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RESEARCH INTERESTS

1. High resolution remote sensing images understanding
2. Hyperspectral remote sensing images denoising
3. Intelligent interpretation and application of medical image
4. Machine learning and computer vision

EDUCATION

2019.09 – 2022.06	Wuhan University	Photogrammetry and Remote Sensing (Ph.D.) State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS)
2017.09 - 2019.06	Wuhan University	Surveying and Mapping Engineering (M.S.) State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS)
2013.09 - 2017.06	Central South University	Surveying and Mapping Engineering (B.S.) School of GeoSciences and Info-Physics

JOURNALS

1. **X. Lu**, Y. Zhong, Z. Zheng, Y. Liu, J. Zhao, A. Ma, and J. Yang, "Multi-scale and Multi-task Deep Learning Framework for Automatic Road Extraction." *IEEE Trans. Geosci. Remote Sens.*, vol. 57, no. 11, pp. 9362-9377, 2019. (SCI Q1 TOP, IF=8.125)
2. **X. Lu**, Y. Zhong, Z. Zheng, and L. Zhang, "GAMSNet: A Novel Globally Aware Road Detection Network with Multi-Scale Residual Learning." *ISPRS J. Photogramm. Remote Sens.*, vol. 175, pp. 340-352, 2021. (SCI Q1 TOP, IF=11.774)
3. **X. Lu**, Y. Zhong, Z. Zheng, J. Wang and L. Zhang, "Cross-Domain Road Detection Based on Global-Local Adversarial Learning Framework," *ISPRS J. Photogramm. Remote Sens.*, vol. 180, pp. 296-312, 2021. (SCI Q1 TOP, IF= 11.774)
4. L. Huang[#], **X. Lu**[#], X. Huang, X. Zou, L. Wu, Z. Zhou, D. Wu, D. Tang, D. Chen, X. Wan, Z. Zhu, T. Deng, L. Shen, J. Liu, Y. Zhu, D. Gong, D. Chen, Y. Zhong, F. Liu, H. Yu, "Intelligent Difficulty Scoring and Assistance System for Endoscopic Extraction of Common Bile Duct Stones Based on Deep Learning: Multicenter Study." *Endoscopy*, vol. 53, no. 5, pp. 491-498, 2021. (SCI Q1 TOP, IF=9.776, co-first author, serve as the algorithm implementer)
5. **X. Lu**, Y. Zhong, Z. Zheng, J. Zhao, and L. Zhang, "Edge-Reinforced Convolutional Neural Network for Road Detection in Very-High-Resolution Remote Sensing Imagery." *Photogramm. Eng. Remote Sens.*, vol. 86, no. 3, pp. 153-160, 2020. (SCI, IF=1.469, wins the first-place of the 2021 John I. Davidson President's Award, ASPRS)
6. **X. Lu**, Y. Zhong, Z. Zheng, D. Chen, Y. Su, A. Ma, and L. Zhang, "Cascaded Multi-Task Road Extraction Network for Road Surface, Centerline and Edge Extraction." *IEEE Trans. Geosci. Remote Sens.*, vol. 60, pp. 1-14, 2022. (SCI Q1 TOP, IF=8.125)
7. **X. Lu**, Y. Zhong, and L. Zhang, "Open Source Data Driven Cross-Domain Road Detection From Very High-Resolution Remote Sensing Imagery," *IEEE Trans. Image Process.*, vol. 31, pp. 6847-6862, 2022. (SCI Q1 TOP, CCF-A, IF= 11.041)

