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# ROTATIONAL INVARIANT FUZZY ROUGHNESS FEATURE FOR TEXTURE CLASSIFICATION

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## ABSTRACT

The need of texture classification arises in several disciplines such as industry, medical, satellite imaging computer vision and image analysis. The success of classification process depends on the selection of feature set. We propose a rotational invariant fuzzy based texture feature for image classification. This work employs a fuzzy membership value to the roughness feature extracted using the Fractional Brownian Motion (FBM) model. The discriminative capability of the proposed approach is tested for image classification. For classification, KNN algorithm is used Brodatz texture database is used for evaluating the proposed approach. This work proves that roughness feature tolerates the rotational variance problem. The fuzzy based approach provides the solution for imprecision and improves the classification accuracy.

**KEYWORDS:** Fuzzy Texture Feature, Texture Classification, Texture Roughness