

CONTENTS

Image Processing and Earth Remote Sensing

1. Real-time multispectral video panorama construction
I A Kudinov, O V Pavlov, I S Kholopov and M Yu Khramov1-5
2. Classification of radar images with different methods of image preprocessing
A A Borodinov and V V Myasnikov6-13
3. Correlative features for the classification of textural images
M A Turkova and A V Gaidel14-20
4. Parameterization of the nonlinear interpolator invariant to four directions contours
for multidimensional digital signals
A I Maksimov and M V Gashnikov21-28
5. On the Problem of Development of Methods and Algorithms Based on the Object-Oriented Logic
Programming for Intelligent Video Monitoring of Laboratory Rats
A A Morozov and O S Sushkova29-37
6. Greedy algorithms of feature selection for multiclass image classification
E F Goncharova and A V Gaidel38-46
7. Multidimensional signals interpolation based on NEDI for HGI compression
M V Gashnikov47-55
8. 3D image combination in aviation computer vision systems
A I Novikov, A I Efimov and D A Kolchaev56-66
9. Soil characteristics influence on the winter wheat yield regression modeling using NDVI
vegetation index
A Y Denisova and A V Evstiforova67-74
10. A public transport departure time prediction algorithm based on operation strategies
and real-time monitoring data
A A Agafonov75-81
11. Accuracy analysis of 3D object reconstruction using RGB-D sensor
A N Ruchay, K A Dorofeev and A V Kober82-88
12. Application of spatial interpolation methods for restoration of partially defined images
Y D Vybornova89-95
13. The analysis of image characteristics on the base of energy features of the wavelet transform
S A Lyasheva, M V Medvedev, M P Shleymovich and V V Mokshin96-102
14. Hippocampus detection and calculation of its characteristics in magnetic resonance imaging
of the brain
V N Gridin, M I Truphanov and V I Solodovnikov103-109
15. Comparison of a low-frequency Butterworth filter with a symmetric SE-filter
K S Medvedeva110-114
16. Edge detection of objects on the satellite images
E E Kurbatova115-122
17. Comparative analysis of stochastic optimization algorithms for image registration
S Voronov, I Voronov and R Kovalenko123-130

18. Wave skeletonization algorithm for raster images M A Kudrina and V S Mishenev.....	131-138
19. Visible Structures Highlighting Model Analysis Aimed at Object Image Detection Problem I R Saifudinov, V V Mokshin, P I Tutubalin, L M Sharnin and D G Hohlov.....	139-148
20. Algorithm for encoding n D spatial objects into GIS D E Andrianov, S V Ereemeev, Y A Kovalev and K V Kuptsov.....	149-155
21. High Resolution Imaging for Bistatic P and VHF Band SAR A V Borisenkov and O V Goriachkin.....	156-162
22. A comparison of iris image segmentation techniques M S Semyonov and E V Myasnikov.....	163-169
23. Gait analysis for person recognition using principal component analysis and support vector machines O V Strukova, L V Shiripova and E V Myasnikov.....	170-176
24. Detection of malignant breast tumors on the background of fibrocystic breast disease Yu A Podgornova and S S Sadykov.....	177-183
25. Detecting forgery in image time series based on anomaly detection N I Evdokimova and V V Myasnikov.....	184-192
26. Algorithm for detecting block-like cracks in facies of human biological fluids V R Krasheninnikov, L I Trubnikova, O E Malenova, A S Yashina, M L Albutova and O A Marinova.....	193-199
27. Methods of detection and ecological state evaluation of protective forest belts using complex ground survey and remote sensing data processing L M Kavelenova, E S Korchikov, N V Prokhorova, D A Terentyeva and V A Fedoseev.....	200-206
28. CFA Artifacts Analysis for Image Splicing Detection A A Varlamova and A V Kuznetsov.....	207-218
29. Application of mixed models of random fields for the segmentation of satellite images N A Andriyanov and V E Dement'ev.....	219-226
30. Video-based age and gender recognition in mobile applications A S Kharchevnikova and A V Savchenko.....	227-235
31. Point clouds registration based on the point-to-plane approach for orthogonal transformations A Makovetskii, S Voronin, V Kober, A Voronin and D Tihonkih.....	236-242
32. Data organization in video surveillance systems using deep learning A D Sokolova and A V Savchenko.....	243-250
33. Technology for automatically characterizing the primary colors of the image and counting the number of objects M I Khotilin, R A Paringer, I A Rytsarev and N S Kravtsova.....	251-256
34. Using spatial-temporal maps for visualization of the karst development dynamics R V Sharapov.....	257-265
35. Spatio-Temporal Slices for Frame Cut Detection in Video N A Sorokina and V A Fedoseev.....	266-272

36. Use autoregressions with multiple roots of the characteristic equations to image representation and filtering N A Andriyanov and K K Vasiliev.....	273-281
37. Unsupervised segmentation of ceramic proppant particles in 3D microCT images E P Serkova, I V Safonov, I V Yakimchuk and V Yu Evstefeeva.....	282-290
38. An image understanding system based on the geometrized histograms method: finding the sky in road scenes K I Kiy.....	291-299
39. Accurate reconstruction of the 3D indoor environment map with a RGB-D camera based on multiple ICP A N Ruchay, K A Dorofeev and A V Kober.....	300-308
40. Development of fuzzy fractal representation of the Image D G Privezentsev, A L Zhiznyakov and E V Pugin.....	309-315
41. Modeling of Agricultural Spatial Objects with Heterogeneous Dynamically Changing Spatial Structure R V Brezhnev, Yu A Maglinets, K V Raevich and G M Tsibulski.....	316-322
42. Context-based method for lossless compression of RGB and multispectral images A V Borusyak, P A Pakhomov, D Yu Vasin and V E Turlapov.....	323-329
43. 3d synthetic aperture radar image A N Leukhin, A A Rozentsov, V I Bezrodnyy, A A Voronin, D Yu Karasev and N A Kokovihina.....	330-335
44. Modeling of polarization SAR system D V Karasev, A N Leukhin, A AVoronin and V I Bezrodny.....	336-343
45. Methods and applications for controlling the correctness of physical exercises performance V L Rozaliev, A I Vybornyi, Y A Orlova and A V Alekseev.....	344-351
46. Investigation of hyperspectral image pixel signatures by the empirical mode decomposition method P A Pakhomov, A V Borusyak and V E Turlapov.....	352-364
47. Interpolation for differential and hierarchical compression of multidimensional signals S A Denisov and M V Gashnikov.....	365-371
48. Building extraction from satellite imagery using a digital surface model A V Dunaeva and F A Kornilov.....	372-378
49. Remote sensing investigation of inundation, elevation and land use assessment for vulnerability analysis in Moscow, Russia K Choudhary, M S Boori and A Kupriyanov.....	379-389
50. Land cover classification and build spectral library from hyperspectral and multi-spectral satellite data: A data comparison study in Samara, Russia M S Boori, R Paringer, K Choudhary, A Kupriyanov and R Banda.....	390-401
51. Short-term traffic flow forecasting using a distributed spatial-temporal model A A Agafonov and A S Yumaganov.....	402-409
52. Compensation of the complex geometric distortions induced by a car digital video recording equipment E V Myasnikov.....	410-416

53. Hybrid face recognition solution for security Y Donon.....	417-423
54. Reduction of the computational complexity of stochastic gradient algorithms of image parameters estimation for a priori optimization of the local sample volume A G Tashlinskii, M G Tsaryov and D G Kraus.....	424-428
55. The technology of correction of dynamic distortions on mobile devices E F Fatkhutdinova and V A Fursov.....	429-437