

# Defining and Solving Multi-Criteria Decision-Making Problems

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## Basic Information

**Where:** University of Zagreb, Faculty of Organization and Informatics

**When:** 15 May 2026

**Duration:** 45 minutes

**Who:** PhD students of the PhD study programme Information Sciences

## Abstract

A requisitely holistic definition and systematic structuring of multicriteria problems are essential before applying multicriteria decision-making methods. A well-structured problem ensures that objectives, criteria, and alternatives are clearly identified, which improves the consistency, transparency, and credibility of the decision-making process and its results. The main objective of this talk is to present the possibilities for applying selected creative problem-solving methods and factor analysis to define and structure a multicriteria problem. It also aims to present the possibilities for applying selected creative problem-solving methods within the typically analytical steps of the multi-criteria decision-making process, that is, for measuring the local values of alternatives and determining the weights of criteria. The applicability of the developed approaches is illustrated with the real-life cases of creditworthiness assessment, evaluation of video-conferencing platforms, measuring students' use of digital technology to support their studies, and in the selection of Information Technology products. The results show that the hybrid approaches that include creative problem solving, statistical, and multi-criteria methods can be well-applied to a wide range of educational, organizational, and management problems.

## Speaker

Vesna Čančer, PhD in economic and business sciences, is a Full Professor of quantitative methods in business science at the University of Maribor's Faculty of Economics and Business (UM FEB). Her primary research interests include decision analysis with an emphasis on multiple criteria decision making, creative problem solving, research methodology, and management science, as well as their applications in economic and business practice. She also transfers the results of her research work into pedagogical work. She gives lectures at all three levels at the UM FEB.

Currently, she is acting vice dean at the UM FEB and president and a member of several committees at this faculty and at UM. She is an active member of the Section for Operational Research of the Slovenian Society Informatika.

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