GONGYANG LI

Associate Professor, Shanghai University
Email: ligongyang@shu.edu.cn / lllmiemie@163.com
https://mathlee.github.io

MAJOR EMPLOYMENT HISTORY

- Associate Professor, Shanghai University, Shanghai, China 06/2024–Now
  - School of Communication and Information Engineering
- Postdoc, Shanghai University, Shanghai, China 06/2022–06/2024
  - Supervisor: Professor Xinpeng Zhang

EDUCATION

- Ph.D., Shanghai University, Shanghai, China 09/2016–06/2022
  - Successive Master-Doctor Program
  - Major in Signal and Information Processing
  - Advisor: Professor Zhi Liu
- Visiting Ph.D. Student, Nanyang Technological University, Singapore 07/2021–06/2022
  - Major in Computer Vision, Media & Interactive Computing Lab (MICL-CVL)
  - Advisor: Professor Weisi Lin (IEEE/IET Fellow)
- B.S., Shanghai Normal University, Shanghai, China 09/2012–06/2016
  - Major in Communication Engineering

RESEARCH INTERESTS

Computer Vision, Saliency Detection, Image/Video Object Segmentation, Semantic Segmentation

AWARDS AND PRIZES

- National Scholarship for Doctoral Students, 2020
- President's Scholarship of Shanghai University, 2020
- The Baogang Scholarship, 2020
- The 13th China Graduate Electronic Design Competition (Shanghai Division), 2nd prize, 2018
- The 14th China Graduate Mathematical Modeling Contest, 3rd prize, 2017
- Shanghai Outstanding Graduates, 2016

PUBLICATIONS

Google Scholar profile: https://scholar.google.com/citations?hl=zh-CN&user=YNq7jc8AAAAJ

RGB-D Salient Object Detection

· **Gongyang Li**, Zhi Liu, Linwei Ye, Yang Wang, and Haibin Ling, "Cross-modal weighting network for RGB-D salient object detection," *European Conference on Computer Vision (ECCV)*, 2020.

· **Gongyang Li**, Zhi Liu, and Haibin Ling, "ICNet: Information conversion network for RGB-D based salient object detection," *IEEE Trans. on Image Processing (T-IP)*, 29:4873-4884, 2020. (IF:11.041)

· **Gongyang Li**, Zhi Liu, Minyu Chen, Zhen Bai, Weisi Lin, and Haibin Ling, "Hierarchical alternate interaction network for RGB-D salient object detection," *IEEE Trans. on Image Processing (T-IP)*, 30:3528-3542, 2021. (IF:11.041)

- Xiaofei Zhou, **Gongyang Li**, Chen Gong, Zhi Liu, and Jiyong Zhang, "Attention-guided RGBD saliency detection using appearance information," *Image and Vision Computing*, 95:103888, 2020. (IF:3.860)
- Zhen Bai, Zhi Liu, **Gongyang Li**, Linwei Ye, and Yang Wang, "Circular complement network for RGB-D salient object detection," *Neurocomputing*, 451:95-106, 2021. (IF:5.779)

Salient Object Detection in Optical Remote Sensing Images

- **Gongyang Li**, Zhen Bai, and Zhi Liu, "Texture-semantic collaboration network for ORSI salient object detection," *IEEE Trans. on Circuits and Systems II: Express Briefs (T-CAS-II)*, 71(4):2464-2468, 2024. (IF:4.4)
- **Gongyang Li**, Zhen Bai, Zhi Liu, Xinpeng Zhang, and Haibin Ling, "Salient object detection in optical remote sensing images driven by Transformer," *IEEE Trans. on Image Processing (T-IP)*, 32:5257-5269, 2023. (IF:11.041)
- **Gongyang Li**, Zhi Liu, Weisi Lin, and Haibin Ling, "Multi-content complementation network for salient object detection in optical remote sensing images," *IEEE Trans. on Geoscience and Remote Sensing (T-GRS)*, 60:5614513, 2022. (IF:8.125)
- **Gongyang Li**, Zhi Liu, Zhen Bai, Weisi Lin, and Haibin Ling, "Lightweight salient object detection in optical remote sensing images via feature correlation," *IEEE Trans. on Geoscience and Remote Sensing (T-GRS)*, 60:5617712, 2022. (IF:8.125)
- **Gongyang Li**, Zhi Liu, Dan Zeng, Weisi Lin, and Haibin Ling, "Adjacent context coordination network for salient object detection in optical remote sensing images," *IEEE Trans. on Cybernetics*, 53(1):526-538, 2023. (IF:19.118)
- **Gongyang Li**, Zhi Liu, Xinpeng Zhang, and Weisi Lin, "Lightweight salient object detection in optical remote-sensing images via semantic matching and edge alignment," *IEEE Trans. on Geoscience and Remote Sensing (T-GRS)*, 61:5601111, 2023. (IF:8.125)
- Zhen Bai, **Gongyang Li**✉, and Zhi Liu, "Global-local-global context-aware network for salient object detection in optical remote sensing images," *ISPRS Journal of Photogrammetry and Remote Sensing (ISPRS JP&RS)*, 198:184-196, 2023. (IF: 11.774) (✉ corresponding author)

