

IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING

A PUBLICATION OF THE IEEE GEOSCIENCE AND REMOTE SENSING SOCIETY



JANUARY 2017

VOLUME 10

NUMBER 1

IJSTHZ

(ISSN 1939-1404)

<i>Computational Infrastructure</i>			
In-Memory Parallel Processing of Massive Remotely Sensed Data Using an Apache Spark on Hadoop YARN Model	W. Huang, L. Meng, D. Zhang, and W. Zhang	3	
GPU Projection of ECAS-II Segmenter for Hyperspectral Images Based on Cellular Automata	J. López-Fandiño, B. Priego, D. B. Heras, F. Argüello, and R. J. Duro	20	
Semantics-Enabled Framework for Spatial Image Information Mining of Linked Earth Observation Data	K. R. Kurte, S. S. Durbha, R. L. King, N. H. Younan, and R. Vatsavai	29	
<i>Methodologies and Applications to:</i>			
<i>Oceans and Water</i>			
Fusion of Sun-Synchronous and Geostationary Images for Coastal and Ocean Color Survey Application to OLCI (Sentinel-3) and FCI (MTG)	C. Peschoud, A. Minghelli, S. Mathieu, M. Lei, I. Pairaud, and C. Pinazo	45	
Shifting Trends in Bimodal Phytoplankton Blooms in the North Pacific and North Atlantic Oceans From Space With the Holo-Hilbert Spectral Analysis	M. Zhang, Y. Zhang, F. Qiao, J. Deng, and G. Wang	57	
Ocean Surface Wind Retrieval Using SMAP L-Band SAR	X. Zhou, J. Chong, X. Yang, W. Li, and X. Guo	65	
<i>Vegetation and Land Surface</i>			
Distinguishing Heavy-Metal Stress Levels in Rice Using Synthetic Spectral Index Responses to Physiological Function Variations	M. Jin, X. Liu, L. Wu, and M. Liu	75	
Differentiating Tree and Shrub LAI in a Mixed Forest With ICESat/GLAS Spaceborne LiDAR	J. Tian, L. Wang, X. Li, C. Shi, and H. Gong	87	
An Intensity Gradient/Vegetation Fractional Coverage Approach to Mapping Urban Areas From DMSP/OLS Nighttime Light Data	M. Tan	95	
Deriving Maximum Light Use Efficiency From Crop Growth Model and Satellite Data to Improve Crop Biomass Estimation	T. Dong, J. Liu, B. Qian, Q. Jing, H. Croft, J. Chen, J. Wang, T. Huffman, J. Shang, and P. Chen	104	
<i>Surface and Subsurface Properties</i>			
Radar Signal Penetration and Horizons Detection on Europa Through Numerical Simulations	F. Di Paolo, S. E. Lauro, D. Castelletti, G. Mitri, F. Bovolo, B. Cosciotti, E. Mattei, R. Orosei, C. Notarnicola, L. Bruzzone, and E. Pettinelli	118	
Quantifying the Termination Mechanism Along the North Tabriz-North Mishu Fault Zone of Northwestern Iran via Small Baseline PS-InSAR and GPS Decomposition	Z. Su, E.-C. Wang, J.-C. Hu, M. Talebian, and S. Karimzadeh	130	

(Contents Continued on Page 2)

Processing, Sensors and Systems for:

<i>SAR</i>		
High-Level Feature Selection With Dictionary Learning for Unsupervised SAR Imagery Terrain Classification	J. Chen, L. Jiao, and Z. Wen	145
A Two-Dimensional Beam-Steering Method to Simultaneously Consider Doppler Centroid and Ground Observation in GEOSAR	J. Chen, G.-C. Sun, M. Xing, J. Yang, Z. Li, and G. Jing	161
Focus Improvement for High-Resolution Highly Squinted SAR Imaging Based on 2-D Spatial-Variant Linear and Quadratic RCMs Correction and Azimuth-Dependent Doppler Equalization	D. Li, H. Lin, H. Liu, G. Liao, and X. Tan	168
Azimuth Motion Compensation With Improved Subaperture Algorithm for Airborne SAR Imaging	L. Zhang, G. Wang, Z. Qiao, and H. Wang	184
Estimation of Rice Crop Height From X- and C-Band PolSAR by Metamodel-Based Optimization	O. Yuzugullu, E. Erten, and I. Hajnsek	194
Bridge Displacements Monitoring Using Space-Borne X-Band SAR Interferometry	M. Lazecky, I. Hlavacova, M. Bakon, J. J. Sousa, D. Perissin, and G. Patrício	205
Estimation of Snow Surface Dielectric Constant From Polarimetric SAR Data	S. Manickam, A. Bhattacharya, G. Singh, and Y. Yamaguchi	211
<i>Multispectral Data</i>		
Integrating Object Boundary in Super-Resolution Land-Cover Mapping	Y. Chen, Y. Ge, and Y. Jia	219
Color-Based Segmentation of Sky/Cloud Images From Ground-Based Cameras	S. Dev, Y. H. Lee, and S. Winkler	231
Consequences of Landsat Image Strata Classification Errors on Bias and Variance of Inventory Estimates: A Forest Inventory Case Study	M. K. Crosby, T. G. Matney, E. B. Schultz, D. L. Evans, D. L. Grebner, H. A. Londo, J. C. Rodgers, and C. A. Collins	243
Atmospheric Correction of Landsat-8/OLI Imagery in Turbid Estuarine Waters: A Case Study for the Pearl River Estuary	H. Ye, C. Chen, and C. Yang	252
<i>Hyperspectral Data</i>		
Improving Orthorectification of UAV-Based Push-Broom Scanner Imagery Using Derived Orthophotos From Frame Cameras	A. Habib, W. Xiong, F. He, H. L. Yang, and M. Crawford	262
Graph Regularized Nonlinear Ridge Regression for Remote Sensing Data Analysis	R. Hang, Q. Liu, H. Song, Y. Sun, F. Zhu, and H. Pei	277
Approximate Area-to-Point Regression Kriging for Fast Hyperspectral Image Sharpening	Q. Wang, W. Shi, P. M. Atkinson, and Q. Wei	286
Recursive Geometric Simplex Growing Analysis for Finding Endmembers in Hyperspectral Imagery	C.-I. Chang, H.-C. Li, C.-C. Wu, and M. Song	296
Firefly-Algorithm-Inspired Framework With Band Selection and Extreme Learning Machine for Hyperspectral Image Classification	H. Su, Y. Cai, and Q. Du	309
Sparse Unmixing With Dictionary Pruning for Hyperspectral Change Detection	A. Ertürk, M.-D. Iordache, and A. Plaza	321
Hyperspectral Image Unmixing Based on Fast Kernel Archetypal Analysis	C. Zhao, G. Zhao, and X. Jia	331
Superpixel-Based Active Learning and Online Feature Importance Learning for Hyperspectral Image Analysis	J. Guo, X. Zhou, J. Li, A. Plaza, and S. Prasad	347
<i>Lidar</i>		
LiDAR Data Filtering and DTM Generation Using Empirical Mode Decomposition	A. H. Özcan and C. Ünsalan	360
Spatial Modeling of Lidar-Derived Woody Biomass Estimates Collected Along Transects in a Heterogeneous Savanna Landscape	D. Gwenzi and M. A. Lefsky	372
