

Fuzzy Approximation Spaces and the F -transforms

Irina Perfiljeva, S.P. Tiwari

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Abstract

The objective of this work is to associate the concepts of fuzzy rough sets and fuzzy topologies with the F -transforms. The notions of the direct F^\uparrow and F^\downarrow transforms are extended to the case where they are applied to an L -valued function on a space with an L -valued fuzzy partition. It is shown that these F -transforms are particular cases of upper and lower fuzzy approximation operators. Moreover, every F -transform component induces a continuous map between two associated fuzzy topological spaces.