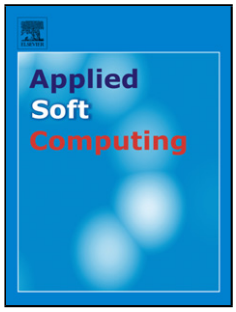
Accepted Manuscript



Title: Dispersion of relative importance values contributes to the ranking uncertainty: Sensitivity analysis of Multiple Criteria Decision-Making methods

Authors: Vida Maliene, Robert Dixon-Gough, Naglis Malys

PII: S1568-4946(18)30117-0
DOI: https://doi.org/10.1016/j.asoc.2018.03.003
Reference: ASOC 4750

To appear in: *Applied Soft Computing*

Received date: 7-9-2017
Revised date: 18-1-2018
Accepted date: 3-3-2018

Please cite this article as: Vida Maliene, Robert Dixon-Gough, Naglis Malys, Dispersion of relative importance values contributes to the ranking uncertainty: Sensitivity analysis of Multiple Criteria Decision-Making methods, Applied Soft Computing Journal https://doi.org/10.1016/j.asoc.2018.03.003

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Dispersion of relative importance values contributes to the ranking uncertainty: sensitivity analysis of Multiple Criteria Decision-Making methods

Vida Maliene[1], Robert Dixon-Gough[2] and Naglis Malys[3,*]

[1]*Department of the Built Environment, The Built Environment and Sustainable Technologies Research Institute, Faculty of Engineering and Technology, Liverpool John Moores University, Byrom Street, Liverpool L3 3AF, United Kingdom*
[2]*Faculty of Environmental Engineering and Land Surveying, University of Agriculture in Kraków, 253c Balicka Street, Kraków 30-149, Poland*
[3]*BBSRC/EPSRC Synthetic Biology Research Centre (SBRC), School of Life Sciences, Centre for Biomolecular Sciences, University Park, University of Nottingham, Nottingham, NG7 2RD, United Kingdom*

**Corresponding author: Email: naglis.malys@nottingham.ac.uk*

Highlights

- Multiple Criteria Decision-Making methods are widely used in research and industry
- Five Multiple Criteria Decision-Making methods compared
- Sensitivity analysis of Multiple Criteria Decision-Making approaches performed
- Dispersion of relative importance values of alternatives correlate with the Euclidian distances of aggregated values
- Dispersion of relative importance values of alternatives contributes directly to the ranking uncertainty
- Dispersion of relative importance values can be used as a measure for finding critical criteria

Download English Version:

https://daneshyari.com/en/article/6903787

Download Persian Version:

https://daneshyari.com/article/6903787

Daneshyari.com