GONGYANG LI

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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 and Honorary Fellow of SIET)

- 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**, 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)
- **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**, 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)
- 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)
- 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**$^{\boxtimes}$, 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) ($^{\boxtimes}$ 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 multi-sensory perception and integration," *Image and Vision Computing (IVC)*, 143:104955, 2024. (IF:3.860)

Defect Detection/Segmentation

· **Gongyang Li**, Xiaofei Zhou, and Hongyun Li, "Ordered cross-scale interaction network for no-service rail surface defect segmentation," *IEEE Trans. on Instrumentation and Measurement (T-IM)*, 74:5033210, 2025. (IF:5.6)

· **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)

· Zhihao He, **Gongyang Li**$^{\boxtimes}$, and Zhi Liu$^{\boxtimes}$, "RGB-D rail surface defect inspection driven by conditional diffusion architecture and frequency knowledge," *IEEE Sensors Journal (SJ)*, 25(10):18334-18343, 2025. ($^{\boxtimes}$ corresponding author) (IF:4.3)

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**$^{\boxtimes}$, Zhijiang Zhang$^{\boxtimes}$, 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) ($^{\boxtimes}$ 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)
- Yike Wang, Zhi Liu, **Gongyang Li**, Xiaofeng Lu, Xuefeng Liu, and Hongwei Zhang, "Hybrid modeling based semantic segmentation of forward-looking sonar images," *IEEE Journal of Oceanic Engineering*, 50(1):380-393, 2025. (IF:3.8)

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)
- Jing Lv, Zhi Liu$^{\boxtimes}$, and **Gongyang Li**$^{\boxtimes}$, "Few-shot fine-tuning with auxiliary tasks for video anomaly detection," *Multimedia Systems (MS)*, 31:127, 2025. (IF:3.5) ($^{\boxtimes}$ corresponding author)
- Baojun Zhou, Xinpeng Huang, **Gongyang Li**, Chao Yang, Liquan Shen, and Ping An, "Dual-guided video frame interpolation with spatial-temporal global attention," *IEEE Trans. on Multimedia (T-MM)*, accepted, 2025.
- Shipei Wang, Ping An, Chao Yang, **Gongyang Li**, Xinpeng Huang, and Shiqi Wang, "Feature quality assessment: A database and a lightweight objective method," *IEEE Trans. on Multimedia (T-MM)*, accepted, 2025.
- Kaifan Zhao, Ran Ma, Min Su, Haozhe Yu, Ping An, and **Gongyang Li**, "MOFNet: Memory optimization fusion network for query-focused video summarization," *IEEE Sensors Journal (SJ)*, accepted, 2025.
- 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.
- 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.
- Haocheng Gu, **Gongyang Li**, and Zhi Liu, "Masked feature regeneration based asymmetric student-teacher network for anomaly detection," *Multimedia Tools and Applications*, 83:90573-90594, 2024. (IF:3)
- 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)*, 36(5):9451-9462, 2025. (IF:10.2)

CONTRACTS AND GRANTS

- Gongyang Li. (12/2022) "Research on Visual Saliency Detection for Multi-source Images and Videos (2022253)," *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 (2022M722037)," *China Postdoctoral Science Foundation*, 80K RMB.

- Gongyang Li. (12/1/2024 - 11/30/2027) "Research on Weakly Supervised Saliency Detection for Multi-modal Data Based on Visual Segmentation Large Model (24YF2713000)," *Shanghai Rising Star Program (including Sailing Program)*, 200K RMB.

- Gongyang Li. (1/1/2025 - 12/31/2027) "Research on Saliency Detection for RGB-D Images Based on Depth Map Quality Perception (62401350)," *National Natural Science Foundation of China*, 300K RMB.

- Gongyang Li. (7/1/2024 - 6/30/2025) "Research on Multi-source Image Salient Object Detection Model based on Deep Learning (LERIS24-02)," *Opening Foundation of Quanzhou Vocational and Technical University in 2024*, 120K RMB.

- Gongyang Li. (9/1/2024 - 8/31/2026) "Research on Steel Surface Defect Detection Algorithm Based on Multimodal Data (KLMVI-2024-HIT-04)," *Open Research Fund of Anhui Province Key Laboratory of Machine Vision Detection and Perception*, 20K RMB.

- Gongyang Li. (1/1/2025 - 12/31/2025) "Research on Saliency Detection for Multi-modal Data Driven by Large Model (YNSC24109)," *Foundation of Yunnan Key Laboratory of Service Computing*, 10K RMB.

- Gongyang Li. (7/1/2025 - 12/31/2026) "Research on Multi-modal Image Salient Object Detection Based on Language and Visual Large Models (PRIU25-03)," *Fujian Key Laboratory of Pattern Recognition and Image Understanding*, 50K RMB.

SERVICES

- Journal Reviewers for IEEE T-PAMI, T-IP, T-VCG, T-NNLS, T-MM, T-CSVT, T-GRS, T-II, T-ITS, T-ETCI, T-BD, T-IM, T-CE, T-AI, IoT, JSTARS, Sensors Journal, SPL, GRSL; PR, Geo-spatial Information Science, Measurement, Neurocomputing, SPIC, JCST, SIVP, MTAP, JVCI, Applied Soft Computing Journal, 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 ICRA, IEEE ICASSP, IEEE MMSP, PRCV.

- Area Chair for IEEE MMSP2022.