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EDUCATION

The Hong Kong Polytechnic University   *08.2015 ∼ 03.2020*
Ph.D, Major in Computer Vision and Machine Learning, Hong Kong, China

South China Normal University,   *09.2010 ∼ 07.2013*
M.S, Major in Computer Applied Technology, Guangzhou, China

Beijing Union University,   *09.2006 ∼ 07.2010*
B.S, Major in Electronic Information Engineering, Beijing, China

WORK EXPERIENCE

Postdoctoral Researcher, *Brain-inspired computational modeling*,   *08.2020 ∼ Present*
School of Computer Science and Engineering
Sun Yat-sen University, Guangzhou

Research Assistant, *Multi-label recognition & Generic visual recognition*,   *07.2013 ∼ 04.2015*
Visual Computing Research Center, Shenzhen Institute of Advanced Technology
Chinese Academy of Sciences, Shenzhen

Research Intern, *Multi-label Recognition*,   *04.2012 ∼ 04.2013*
Visual Computing Research Center, Shenzhen Institute of Advanced Technology
Chinese Academy of Sciences, Shenzhen

PUBLICATION ([*]co-first authors, [#]corresponding authors)

[1] **Lingxiao Yang**, Ru-Yuan Zhang, Yanchen Wang, and Xiaohua Xie. MMA: Multi-Modal Adapter for Vision-Language Models. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024

[2] Qi Chen, Yun Chen, Yuheng Huang, Xiaohua Xie, and **Lingxiao Yang**[#]. Region-based online selective examination for weakly supervised semantic segmentation. *Information Fusion*, page 102311, 2024

[3] Huajun Zhou, Yang Lin, **Lingxiao Yang**, Jianhuang Lai, and Xiaohua Xie. Benchmarking deep models on salient object detection. *Pattern Recognition*, 145:109951, 2024

[4] Jianxiong Tang, Jian-Huang Lai, Xiaohua Xie, **Lingxiao Yang**, and Wei-Shi Zheng. Ac2as: Activation consistency coupled ann-snn framework for fast and memory-efficient snn training. *Pattern Recognition*, 144:109826, 2023

[5] **Lingxiao Yang**, Hui Zhen, Le Li, Yuanning Li, Han Zhang, Xiaohua Xie, and Ru-Yuan Zhang. Functional diversity of visual cortex improves constraint-free natural image reconstruction from human brain activity. *Fundamental Research*, 2023

[6] Yun Chen, **Lingxiao Yang**, Qi Chen, Jian-Huang Lai, and Xiaohua Xie. Attention-based Interactive Disentangling Network for Instance-level Emotional Voice Conversion. In *Proc. INTERSPEECH 2023*, pages 2068–2072, 2023

[7] Yunlong Xu*, **Lingxiao Yang***, Hongzhi You, Zonglei Zhen, Da-Hui Wang, Xiaohong Wan, Xiaohua Xie, and Ru-Yuan Zhang. Rulematch: matching abstract rules for semi-supervised learning of human standard intelligence tests. In *Proceedings of the International Joint Conferences on Artificial Intelligence (IJCAI)*, 2023

[8] Jianxiong Tang, Jian-Huang Lai, Xiaohua Xie, and **Lingxiao Yang**. Spike Count Maximization for Neuromorphic Vision Recognition. In *Proceedings of the International Joint Conferences on Artificial Intelligence (IJCAI)*, 2023

[9] Junkai Yan, **Lingxiao Yang**, Yipeng Gao, and WEI-SHI ZHENG. Self-supervised Cross-stage Regional Contrastive Learning for Object Detection. In *International Conference on Multimedia and Expo (ICME)*. IEEE, 2023

[10] Junhao Dong, **Lingxiao Yang**, Yuan Wang, Xiaohua Xie, and Jianhuang Lai. Towards intrinsic adversarial robustness through probabilistic training. *IEEE Transactions on Image Processing*, 2023

[11] Huajun Zhou, Bo Qiao, **Lingxiao Yang**, Jianhuang Lai, and Xiaohua Xie. Texture-guided Saliency Distilling for Unsupervised Salient Object Detection. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023

[12] Wenjie Luo, Xiaohua Xie, Kuoyu Deng, **Lingxiao Yang**, and Jianhuang Lai. Learning shadow removal from unpaired samples via reciprocal learning. *IEEE Transactions on Image Processing*, 2023

