Shengjie Liu

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EDUCATION

Ph.D.   Population, Health and Place, University of Southern California, 2026 (expected)

B.S.   Geographic Information Science, Sun Yat-Sen University, 2019

EXPERIENCE

2019–21   The University of Hong Kong
           Research Assistant, Department of Physics

PUBLICATIONS

Journal Articles

2022   Kyba, C.C.M., M. Aubé, S. Bará, A. Bertolo, C.A. Bouroussis, S. Cavazzani, B.R. Espey, F. Falchi, G. Gyuk, A. Jechow, M. Kocifaj, Z. Kolláth, H. Lamphar, N. Levin, S. Liu, S.D. Miller, S. Ortolani, C.S.J. Pun, S.J. Ribas, T. Ruhtz, A.S. de Miguel, M. Schneider, R.M. Shrestha, A. Simoneau, C.W. So, T. Storch, K.P. Tong, M. Tuñón, D. Turnshek, K. Walczak, J. Wang, Z. Wang, and J. Zhang. "Multiple Angle Observations Would Benefit Visible Band Remote Sensing Using Night Lights." *Journal of Geophysical Research: Atmospheres*, 127, e2021JD036382. doi:10.1029/2021JD036382

2021   Liu, S., Z. Zhou, H. Ding, Y. Zhong, and Q. Shi. "Crop Mapping Using Sentinel Full-Year Dual-Polarized SAR Data and a CPU-Optimized Convolutional Neural Network With Two Sampling Strategies." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 14, pp. 7017-7031. doi:10.1109/JSTARS.2021.3094973

2021   Liu, S., Q. Shi, and L. Zhang. "Few-shot hyperspectral image classification with unknown classes using multitask deep learning." *IEEE Transactions on Geoscience and Remote Sensing*, 59(6), pp. 5085-5102. doi:10.1109/TGRS.2020.3018879

2021   Liu, S., H. Luo, and Q. Shi. "Active Ensemble Deep Learning for Polarimetric Synthetic Aperture Radar Image Classification." *IEEE Geoscience and Remote Sensing Letters*, 18(9), pp. 1580-1584. doi:10.1109/LGRS.2020.3005076

2020   Liu, S., and Q. Shi. "Local climate zone mapping as remote sensing scene classification using deep learning: A case study of metropolitan China." *ISPRS Journal of Photogrammetry and Remote Sensing*, 164, pp. 229-242. doi:10.1016/j.isprsjprs.2020.04.008

2020   Liu, S., and Q. Shi. "Multitask Deep Learning With Spectral Knowledge for Hyperspectral Image Classification." *IEEE Geoscience and Remote Sensing Letters*, 17(12), pp. 2110-2114. doi:10.1109/LGRS.2019.2962768

2019   Liu, S., Z. Qi, X. Li, and A.G.-O. Yeh. "Integration of Convolutional Neural Networks and Object-Based Post-Classification Refinement for Land Use and Land Cover Mapping with Optical and SAR Data." *Remote Sensing*, 11(6), p.690. doi:10.3390/rs11060690

Conference Proceedings

2022   Liu, S., and Q. Shi. "Estimating PM2.5 and PM10 on Zhuhai-1 Hyperspectral Imagery." Accepted to *Proceedings of IEEE International Geoscience and Remote Sensing Symposium IGARSS*, 2022.

