

Special Topic Articles on Fuzzy AHP



In this issue, three papers on the theoretical development and/or practical usage of Fuzzy AHP are presented. The first paper, *Warehouse Risk Assessment Using Interval Valued Intuitionistic Fuzzy AHP* by Selcuk Cebi and Esra Ilbahar is on the selection of a maintenance strategy involving the prioritization of critical factors. It presents an AHP application based on four maintenance strategies, namely corrective maintenance, preventive maintenance, predictive maintenance, and proactive maintenance, and the decision criteria, which are cost, quality, safety, value added and viability. The contribution of the paper is that Fuzzy AHP may be a useful tool to solve the consistency problems in classical AHP applications. The second paper, *Selection of Industrial Maintenance Strategy: Classical AHP and Fuzzy AHP Applications* by Robison Ohta, Valerio A. P. Salomon and Messias Borgia Silva, tries to evaluate and categorize the risks in warehouses in terms of occupational health and safety. It provides a new perspective to warehouse risk assessment. An interval-valued intuitionistic fuzzy AHP is proposed for evaluating and categorizing the risks in warehouses. The third paper, *Intuitionistic Fuzzy Originated Interval Type-2 Fuzzy AHP: An Application to Damless Hydroelectric Power Plants* by Cengiz Kahraman, Başar Öztayşi, Sezi Çevik Onar and Onur Doğan, develops an intuitionistic fuzzy originated interval type-2 fuzzy AHP method and applies it to the technology selection problem of a damless hydroelectric power plant. Linguistic evaluations and its corresponding triangular intuitionistic fuzzy scale are used in this multi criteria damless technology selection problem.

I hope this section will provide a useful resource of ideas, techniques, and methods for research on fuzzy AHP. I am grateful to the referees whose valuable and highly appreciated works contributed to the selection of the papers published in this section. I would like to thank the Editor-in-Chief, Enrique Mu, and Associate Editor, Birsen Karpak for their supportive roles in this process.

Cengiz Kahraman, Guest Editor

Ckahraman

Department of Industrial Engineering,
Istanbul Technical University,
34367 Besiktas, Istanbul, Turkey