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# Autocratic decision making using group recommendations based on hesitant fuzzy sets for green hotels selection and bidders selection

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## Abstract

In this paper, we propose a new method for autocratic decision making using group recommendations (ADMUGRs) based on hesitant fuzzy sets (HFSs), where hesitant fuzzy decision matrices (HFDMs) provided by decision makers (DMs) are represented by hesitant fuzzy elements (HFEs). The proposed method is simpler than He *et al.*'s method (2015) due to the fact that He *et al.*'s method uses the complicated hesitant fuzzy power Bonferroni mean operator and the complicated hesitant fuzzy power geometric Bonferroni mean operator for hesitant fuzzy multiple attribute group decision making. We also use the proposed method for dealing with the “green hotels selection problem” and the “bidders selection problem”. The proposed method for ADMUGRs based on HFSs provides us with a very useful way for autocratic decision making using group recommendations in hesitant fuzzy environments.

**Keywords:** Autocratic decision making; Consensus measures; Group recommendations; Hesitant fuzzy elements; Hesitant fuzzy sets.

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