenko and Prof. Stan Sclaroff
- **Adobe Research** **Remote, USA**
Research Intern *05/2021 – 11/2021*
 - Collaborated with Dr. Simon Niklaus
 - Topic: video frame interpolation and synthesis.
- **Adobe Research** **San Jose, CA, USA**
Research Intern *05/2019 – 11/2019*
 - Collaborated with Dr. Federico Perazzi, Dr. Fabian Caba, Dr. Oliver Wang, and Dr. Zhe Lin
 - Topic: low-latency video sequence processing.
- **Nanyang Technological University** **Singapore**
Research Assistant *07/2016 – 8/2018*
 - Collaborated with Dr. Gang Wang and Prof. Yap-Peng Tan
 - Topic: image/video understanding and processing.

Education

- **Boston University** **Boston, MA, USA**
Ph.D. student advised by Prof. Stan Sclaroff and Prof. Kate Saenko *08/2018 – 12/2022*
Research area: Efficient learning and inferencing for image/video understanding.
- **University of Chinese Academy of Science** **Beijing, China**
M.E. student in Computer Science *08/2013 – 06/2016*
Research area: Image segmentation and image document analysis
- **Sichuan University** **Sichuan, China**
B.E. student in Electronic Engineering *09/2009 – 06/2013*
 - A member of Wu-Yuzhang Honors College

Professional Services & Award

- Associate Editor, Pattern Recognition (PR)
- Associate Editor, ACM Computing Surveys (CSUR)
- Guest Editor, Recent Advances in Efficient Image and Video Processing, Electronics, 2024-Present.
- Area Chair, International Conference on Machine Learning (ICML), 2025.
- Area Chair, International Joint Conference on Artificial Intelligence (IJCAI), 2025.
- Area Chair, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024, 2025.
- Area Chair, International Conference on Neural Information Processing Systems (NeurIPS), 2024.
- Area Chair, ACM International Conference on Multimedia (MM), 2024.

- Area Chair, IEEE Conference on Artificial Intelligence (CAI), 2024.
- Senior Program Committee, International Joint Conference on Artificial Intelligence (IJCAI), 2023, 2024.
- Session Chair, International Conference on Robotics and Automation (ICRA), 2020.
- Organizer, ICME Workshop - Vision and Learning for an Enhanced Metaverse, 2024.
- Organizer, ICME Grand Challenge – 2nd Multi-Modal Video Reasoning and Analyzing Competition, 2024.
- Organizer, CVPR Workshop – Efficient Computer Vision, 2023.
- Organizer, IEEE Competition – Low-Power Computer Vision Challenge, 2023.
- Organizer, ICCV Challenge – Visual Domain Adaptation Challenge, 2019.
- Program Committee Member / Reviewer, CVPR, ICCV, ECCV, NeurIPS, ICLR, etc.
- Reviewer, TPAMI, PR, TIP, TMM, TCSVT, IJCV, etc.
- Outstanding Reviewer, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021.
- Nanyang Research Scholarship of Singapore, 2017-2018

Projects

Key Research and Development Program of Sichuan Province	PI
<i>Large Multimodal Model for Dispute Mediation, 1,000,000 RMB</i>	<i>4/2025 – 3/2028</i>
General Program of NSFC	PI
<i>Efficient Scene Understanding with Multi-Sensor Collaboration, 500,000 RMB</i>	<i>1/2025 – 12/2028</i>
NSFC Excellent Young Scientists Fund (Overseas)	PI
<i>Visual Image Feature Encoding and Understanding, 2,000,000 RMB</i>	<i>1/2024 – 12/2026</i>

Students

- PhD Student: Yuyan Chen, Qingfeng Guan, Longyu Yang
- Master Student: Yuan Feng, Xiaorui Sun, Tan Zhang, Quanyou Li, Guomiao Yin, Peiyang Ni, Rundi Fan, Haohua Qiu, Jinyi Li

Publications

Journal

Duo Peng, Qihong Ke, Mark He Huang, **Ping Hu** and Jun Liu, “Unified Prompt Attack Against Text-to-Image Generation Models”, *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, 2025.

Xin Wang, Liang Peng, Rongyao Hu, **Ping Hu**, and Xiaofeng Zhu, “Unsupervised Multiplex Graph Representation Learning via Maximizing Coding Rate Reduction”, *Pattern Recognition (PR)*, 2025.