2021   Liu, S., C.W. So, and C.S.J Pun. "Analyzing Long-Term Artificial Light at Night Using Viirs Monthly Product with Land Use Data: Preliminary Result of Hong Kong." *Proceedings of IEEE International Geoscience and Remote Sensing Symposium IGARSS*, 2021, pp. 6821-6824. 10.1109/IGARSS47720.2021.9553915

2021   Liu, S., and Q. Shi. "Multi-Label Local Climate Zone Mapping as Scene Classification Using Very High Resolution Imagery: Preliminary Result of Hong Kong." *Proceedings of IEEE International Geoscience and Remote Sensing Symposium IGARSS*, 2021, pp. 6809-6812. 10.1109/IGARSS47720.2021.9553086

2018	Liu, S., H. Luo, Y. Tu, Z. He, and J. Li. "Wide Contextual Residual Network with Active Learning for Remote Sensing Image Classification." *Proceedings of IEEE International Geoscience and Remote Sensing Symposium IGARSS*, 2018, pp. 7145-7148. 10.1109/IGARSS.2018.8517855

Conference Abstracts

2022	Pun, C.S.J., C.W. So, S. Liu, L. Canas, C.E. Walker, and S.L. Cheung. "Measurement of cloud amplification effect over a wide range of night sky brightness observations with the GaN-MN." In *LPTMM - Light Pollution Theory Modeling and Measurement*, June 2022, Santiago de Compostela, Galicia, Spain. Link at http://lptmm.org/
2022	Pun, C.S.J., C.W. So, and S. Liu. "Analyzing the Sources and Variations of Night Lights Between 2012 and 2019 in Hong Kong from VIIRS Monthly Products." In *LPTMM - Light Pollution Theory Modeling and Measurement*, June 2022, Santiago de Compostela, Galicia, Spain. Link at http://lptmm.org/
2021	Liu, S., C.W. So, and C.S.J. Pun. "The relationship between night sky brightness and remote sensing data: Preliminary result from Luojia-1 and the International Space Station." In *7th International Conference on Artificial Light at Night (ALAN)*, June 2021, Lleida, Catalonia, Spain. Link at http://artificiallightatnight.org
2021	So, C.W., N.Y.J. Chang, S. Liu, L. Canas, C.E. Walker, S.L. Cheung, and C.S.J. Pun. "A Multinational Study of Night Sky Brightness Patterns: Preliminary Results from the Globe at Night – Sky Brightness Monitoring Network (GaN-MN) of the Study of Cloud Amplification on NSB." In *7th International Conference on Artificial Light at Night (ALAN)*, June 2021, Lleida, Catalonia, Spain. Link at http://artificiallightatnight.org
2020	Pun, C.S.J., C.W. So, N.Y.J. Chang, S. Liu, L. Canas, C.E. Walker, and S.L. Cheung. "A Multinational Study of Night Sky Brightness Patterns: Preliminary Results from the Globe at Night – Sky Brightness Monitoring Network (GaN-MN)." In *6th International Conference on Artificial Light at Night (ALAN)*, June 2020, Lleida, Catalonia, Spain. Link at http://artificiallightatnight.org

GRANTS AND AWARDS

Awards and Honors

2019	The First Orbita Hyperspectral Data Processing Paper Contest, Second Prize, 5000 CNY (714 USD)
2018	IEEE Geoscience and Remote Sensing Society IGARSS Student Travel Grant, 1650 USD
2018	Scholarship of the EMBA Alumni Association for Real Estate of Sun Yat-Sen University, 3000 CNY (428 USD)

Grants

2022	Investigating urban heat islands and diurnal temperature range in Los Angeles with Landsat imagery and a thermal camera. USC Dornsife PhD Academy Scholarship and Research Fund Award, 485 USD
2017–18	Using DMSP/OLS night lights to capture the collapse and rise of post-Soviet states. National Students' Innovation and Entrepreneurship Training Program, No. 201810558050, 10,000 CNY (1400 USD)

SERVICE

Academic Journal Peer Review

IEEE Geoscience and Remote Sensing Letters

IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing

IEEE Transactions on Geoscience and Remote Sensing

Knowledge-Based Systems

Pattern Recognition Letters

Remote Sensing Letters

Scientific Reports

Urban Climate

Memberships

IEEE Geoscience and Remote Sensing Society (GRSS)

IEEE GRSS Image Analysis and Data Fusion (IADF) Technical Committee

<div align="center">Updated July 2022</div>