Salient Object Detection on Other Images/Videos

- Yilei Chen#, **Gongyang Li**#, Ping An, Zhi Liu, Xinpeng Huang, and Qiang Wu, "Light field salient object detection with sparse views via complementary and discriminative interaction network," *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 34(2):1070-1085, 2024. (# equal contribution) (IF:5.859)
- Chengjun Han#, **Gongyang Li**#, Zhi Liu, and Yike Wang, "Two-stage edge reuse network for salient object detection of strip steel defect images," *IEEE Trans. on Instrumentation and Measurement (T-IM)*, 71:5019812, 2022. (# equal contribution) (IF:5.332)
- Tuo Ding#, **Gongyang Li**#, Zhi Liu, and Yike Wang, "Cross-scale edge purification network for salient object detection of steel defect images," *Measurement*, 199:111429, 2022. (# equal contribution) (IF:5.131)
- Mengke Huang, **Gongyang Li**✉, Zhi Liu, and Linchao Zhu, "Lightweight distortion-aware network for salient object detection in omnidirectional images," *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 33(10):6191-6197, 2023. (IF: 5.859) (✉ corresponding author)
- Xiaofei Zhou, Zhi Liu, Chen Gong, **Gongyang Li**, and Mengke Huang, "Video saliency detection using deep convolutional neural networks," *PRCV*, 2018.
- Jingru Ren, Zhi Liu, **Gongyang Li**, Xiaofei Zhou, Cong Bai, and Guangling Sun, "Co-saliency detection using collaborative feature extraction and high-to-low feature integration," *IEEE ICME*, 2020.
- Mengke Huang, Zhi Liu, **Gongyang Li**, Xiaofei Zhou, and Olivier Le Meur, "FANet: Features adaptation network for 360° omnidirectional salient object detection," *IEEE Signal Processing Letters (SPL)*, 27:1819-1823, 2020. (IF:3.201)

· Zhen Bai, Zhi Liu, **Gongyang Li**, and Yang Wang, "Adaptive group-wise consistency network for co-saliency detection," *IEEE Trans. on Multimedia (T-MM)*, 25:764-776, 2023. (IF:8.182)

Saliency Prediction

· Mengke Huang, **Gongyang Li**[✉], Zhi Liu, Yong Wu, Chen Gong, Linchao Zhu, and Yi Yang, "Exploring viewport features for semi-supervised saliency prediction in omnidirectional images," *Image and Vision Computing (IVC)*, 129:104590, 2023. (IF:3.860) ([✉] corresponding author)

· Ziqiang Wang, Zhi Liu, **Gongyang Li**, Yang Wang, Tianhong Zhang, Lihua Xu, and Jijun Wang, "Spatio-temporal self-attention network for video saliency prediction," *IEEE Trans. on Multimedia (T-MM)*, 25:1161-1174, 2023. (IF:8.182)

· Yingjie Song, Zhi Liu, **Gongyang Li**, Dan Zeng, Tianhong Zhang, Lihua Xu, and Jijun Wang, "RINet: Relative importance-aware network for fixation prediction," *IEEE Trans. on Multimedia (T-MM)*, 25:9263-9277, 2023. (IF:8.182)

· Jiawei Xie, Zhi Liu, **Gongyang Li**, Xiaofeng Lu, and Tao Chen, "Global semantic-guided network for saliency prediction," *Knowledge-Based Systems*, 284:111279, 2024. (IF:8.8)

· Jiawei Xie, Zhi Liu, **Gongyang Li**, and Yingjie Song,, "Audio-visual saliency prediction with multisensory perception and integration," *Image and Vision Computing (IVC)*, 143:104955, 2024. (IF:3.860)

Defect Detection/Segmentation

· **Gongyang Li**[#], Chengjun Han[#], and Zhi Liu, "No-service rail surface defect segmentation via normalized attention and dual-scale interaction," *IEEE Trans. on Instrumentation and Measurement (T-IM)*, 72:5020310, 2023. ([#] equal contribution) (IF:5.332)

· Chengjun Han[#], **Gongyang Li**[#], Zhi Liu, and Yike Wang, "Two-stage edge reuse network for salient object detection of strip steel defect images," *IEEE Trans. on Instrumentation and Measurement (T-IM)*, 71:5019812, 2022. ([#] equal contribution) (IF:5.332)

· Tuo Ding[#], **Gongyang Li**[#], Zhi Liu, and Yike Wang, "Cross-scale edge purification network for salient object detection of steel defect images," *Measurement*, 199:111429, 2022. ([#] equal contribution) (IF:5.131)

Fixation-based Object Segmentation

· **Gongyang Li**, Zhi Liu, Ran Shi, Zheng Hu, Weijie Wei, Yong Wu, Mengke Huang, and Haibin Ling, "Personal fixations-based object segmentation with object localization and boundary preservation," *IEEE Trans. on Image Processing (T-IP)*, 30:1461-1475, 2021. (IF:11.041)

· **Gongyang Li**, Zhi Liu, Ran Shi, and Weijie Wei, "Constrained fixation point based segmentation via deep neural network," *Neurocomputing*, 368:180-187, 2019. (IF:5.779)

· Ran Shi, **Gongyang Li**, Weijie Wei, and Zhi Liu, "Fixations based personal target objects segmentation," *ACM Multimedia Asia*, 2020.