[13] **Lingxiao Yang**, Hongzhi You, Zonglei Zhen, Da-Hui Wang, Xiaohong Wan, Xiaohua Xie, and Ru-Yuan Zhang. Neural prediction errors enable analogical visual reasoning in human standard intelligence tests. In *International Conference on Machine Learning (ICML)*. PMLR, 2023

[14] Pengze Zhang, **Lingxiao Yang**, Xiaohua Xie, and Jianhuang Lai. Pose guided person image generation via dual-task correlation and affinity learning. *IEEE Transactions on Visualization and Computer Graphics*, 2023

[15] Zi-Jian Cheng*, **Lingxiao Yang***, Wen-Hao Zhang, and Ru-Yuan Zhang. Representational geometries reveal differential effects of response correlations on population codes in neurophysiology and functional magnetic resonance imaging. *Journal of Neuroscience*, 2023

[16] Qiyang Peng*, **Lingxiao Yang***, Xiaohua Xie, and Jianhuang Lai. Learning Weak Semantics by Feature Graph for Attribute-based Person Search. *IEEE Transactions on Image Processing*, 2023

[17] Zixuan Chen, **Lingxiao Yang**, Jian-Huang Lai, and Xiaohua Xie. Cunerf: Cube-based neural radiance field for zero-shot medical image arbitrary-scale super resolution. In *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, pages 21185–21195, 2023

[18] Bo Qiao, Huajun Zhou, **Lingxiao Yang**#, and Xiaohua Xie. Few Shot Object Detection with Incompletely Annotated Samples. In *International Joint Conference on Neural Networks (IJCNN)*. IEEE, 2023

[19] Huajun Zhou, Peijia Chen, **Lingxiao Yang**, Xiaohua Xie, and Jianhuang Lai. Activation to Saliency: Forming High-Quality Labels for Unsupervised Salient Object Detection. *IEEE Transactions on Circuits and Systems for Video Technology*, pages 1–1, 2022

[20] Jianxiong Tang, Jian-Huang Lai, Wei-Shi Zheng, **Lingxiao Yang**, and Xiaohua Xie. Relaxation LIF: A Gradient-based Spiking Neuron for Direct Training Deep Spiking Neural Networks. *Neurocomputing*, 501:499–513, 2022

[21] Huajun Zhou, **Lingxiao Yang**, Xiaohua Xie, and Jianhuang Lai. Selective Intra-Image Similarity for Persona-lized Fixation-based Object Segmentation. *IEEE Transactions on Circuits and Systems for Video Technology*, pages 1–1, 2022

[22] Yipeng Gao, **Lingxiao Yang**, Yunmu Huang, Song Xie, Shiyong Li, and WEI-SHI ZHENG. AcroFOD: An Adaptive Method for Cross-domain Few-shot Object Detection. In *European Conference on Computer Vision (ECCV)*, 2022

[23] Qi Chen, **Lingxiao Yang**, Jian-Huang Lai, and Xiaohua Xie. Self-Supervised Image-Specific Prototype Exploration for Weakly Supervised Semantic Segmentation. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 4288–4298, June 2022

[24] Pengze Zhang, **Lingxiao Yang**, Jian-Huang Lai, and Xiaohua Xie. Exploring Dual-Task Correlation for Pose Guided Person Image Generation. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 7713–7722, June 2022

[25] Pengze Zhang, **Lingxiao Yang**, Xiaohua Xie, and Jian-Huang Lai. Lightweight Texture Correlation Network for Pose Guided Person Image Generation. *IEEE Transactions on Circuits and Systems for Video Technology*, pages 1–1, 2021

[26] **Lingxiao Yang**, Ru-Yuan Zhang, Lida Li, and Xiaohua Xie. SimAM: A Simple, Parameter-free Attention Module for Convolutional Neural Networks. In *International Conference on Machine Learning (ICML)*, pages 11863–11874. PMLR, 2021

[27] Jinxing Li, Dandan Fan, **Lingxiao Yang**, Shuhang Gu, Guangming Lu, Yong Xu, and David Zhang. Layer-Output Guided Complementary Attention Learning for Image Defocus Blur Detection. *IEEE Transactions on Image Processing*, 30:3748–3763, 2021

