TEXTURE IMAGE SEGMENTATION BASED ON ESTIMATING THE LOCAL STATISTICAL FEATURES

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Image Processing Systems Institute of the RAS

This work is aimed at studying the efficiency of the features based on texture energy measures when solving the image segmentation problem. An algorithm for feature space generation based on the texture energy measures is proposed. The texture features are used for segmentation of diagnostic crystallogram images. Using test texture images, the segmentation quality is estimated and the feature efficiency is studied when solving the texture segmentation problem.

Texture, texture energy features of crystallogram image, texture segmentation

References

1. **Ilyasova, N.Yu.** Crystallogram classification using methods of texture image statistical analysis / N.Yu. Ilyasova, A.G. Kupriyanov, A.G. Khramov // Computer Optics. – 2000. – No. 20. – P. 122–127. – [in Russian].

2. **Sharma, M.** Evaluation of texture methods for image analysis / M. Sharma, M. Markou, S. Singh // Pattern Recognition Letters. – 1980.

3. **Haralick, R.M.** Textural features for image classification / R.M. Haralick, K. Shanmugam, I. Dinstein // IEEE Trans. on Systems, Man and Cybernetics. – 1973. – V.3. – P. 610-621.

4. **Laws, K.I.** Rapid Texture Identification / K.I. Laws // SPIE. – 1980. – Vol. 238. – P. 376-380.

5. **Tu, G.** Principles of Pattern Recognition / G. Tu, R. Gonsales. – M.: "Mir" Publishers (World), 1978. – 411 pages. – [in Russian].

6. **Brodatz, P.** Textures: A Photographic Album for Artists and Designers / P. Brodatz – New York: Dover, 1966.

Kuprianov Alexandr Viktorovich, Establishment of the Russian Academy of Sciences Image Processing Systems Institute of the Russian Academy of Sciences, Samara, Russia, the senior scientific employee of laboratory of laser measurements. It is published over 50 works in domestic and foreign editions. Area of research: biomedical image processing, texture analysis, local and spectral transforms, biometrical identification.