· Ran Shi, **Gongyang Li**, Weijie Wei, Xiaofei Zhou, and Zhi Liu, "Personalized image observation behavior learning in fixation based personalized salient object segmentation," *Neurocomputing*, 445:255-266, 2021. (IF:5.779)

RGB-T/D Semantic Segmentation

· **Gongyang Li**, Yike Wang, Zhi Liu, Xinpeng Zhang, and Dan Zeng, "RGB-T semantic segmentation with location, activation, and sharpening," *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 33(3):1223-1235, 2023. (IF: 5.859)

· Yike Wang[#], **Gongyang Li**[#], and Zhi Liu, "SGFNet: Semantic-guided fusion network for RGB-Thermal semantic segmentation," *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 33(12):7737-7748, 2023. ([#] equal contribution) (IF: 5.859)

· Jianlin Chen, **Gongyang Li**✉, Zhijiang Zhang✉, and Dan Zeng, "EFDCNet: Encoding fusion and decoding correction network for RGB-D indoor semantic segmentation," *Image and Vision Computing (IVC)*, 142:104892, 2024. (IF:3.860) (✉ corresponding author)

· Ying Lv, Zhi Liu, and **Gongyang Li**, "Context-aware interaction network for RGB-T semantic segmentation," *IEEE Trans. on Multimedia (T-MM)*, 26:6348-6360, 2024. (IF:8.182)

Segmentation-related

· **Gongyang Li**, Zhi Liu, and Xiaofei Zhou, "Effective online refinement for video object segmentation," *Multimedia Tools and Applications*, 78(23):33617-33631, 2019. (IF:2.577)

· Zheng Hu, Zhi Liu, **Gongyang Li**, Linwei Ye, Lei Zhou, and Yang Wang, "Weakly supervised instance segmentation using multi-stage erasing refinement and saliency-guided proposals ordering," *Journal of Visual Communication and Image Representation*, 73:102957, 2020. (IF:2.887)

Others

· Yong Wu#, **Gongyang Li**#, Zhi Liu, Mengke Huang, and Yang Wang, "Gaze estimation via modulation-based adaptive network with auxiliary self-learning," *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 32(8):5510-5520, 2022. (# equal contribution) (IF: 5.859)

· Yingjie Song, Zhi Liu, **Gongyang Li**, Jiawei Xie, Qiang Wu, Dan Zeng, Lihua Xu, Tianhong Zhang, and Jijun Wang, "EMS: A large-scale eye movement dataset, benchmark and new model for schizophrenia recognition," *IEEE Trans. on Neural Networks and Learning Systems (T-NNLS)*, accepted, 2024.

· Ying Lv, Zhi Liu, **Gongyang Li**, and Xiaojun Chang, "Noise-aware intermediary fusion network for off-road freespace detection," *IEEE Trans. on Intelligent Vehicles (T-IV)*, accepted, 2024.

· Haocheng Gu, **Gongyang Li**, and Zhi Liu, "Masked feature regeneration based asymmetric student-teacher network for anomaly detection," *Multimedia Tools and Applications*, 2024. (IF:2.577)

· Qihan Jiao, Zhi Liu, **Gongyang Li**, Linwei Ye, and Yang Wang, "Fine-grained image classification with coarse and fine labels on one-shot learning," *IEEE ICMEW*, 2020.

CONTRACTS AND GRANTS

- Gongyang Li. (12/2022) "Research on Visual Saliency Detection for Multi-source Images and Videos," *Shanghai Super Postdoctoral Incentive Funding Program*, 300K RMB.
- Gongyang Li. (1/1/2023 - 6/30/2024) "Research on High-performance Saliency Detection for Complex Optical Remote Sensing Images," *China Postdoctoral Science Foundation*, 80K RMB.

SERVICES

- Journal Reviewers for IEEE T-PAMI, T-IP, T-VCG, T-NNLS, T-MM, T-CSVT, T-GRS, T-ETCI, T-IM, JSTARS, SPL, GRSL; PR, Geo-spatial Information Science, Neurocomputing, SPIC, JCST, SIVP, MTAP, JVCI, IET Image Processing, European Journal of Remote Sensing, Journal of Intelligent & Fuzzy Systems, Electronic Research Archive, Journal of Real-Time Image Processing, Mathematical Biosciences and Engineering, and International Journal of Machine Learning and Cybernetics.
- Conference Reviewers for IEEE ICASSP, IEEE MMSP.
- Area Chair for IEEE MMSP2022.