Ping Hu, Ximeng Sun, Stan Sclaroff, Kate Saenko, “Dualcoop++: Fast and effective adaptation to multi-label recognition with limited annotations”, *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, 2024.

Ping Hu, Simon Niklaus, Lu Zhang, Stan Sclaroff, Kate Saenko, “Many-to-many Splatting for Efficient Video Frame Interpolation”, *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, 2024.

Zhenyu Chen, Lu Zhang, **Ping Hu**, Huchuan Lu, You He, “MaskTrack: Auto-Labeling and Stable Tracking for Video Object Segmentation”, *IEEE Trans. on Neural Networks and Learning Systems (T-NNLS)*, 2024.

Yumeng Kang, Lu Zhang, **Ping Hu**, Yu Liu, Huchuan Lu, You He, “Learning Depth-aware Decomposition for Single Image Dehazing”, *Computer Vision and Image Understanding (CVIU)*, 2024.

Jianyang Zhang, Guowu Yang, **Ping Hu**, Guosheng Lin, Fengmao Lv, “Semantic consistent embedding for domain adaptive zero-shot”, *IEEE Trans. Image Processing (T-IP)*, 2023.

Ping Hu, Stan Sclaroff, Kate Saenko, "Leveraging Geometric Structure for Label-efficient Semi-supervised Scene Segmentation", *IEEE Trans. Image Processing (T-IP)*, 2022.

Ping Hu, Federico Perazzi, Fabian Caba Heilbron, Oliver Wang, Zhe Lin, Kate Saenko, Stan Sclaroff, "Real-time Semantic Segmentation with Fast Attention", *IEEE Robotics and Automation Letters (RA-L)*, 2021.

Ping Hu, Gang Wang, Xiangfei Kong, Jason Kuen, Yap-peng Tan, "Cascaded Refinement Network for Video Object Segmentation", *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, 2019.

Ping Hu, Gang Wang, Yap-peng Tan, "Recurrent Spatial Pyramid CNN for Optical Flow Estimation", *IEEE Trans. on Multimedia (T-MM)*, 2018.

Ping Hu, Weiqiang Wang, Chi Zhang, Ke Lu, "Detecting Salient Objects via Color and Texture Compactness Hypotheses", *IEEE Trans. on Image Processing (T-IP)*, 2016.

Conference.....

Longyu Yang, Ping Hu*, Shangbo Yuan, Lu Zhang, Jun Liu, Heng Tao Shen, Xiaofeng Zhu, "Towards Explicit Geometry-Reflectance Collaboration for Generalized LiDAR Segmentation in Adverse Weather", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR Oral)*, 2025.

Wenbo Zhang, Lu Zhang, **Ping Hu**, Liqian Ma, Yunzhi Zhuge, Huchuan Lu, "Bootstrapping Clustering of Gaussians for View-consistent 3D Scene Understanding", *The Annual AAAI Conference on Artificial Intelligence (AAAI)*, 2025.

Ziyan Guo, Haoxuan Qu, Hossein Rahmani, Dewen Soh, **Ping Hu**, Qihong Ke, Jun Liu, "TSTMotion: Training-free Scene-aware Text-to-motion Generation", *IEEE Conference on Multimedia Expo (ICME)*, 2025.

Reuben Tan, Ximeng Sun, **Ping Hu**, Jui-Hsien Wang, Hanieh Deilamsalehy, Bryan A. Plummer, Bryan Russell, Kate Saenko, "Koala: Key frame-conditioned long video-LLM", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

Jiazuo Yu, Yunzhi Zhuge, Lu Zhang, **Ping Hu**, Dong Wang, Huchuan Lu, You He, "Boosting Continual Learning of Vision-Language Models via Mixture-of-Experts Adapters", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

Duo Peng, Zhengbo Zhang, **Ping Hu**, Qihong Ke, David Yau, Jun Liu, "PPM: Text-to-Image Diffusion Models are Category-Agnostic Pose Estimators", *European Conference on Computer Vision (ECCV)*, 2024.

Zongqian Wu, Yujing Liu, Mengmeng Zhan, **Ping Hu**, Xiaofeng Zhu, "Adaptive Multi-Modality Prompt Learning", *ACM Multimedia Conference (MM)*, 2024.

Mengmeng Zhan, Zhongqian Wu, Rongyao Hu, **Ping Hu**, Heng Tao Shen, Xiaofeng Zhu, "Towards Dynamic-Prompting Collaboration for Source-Free Domain Adaptation", *International Joint Conference on Artificial Intelligence (IJCAI)*, 2024.