[28] Zixuan Chen, Huajun Zhou, Jian-Huang Lai, **Lingxiao Yang**, and Xiaohua Xie. Contour-Aware Loss: Boundary-Aware Learning for Salient Object Segmentation. *IEEE Transactions on Image Processing*, 30:431–443, 2021

[29] Huajun Zhou, Xiaohua Xie, Jian-Huang Lai, Zixuan Chen, and **Lingxiao Yang**. Interactive Two-Stream Decoder for Accurate and Fast Saliency Detection. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 9141–9150, 2020

[30] **Lingxiao Yang**, David Zhang, and Lei Zhang. Learning A Visual Tracker from A Single Movie without Annotation. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, volume 33, pages 9095–9102, 2019

[31] Shuai Li, **Lingxiao Yang**, Jianqiang Huang, Xian-Sheng Hua, and Lei Zhang. Dynamic Anchor Feature Selection for Single-Shot Object Detection. In *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, October 2019

[32] **Lingxiao Yang**, Xiaohua Xie, and Jian huang Lai. Learning Discriminative Visual Elements using Part-based Convolutional Neural Network. *Neurocomputing*, 316:135–143, 2018

[33] **Lingxiao Yang**, Xiaohua Xie, Peihua Li, David Zhang, and Lei Zhang. Part-based Convolutional Neural Network for Visual Recognition. In *International Conference on Image Processing (ICIP)*, pages 1772–1776. IEEE, 2017 **(Oral)**

[34] Linnan Zhu*, **Lingxiao Yang***, David Zhang, and Lei Zhang. Learning A Real-Time Generic Tracker using Convolutional Neural Networks. In *International Conference on Multimedia and Expo (ICME)*, pages 1219–1224. IEEE, 2017 **(Best paper candidate)**

[35] **Lingxiao Yang**, Risheng Liu, David Zhang, and Lei Zhang. Deep Location-Specific Tracking. In *Proceedings of the 25th ACM International Conference on Multimedia (ACM MM)*, pages 1309–1317, 2017

[36] Xiaohua Xie, **Lingxiao Yang**, and Wei-Shi Zheng. Learning Object-Specific DAGs for Multi-label Material Recognition. *Computer Vision and Image Understanding*, 143:183–190, 2016

[37] **Lingxiao Yang** and Xiaohua Xie. Exploiting Object Semantic Cues for Multi-label Material Recognition. *Neurocomputing*, 173:1646–1654, 2016

[38] **Lingxiao Yang** and Xiaohua Xie. Max-Margin Analysis based Patch Sampling for Discovery of Mid-Level Parts. In *International Conference on Image Processing (ICIP)*, pages 2214–2218. IEEE, 2015 **(Oral)**

PROJECTS

- (**Principal Investigator**) Few-shot object detection
  Natural Science Foundation of China, *01.01.2023-12.31.2025*

- (**Principal Investigator**) Cross-domain/cross-task object detection
  Natural Science Foundation of Guangdong, *01.01.2022-12.31.2024*

- (**Principal Investigator**) Large generative models for object detection
  Fundamental Research Funds for the Central Universities, SYSU   *01.01.2023-12.31.2023*

- (Participator) Air-Ground Integration based Multi-source Image and Video Processing
  The Joint Funds of the National Natural Science Foundation of China,   *01.01.2023-12.31.2026*

- (Participator) Robust Learning and Interactive Annotations for Weakly Supervised Visual Problems
  The National Natural Science Foundation of China,   *01.01.2017-12.31.2020*

TALKS

SimAM: A Simple Parameter-free Attention Module for Convolutional Neural Networks
Invited Talk in College of Information Science and Technology, Jinan University   *10.2021*

Visual tracking: recent advances and new challenges
Invited Talk in School of mathematics and statistics, Xidian University   *10.2020*

ACADEMIC SERVICES

Journal Reviewer
IEEE Transactions on Image Processing (T-IP)
IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT)
IEEE Transactions on Neural Networks and Learning Systems (T-NNLS)
Neurocomputing
Frontiers in Neuroscience

Conference Reviewer
International Conference on Learning Representations (ICLR)
Conference on Neural Information Processing Systems (NeurIPS)
The IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR)
International Conference on Computer Vision (ICCV)
International Joint Conference on Artificial Intelligence (IJCAI)
AAAI Conference on Artificial Intelligence (AAAI)