

- [ScienceWatch Home](#)
- [Inside This Month...](#)
- [Interviews](#)

- Featured Interviews
- Author Commentaries
- Institutional Interviews
- Journal Interviews
- Podcasts

Analyses

- Featured Analyses
- What's Hot In...
- Special Topics

Data & Rankings

- Sci-Bytes
- Fast Breaking Papers
- New Hot Papers
- Emerging Research Fronts
- Fast Moving Fronts
- Corporate Research Fronts
- Research Front Maps
- Current Classics
- Top Topics
- Rising Stars
- New Entrants
- Country Profiles

About Science Watch

- Methodology
- Archives
- Contact Us
- RSS Feeds



Interviews

Analyses

Data & Rankings

2009 : June 2009 - Fast Breaking Papers : Edmundas Kazimieras Zavadskas, Algimantas Zakarevicius, Jurgita Antuceviciene

FAST BREAKING PAPERS - 2009

June 2009



Edmundas Kazimieras Zavadskas, Algimantas Zakarevicius, & Jurgita Antuceviciene talk with ScienceWatch.com and answer a few questions about this month's Fast Breaking Paper in the field of Mathematics.



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Article Title: Evaluation of ranking accuracy in multi-criteria decisions

Authors: Zavadskas, EK;Zakarevicius, A;Antuceviciene, J

Journal: INFORMATICA

Volume: 17

Issue: 4

Page: 601-618

Year: 2006

* Vilnius Gediminas Tech Univ, Sauletekio Al 11, LT-10223 Vilnius 40, Lithuania.

* Vilnius Gediminas Tech Univ, LT-10223 Vilnius 40, Lithuania.

SW: Why do you think your paper is highly cited?

Multiple criteria decision-making (MCDM) methods are widely analyzed in scientific literature as well as being applied to decisions in real life situations. In our research evaluation of the credibility of ranking results in multiple criteria optimization problems was analyzed. This question is a familiar one for users of MCDM methods, but has still not been widely explored and published.

SW: Does it describe a new discovery, methodology, or synthesis of knowledge?

There were two fields integrated: multiple criteria decision-making methodology was supplemented by the elements of mathematical statistics. Consequently, the methodology for measuring the accuracy of determining the relative significance of alternatives as a function of the initial criteria values was developed.

SW: Would you summarize the significance of your paper in layman's terms?

Our research provides a possibility to define the credibility of multiple criteria compromise solutions that are obtained using formal numerical criteria.

SW: How did you become involved in this research, and were any particular problems encountered along the way?

We have been applying the MCDM methods in research and practice for many years. Researchers from various scientific areas joined our team and the field of application of multiple criteria decision-making expanded. Accordingly, the need of improving and supplementing the methodology of compromise decisions arose.

SW: Where do you see you research leading in the future?

"We have been applying the MCDM methods in research and practice for many years."

We intend to further develop and improve the methodology and its application by making a synthesis of MCDM and other communicating sciences. We will expand the possibilities of application of the methodology as well as its effectiveness in multiple criteria decisions by using principals of system approach and system analysis.

SW: Do you foresee any social or political implication for your research?

The developed methodology could be applied to solving problems and determining rational solutions in the field of sustainable development which takes priority in scientific and political decisions at present. The methodology could help to define the credibility of solutions when a lot of conflicting and hardly commensurable criteria are involved.

Edmundas Kazimieras Zavadskas
Professor, Doctor Habilus
Vice Rector
Department of Construction Technology and Management
Vilnius Gediminas Technical University
Vilnius, Lithuania

Web

Algimantas Zakarevicius
Professor, Doctor Habilus
Department of Geodesy and Cadastre
Vilnius Gediminas Technical University
Vilnius, Lithuania

Web

Jurgita Antucheviciene
Doctor
Department of Construction Technology and Management
Vilnius Gediminas Technical University
Vilnius, Lithuania

Web

KEYWORDS: MODEL; WEIGHTS; DESIGN; TOPSIS; MCDM.

 PDF

[back to top](#) 

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