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Publications and Patents

Publications

Book:

J.A. Benediktsson and P. Ghamisi, *Spectral-Spatial Classification of Hyperspectral Remote Sensing Images*, Artech House, Boston, 2015.

Articles in Internationally Refereed Journals:

- (1) M. Muller, D. Piacone, B. Demir, G. Camps-Valls, M.O. Ulfarsson and J.A. Benediktsson, " Hybrid Deep Learning Models for Remote Sensing Image Processing," accepted for publication, *Proceedings of the IEEE*, 2025.
- (2) Z. Lv, M. Zhang, W. Sun, T. Lei, J. A. Benediktsson, and T. Liu, "Land cover change detection with hyperspectral remote sensing images: A survey," *Information Fusion*, Vol. 123, Article no. 103257, DOI: 10.1016/j.inffus.2025.103257, Nov. 2025
- (3) Q. Weng, Q. Hou, Z. Chen, J.A. Benediktsson, P. Gamba, D. Tuia, F. Zhang, Y. Xu, M. Wu, N. Li, and M. Batty, "Urban visual-spatial intelligence: linking human and sensor perception for sustainable urban development," *npj Urban Sustain* 5, 65 (2025). <https://doi.org/10.1038/s42949-025-00256-2>
- (4) D. Pent, B. Zhang, S. Zheng, W. Ju, J.M. Chen, P. Ciais, H. Guo, Y. Pan, L. Yu, Y. Xu, B. Zhao, J.A. Benediktsson, A.R. Huete, Z. Shi, Y. Hu, L. Liu, F. Chen, M. Shen, L. Huang and X. Zhang, "Newly established forests dominated global carbon sequestration change induced by land cover conversions," *Nature Communications*, Vol. 16, Article No. 6570, DOI: 10.1038/s41467-025-61956-y, 2025.
- (5) Z. Lv, T. Yang, P. Zhong, W. Sun, J.A. Benediktsson, and J. Li, "Hierarchical Feature Fusion Triple Network for Change Detection with Bitemporal Remote Sensing Images," *IEEE Trans. on Geoscience and Remote Sensing*, Vol. 63, Article No. 4401512, DOI: 10.1109/TGRS.2025.3525811, 2025.
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- (7) D. Liu, E. Wang, Y. Pan, L. Wang, J.A. Benediktsson, J. Wang, and D. Lei, "Pansharpening Based on Multimodal Texture Correction and Adaptive Edge Detail Fusion, *Remote Sensing*, Vol. 16, Article No. 2941, 2024

- (8) D. Hong *et al.*, "SpectralGPT: Spectral Remote Sensing Foundation Model," in *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 46, no. 8, pp. 5227-5244, Aug. 2024, doi: 10.1109/TPAMI.2024.3362475.
- (9) Z. Lv, P. Zhang, W. Sun, T. Lei, J. A. Benediktsson and P. Li, "Sample Iterative Enhancement Approach for Improving Classification Performance of Hyperspectral Imagery," in *IEEE Geoscience and Remote Sensing Letters*, vol. 21, pp. 1-5, 2024, Art. no. 2500605, doi: 10.1109/LGRS.2023.3348093.
- (10) Z. Ye, L. Zhang, C. Zheng, J. Peng, and J. A. Benediktsson, "Small-Sample Classification for Hyperspectral Images With EPF-Based Smooth Ordering," in *IEEE Transactions on Geoscience and Remote Sensing*, vol. 62, pp. 1-14, 2024, Art. no. 5525814, doi: 10.1109/TGRS.2024.3436821.
- (11) Z. Lv, P. Zhang, L. Xie, J. A. Benediktsson and T. Lei, "Iterative Sample Generation and Balance Approach for Improving Hyperspectral Remote Sensing Imagery Classification with Deep Learning Network," in *IEEE Transactions on Geoscience and Remote Sensing*, vol. 62, pp. 1-13, 2024, Art. no. 5524413, doi: 10.1109/TGRS.2024.3432792.
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