ADVANCED IMAGE UNDERSTANDING AND PATTERN ANALYSIS METHODS IN MEDICAL IMAGING

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ABSTRACT

This paper describes an innovative approach to the use of linguistic methods of structural image analysis in intelligent systems of visual data perception. They are directed at understanding medical images and a deeper analysis of their semantic contents. This type of image reasoning and understanding is possible owing to the use of especially defined graph grammars enabling one both the correct recognition of significant disease lesions and conducting a deeper analysis of the discovered irregularities on various specific levels. The proposed approach will be described on selected examples of images obtained in radiological diagnosis.