CONFERENCE PAPERS

1. **X. Lu**, Y. Zhong, and J. Zhao, "Multi-Scale Enhanced Deep Network for Road Detection," in *Proc. Int. Geosci. Remote Sens. Symp. (IGARSS)*, July 2019. (EI, Poster)
2. **X. Lu**, Y. Zhong, and Z. Zheng, "A Novel Global-Aware Deep Network for Road Detection of Very High-Resolution Remote Sensing Imagery," in *Proc. Int. Geosci. Remote Sens. Symp. (IGARSS)*, July 2020. (EI, Poster)
3. **X. Lu**, and Y. Zhong, "A Novel Global-Local Adversarial Network for Unsupervised Cross-Domain Road Detection," in *Proc. Int. Geosci. Remote Sens. Symp. (IGARSS)*, July, 2021. (EI, Oral)
4. **X. Lu**, Y. Zhong, Z. Zheng, and D. Chen "GRE and Beyond: A Global Road Extraction Dataset," in *Proc. Int. Geosci. Remote Sens. Symp. (IGARSS)*, July 2022. (EI, Oral)

CO-AUTHOR PAPERS

1. Y. Zhong, ..., **X. Lu**, ..., "COLOR: Cycling, Offline Learning, and Online Representation Framework for Airport and Airplane Detection Using GF-2 Satellite Images," *IEEE Trans. Geosci. Remote Sens.*, vol. 58, no. 12, pp. 8438-8449, 2020. (SCI Q1 TOP, IF=8.125)
2. Q. Zhu, ..., **X. Lu**, ..., "A global context-aware and batch-independent network for road extraction from VHR satellite imagery," *ISPRS J. Photogramm. Remote Sens.*, vol. 175, pp. 353-365, 2021. (SCI Q1 TOP, IF=11.774)
3. D. Chen, ..., and **X. Lu**, "Urban road mapping based on an end-to-end road vectorization mapping network framework," *ISPRS J. Photogramm. Remote Sens.*, vol. 178, pp. 345-365, 2021. (SCI Q1 TOP, IF=11.774)
4. J. Wang, ..., **X. Lu**, ..., "LoveDA: A remote sensing land-cover dataset for domain adaptive semantic segmentation," Thirty-fifth Conference on Neural Information Processing Systems Datasets and Benchmarks Track (*NeurIPS*), 2021. (CCF-A)
5. Y. Zhong, ..., and **X. Lu**, "Spatio-Temporal Dual-Branch Network With Predictive Feature Learning for Satellite Video Object Segmentation," *IEEE Trans. Geosci. Remote Sens.*, vol. 60, pp. 1-15, 2022. (SCI Q1 TOP, IF=8.125)

RESEARCH PROJECTS

1. **National Key Research and Development Project**: "Research on Key Technologies of Emergency Response of Land Resources and Ecological Environment Safety", acting as research backbone.
2. **National Natural Science Foundation of China Excellent Youth Fund**: "Hyperspectral Remote Sensing, Object Recognition, and Scene Understanding", acting as the research backbone.

SERVICES

1. **Conference Services**: serve as Session Chair (Infrastructure Detection) of IGARSS 2021.
2. **Journal Reviewer**: ISPRS Journal of Photogrammetry and Remote Sensing; IEEE Transactions on Geoscience and Remote Sensing (TGRS); IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS); European Journal of Remote Sensing.

AWARDS & HONORS

2022: Outstanding Graduate of Wuhan University. Second Prize of Graduate Academic Innovation Award of Wuhan University

2021: First-place of the 2021 John I. Davidson President's Award, ASPRS (only one paper selected worldwide each year); First Prize of Graduate Academic Innovation Award of Wuhan University; First Prize of Wang Zhizhuo Innovation Talent of Wuhan University; First Prize of Academic Scholarship of Wuhan University.

2020: First prize of Wuhan University Hongtu Chuangzhan Scholarship; PhD First-class Academic Scholarship; Activist of Social Activities in Wuhan University; Excellent Postgraduate of Wuhan University.

2019: Outstanding Graduate of Wuhan University.

2018: Master's First-class Academic Scholarship; Outstanding Student Leader of Wuhan University; Excellent Postgraduate of Wuhan University; Excellent Report Award of "The 8th National Doctoral Academic Forum on Geographic Information Science".