Jincheng Huang, Yujie Mo, **Ping Hu**, Xiaoshuang Shi, Shangbo Yuan, Zeyu Zhang, Xiaofeng Zhu, "Exploring the Role of Node Diversity in Directed Graph Representation Learning", *International Joint Conference on Artificial Intelligence (IJCAI)*, 2024.

Yujie Mo, Feiping Nie, **Ping Hu**, Heng Tao Shen, Zheng Zhang, Xinchao Wang, Xiaofeng Zhu, "Self-

Supervised Heterogeneous Graph Learning: a Homophily and Heterogeneity View", *International Conference on Learning Representations (ICLR)*, 2024.

Xiaolong Wang, **Ping Hu**, Rongyao Hu, Xiaofeng Zhu, "GATrack: Group-Aware features for multiple object tracking", *IEEE Conference on Multimedia Expo (ICME)*, 2024.

Duo Peng, Li Xu, Qihong Ke, **Ping Hu**, Jun Liu, "Joint Attribute and Model Generalization Learning for Privacy-Preserving Action Recognition", *Neural Information Processing Systems (NeurIPS)*, 2023.

Duo Peng, **Ping Hu**, Qihong Ke, Jun Liu, "Diffusion-based Image Translation with Label Guidance for Domain Adaptive Semantic Segmentation", *IEEE International Conference on Computer Vision (ICCV)*, 2023.

Tianjiao Li, Lin Geng Foo, **Ping Hu**, Xindi Shang, Hossein Rahmani, Zehuan Yuan, Jun Liu, "Token boosting for robust self-supervised visual transformer pre-training", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

Simon Niklaus, **Ping Hu**, Jiawen Chen, "Splatting-based Synthesis for Video Frame Interpolation", *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2023.

Ping Hu, Simon Niklaus, Stan Sclaroff, Kate Saenko, "Many-to-many Splatting for Efficient Video Frame Interpolation", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.

Zhenyu Chen, **Ping Hu**, Lu Zhang, et. al, "Video Object Segmentation via Structural Feature Reconfiguration", *Asian Conference on Computer Vision (ACCV)*, 2022.

Ximeng Sun, **Ping Hu**, Kate Saenko, "DualCoOp: Fast Adaptation to Multi-Label Recognition with Limited Annotations", *Neural Information Processing Systems (NeurIPS)*, 2022.

Kuniaki Saito, **Ping Hu**, Trevor Darrell, Kate Saenko, "Learning to Detect Everything in an Open World", *European Conference on Computer Vision (ECCV)*, 2022.

Dina Bashkirova, Mohamed Abdelfattah, Ziliang Zhu, James Akl, Fadi Alladkani, **Ping Hu**, Vitaly Ablavsky, Berk Calli, Sarah Adel Bargal, Kate Saenko, "ZeroWaste Dataset: Towards Deformable Object Segmentation in Cluttered Scenes". *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. 2022

Ping Hu, Stan Sclaroff, Kate Saenko, "Uncertainty-Aware Learning for Zero-Shot Semantic Segmentation", *Neural Information Processing Systems (NeurIPS)*, 2020.

Ping Hu, Fabian Caba Heilbron, Oliver Wang, Zhe Lin, Stan Sclaroff, Federico Perazzi, "Temporally Distributed Networks for Fast Video Semantic Segmentation", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.

Ping Hu, Jun Liu, Gang Wang, Vitaly Ablavsky, Kate Saenko, Stan Sclaroff, "DIPNet: Dynamic Identity Propagation Network for Video Object Segmentation", *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2020.

Ping Hu, Gang Wang, Xiangfei Kong, Jason Kuen, Yap-peng Tan, "Motion-Guided Cascaded Refinement Network for Video Object Segmentation", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.

Ping Hu, Bing Shuai, Jun Liu, Gang Wang, "Deep Level Sets for Salient Object Detection", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.

Jun Liu, Gang Wang, **Ping Hu**, Ling-Yu Duan, Alex C. Kot, "Global Context-Aware Attention LSTM

Networks for 3D Action Recognition”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.

Ping Hu, Weiqiang Wang, Ke Lu, “Detecting Salient Objects via Spatial and Appearance Compactness Hypotheses”, *ACM Multimedia (MM)*, 2015.