

 ISBN: 978-605-83575-1-8

2016  
**BOOK OF  
ABSTRACTS**

**ICENS**

INTERNATIONAL CONFERENCE ON  
ENGINEERING AND NATURAL SCIENCES

**24-28 May 2016 / Sarajevo**

# **Book of Abstracts of the International Conference on Engineering and Natural Sciences (ICENS) 2016**

Edited by

**Prof. Dr. Özer Çınar**

Published, 2016 info@icens.eu

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## ANALYZING TOTAL COST PARAMETERS PRIORITIES IN THE CATERING SYSTEM BY USING ANALYTICAL HIERARCHY PROCESS

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### Abstract:

This paper aims to determine the relative weights of the decision criteria and priorities of alternatives which effective on the total cost of the catering system. Here Analytical Hierarchy Process (AHP, a Multi Criteria Decision Making method) is applied for getting the relative rankings of the catering cost parameters between the years of 2012 and 2014. Years were selected as criteria. Six parameters were identified as alternatives; cleaning, food, staff, consumption, energy and others. Selected parameters are widely used for different purposes of catering system and they can be used for common analysis of sub cost groups. Both conceptual and operational difficulties make the calculations complex and invariably cumbersome. The proposed approach enables the transfer of data, information, and knowledge between the different years related to catering processes. It also combines the characteristics of both the practical experiences of caterers with the output of a mathematical analysis model, to obtain more accurate knowledge that can be used for weight ranking, and accordingly process optimization. Moreover, studies that compare different cost factors in catering have not been found in the literature. This approach also helps caterers as well as catering planners for understanding priorities and weights of these alternative catering parameters to calculate budget and compare actual cost in each year.

**Keywords:** Catering, Total cost, AHP, Priorities, Weights