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# TECHNICAL REPORT

# A COMPARATIVE STUDY OF TODIM AND TOPSIS APPROACH TO MULTI CRITERIA DECISION MAKING (MCDM)

**P27M19**

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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**ABSTRACT**

This research is focusing on the application of an acronym in Portuguese for Interactive and Multi-Criteria Decision Making (TODIM) and a Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) methods to solve the multi criteria decision making. The problem with this study is there is a lot of method in fuzzy sets that can be used to solve the multi criteria decision making (MCDM) and it is quite hard for the decision maker to choose the best selection and ranking the different alternatives. The objectives of this research are to apply TODIM and TOPSIS method in MCDM and to study the alternatives ranking between TODIM and TOPSIS method. First process of methodology is applied the TODIM method to solve the selection in the best offer from set of proposal by Roszkowska (2011) and a comparative study of classical TOPSIS and new TOPSIS method by Garcia-Cascales & Lamata (2012). Next, process of application TOPSIS method in the selection in the elective courses by Aytac, Tus, & Kundakci (2016) and in the selection in the residential properties by Uysal & Omur (2014). From this study, the result shows the most important alternative based on the preferred criteria after applying TODIM and TOPSIS methods.