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Research Interest

- Multimodal Industrial Vision (Experienced)
- Medical Image Analysis (Experienced)
- Vision-Language-Action Models (Rookie)

Publications

† *Equal Contribution*, * *Corresponding Author*

[1] **Shuai Jiang**, Yunfeng Ma, Jingyu Zhou, Yuan Bian, Yaonan Wang, and Min Liu*, Resilient Multimodal Industrial Surface Defect Detection with Uncertain Sensors Availability, *IEEE/ASME Transactions on Mechatronics (**T-Mech**)*, 2025.

[2] **Shuai Jiang**, Kai Hu*, Yuan Zhang, and Xieping Gao, Joint Segmentation of FAZ and RVs in OCTA Images with Auxiliary 3D Image Projection Learning, *IEEE Transactions on Instrumentation and Measurement (**T-IM**)*, 2024.

[3] **Shuai Jiang**, Min Liu*, Yuxi Liu, Yunfeng Ma, and Yaonan Wang, Category-agnostic Cluster-guided Selective Suppression for Weakly Supervised Surface Defect Localization, *IEEE Transactions on Instrumentation and Measurement (**T-IM**)*, 2024.

[4] Kai Hu, **Shuai Jiang**, Dong Liu, and Xieping Gao*, Segmentation of Retinal Layer Boundary in OCT Images Based on End-to-end Deep Neural Network and Graph Search, ***Journal of Software***, 2023.

[5] Kai Hu, **Shuai Jiang**, Yuan Zhang, Xuanya Li, and Xieping Gao*, Joint-Seg: Treat Foveal Avascular Zone and Retinal Vessel Segmentation in OCTA Images as a Joint Task, *IEEE Transactions on Instrumentation and Measurement (**T-IM**)*, 2022.

[6] Meng Gao†, Yunfeng Ma†, **Shuai Jiang**, Qi Su, Xiangfei Meng, Yaonan Wang, and Min Liu*, PANDA: Progressive Adaptive Network for Defect-aware Few-shot Segmentation, *IEEE Transactions on Industrial Informatics (**T-II**)*, 2025.

[7] Yunfeng Ma, Min Liu*, **Shuai Jiang**, Jingyu Zhou, Yuan Bian, and Yaonan Wang, Efficient Feature Coupling for Industrial Few-shot Defect Segmentation, *IEEE/ASME Transactions on Mechatronics (**T-Mech**)*, 2025.

[8] Yuxi Liu†, Min Liu†, **Multi-View Attention Guided Feature Learning for Unsupervised Surface Defect Detection**, Yi Tang*, and Yaonan Wang, Searching Efficient Semantic Segmentation Architectures via Dynamic Path Selection, *The 39-th Annual Conference on Neural Information Processing Systems (**NeurIPS**)*, 2025.

[9] Yunfeng Ma, Min Liu*, **Shuai Jiang**, Xueping Wang, Yuan Bian, and Yaonan Wang, Multi-Context Aggregation Network with Foreground Correction for Automated Few-Shot Defect Segmentation, *IEEE Transactions on Automation Science and Engineering (**T-ASE**)*, 2025.

[10] Jingyu Zhou, Min Liu*, Yunfeng Ma, **Shuai Jiang**, and Yaonan Wang, Multi-View Attention Guided Feature Learning for Unsupervised Surface Defect Detection, *IEEE/ASME Transactions on Mechatronics (**T-Mech**)*, 2025.

[11] Yuxi Liu†, Yunfeng Ma†, Yi Tang, Min Liu*, **Shuai Jiang**, and Yaonan Wang, Automated Neural Architecture Design for Industrial Defect Detection, *IEEE/ASME Transactions on Mechatronics (**T-Mech**)*, 2025.

[12] Yaoyi Cai, Dan Huang, ZhiXun Li, Yunfeng Ma*, **Shuai Jiang**, Zekai Yao*, and Min Liu*, EGCR-Net: Edge-Guided Cross-Region Network for Semi-Supervised Soldering Defect Detection, *IEEE Transactions on Instrumentation and Measurement (**T-IM**)*, 2025.

[13] Jingyu Zhou†, Yunfeng Ma†, Zhenhai Li, Min Liu*, **Shuai Jiang**, and Yaonan Wang, 3D Imaging Optical Path-Guided Viewpoint Planning Method for Free-Form Surface Inspection, *IEEE/ASME Transactions on Mechatronics (**T-Mech**)*, 2025.

[14] Yuan Bian, Min Liu*, Yunqi Yi, Xueping Wang, **Shuai Jiang**, Yaonan Wang, Prompt-driven Transferable Adversarial Attack on Person Re-Identification with Attribute-aware Textual Inversion, *IEEE/CVF International Conference on Computer Vision (**ICCV**)*, 2025.

[15] Xihang Cheng†, Xiangfei Meng†, Min Liu*, Yuxi Liu, Yunfeng Ma, **Shuai Jiang**, and Yaonan Wang, Neural Architecture Search-based Detection Method and System for Aero-engine Blade Surface Defects, ***SCIENTIA SINICA Informationis***, 2025.

Education

† *Indicates expected*

Sept. 2023 – Jun. 2027 †	Ph.D., Control Science and Engineering, *Hunan University*
	Supervisors: Min Liu and Yaonan Wang
Oct. 2020 – Jun. 2023	M.Eng., Computer Technology, *Xiangtan University*
	Supervisors: Kai Hu and Xieping Gao
Sept. 2016 – Jun. 2020	B.Sc., Network Engineering, *Xiangtan University*

Selected Honours and Awards

2023 Excellent Graduates, *Hunan Provincial Department of Education*

2022 China National Scholarship, *Ministry of Education of the People's Republic of China*

Academic Services

Journal Reviewer

- T-MI, T-IM, J-BHI, Scientific Data, IEEE Access

Conference Reviewer

- NeurIPS, CVPR, ICCV, AAAI, ACMMM, ICASSP, ICME