FUZZY LOGIC WITH EVALUATED SYNTAX EXTENDED BY SEMIMODULE CONNECTIVE

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In this paper, we will work with Fuzzy Logic in narrow sense with evaluated syntax. Our goal is to extend it by a new semimodule connective. The corresponding structure of truth values is MV-algebra extended by product (semimodule operation) and, namely, Łukasiewicz algebra extended by ordinary product.

We will show some interesting properties of this new connective. Using some of the proved properties of the new connective, an equivalence theorem will be formulated. We will also demonstrate that the new logic is complete.

References

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