FUZZY QUERY PROCESSING FOR DOCUMENT RETRIEVAL
BASED ON GFNGMA OPERATORS

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ABSTRACT—In recent years, geometric-mean averaging operators (GMA operators) have been proposed to overcome the drawbacks of the existing T-operators and averaging operators for handling the Boolean “AND” and “OR” operations in fuzzy information retrieval. However, the GMA operators can not deal with queries represented by generalized fuzzy numbers. In this paper, we present generalized fuzzy number geometric-mean averaging operators (GFNGMA operators) for dealing with queries based on generalized fuzzy numbers. Furthermore, we use GFNGMA operators to deal with queries represented by interval-valued fuzzy numbers. The proposed GFNGMA operators can deal with fuzzy queries in a more flexible and more intelligent manner.