Special Topic Articles on Fuzzy AHP: Part-2

In the special topic articles of this issue, three papers on the theoretical development and/or practical usage of Fuzzy AHP are presented. The first paper, *Solar PV Power Plant Location Selection Using a Z-Fuzzy Number Based AHP* by Irem Otay and Cengiz Kahraman is on the selection of a location for a solar energy PV plant using a four-level hierarchy. The authors consider several main and sub-criteria including initial cost, maintenance cost, slope, and distance to highways. The study solves the multi-criteria solar PV power plant location selection problem with a Z-fuzzy based AHP method. A Z-fuzzy number is a relatively new concept in the fuzzy set theory that considers the reliability assigned to an ordinary fuzzy number and enables one to circumvent the limitations of ordinary fuzzy numbers. The second paper, *Interval-Valued Neutrosophic AHP with Possibility Degree Method* by Eda Bolturk and Cengiz Kahraman is on the development of an interval-valued neutrosophic AHP method by employing the possibility degree method for ranking interval numbers in this method. Pairwise comparison matrices are filled in by using linguistic terms and the relative importance degrees of criteria are obtained. An application of the proposed method is given in the area of energy planning. Comparative and sensitivity analyses are also presented in the paper. The third paper, *Prioritization of Alternatives Based on Analytic Hierarchy Process Using Interval Type-2 Fuzzy Sets* by Konstantin Yury Degtiarev and Mikhail Yury Borisov presents a model assigning weights to the constraints based on expert assessments. An interval type-2 membership functions based fuzzy AHP is presented. The main objective of the paper is to develop an approach which would make it possible to integrate an expert's confidence degree into FAHP model.

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 work 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.

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