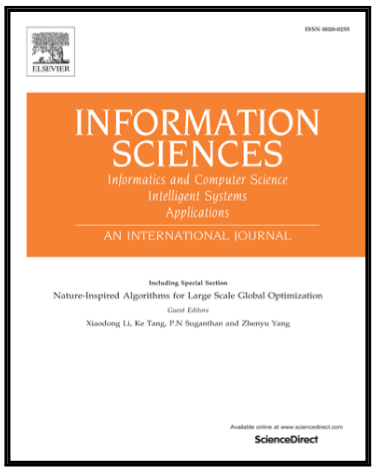

Multiple Criteria Decision Making for Linguistic Judgments with Importance Quantifier Quided Ordered Weighted Averaging Operator

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PII: S0020-0255(18)30757-6
DOI: https://doi.org/10.1016/j.ins.2018.09.043
Reference: INS 13954

To appear in: *Information Sciences*

Received date: 24 March 2018
Revised date: 17 September 2018
Accepted date: 20 September 2018

Please cite this article as: Kuo-Ping Chiao, Multiple Criteria Decision Making for Linguistic Judgments with Importance Quantifier Quided Ordered Weighted Averaging Operator, *Information Sciences* (2018), doi: https://doi.org/10.1016/j.ins.2018.09.043

Highlights

- This paper focuses on the establishment of a 'softer' decision aggregation task of multiple criteria decision making with the linguistic judgments mapped by interval type-2 fuzzy sets.
- The IQG OWA operator is extended from the Yager's OWA with linguistic quantifiers.
- A new IT2FS ranking methodology is formulated based on the proposed parametric gen- eralized graded mean integration representation with the extended level sets of the IT2FS.
- The partial ordering set properties of the ranking methodology are rigorously discussed.
- The optimal IQG OWA IT2FS weights and the overall decision IT2FS rates are obtained. through the mixed integer linear programming models for the optimal IQG IT2FS weights.
- The overall procedure for IT2FS MCDM with the optimal IQG OWA weights is formulated.
- An MCDM problem, New Product Development Project Screening, is used for demon- strating the proposed methodology.