DIFFERENT GENERALIZATIONS OF PSEUDO-CONVOLUTION AND ITS APPLICATIONS

Ivana Štajner-Papuga*, Tatjana Grbić**

* Institute of Mathematics, University of Novi Sad, Trg D. Obradovića 4, Novi Sad, Yugoslavia
papuga@eunet.yu
** Faculty of Engineering, University of Novi Sad, Trg D. Obradovića 6, Novi Sad, Yugoslavia
tatjana@uns.ns.ac.yu

Pseudo-convolutions are operations with functions which range is structure called semiring that consists of closed or semiclosed subinterval of extended real line, pseudo-addition $\oplus$ and pseudo-multiplication $\odot$. Properties and applications of pseudo-convolutions based on semirings with associative and commutative pseudo-operations have been investigated in [1, 3].

Generalization of pseudo-convolution based on generalization of domain of functions have been analyzed in [2]. We shall consider applications of this type of genaralized pseudo-convolution in mathematical morphology, i.e., we shall established conection between basic fuzzy morphological operations and pseudo-convolutions.

Next, we shall investigate the generalization of pseudo-convolution obtained by generalizations of pseudo-operations that assemble the semiring itself, as well as its applications.

References

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