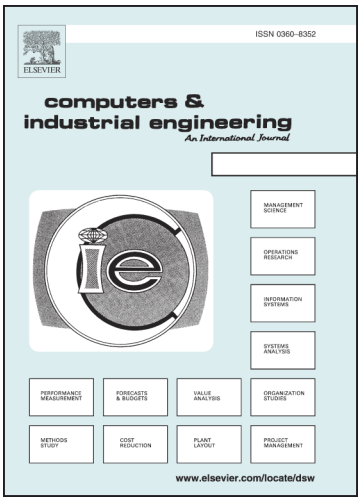

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Abstract

To improve the ability and efficiency of the hospital management, it is needed for us to handle the decision making problems so as to assist the hospital decision support systems. Considering the complexity and urgency of the hospital management affairs, this paper proposes a projection model with hesitant fuzzy linguistic term sets to solve the decision making problems under consideration. The proposed model not only can describe the uncertainties of the problems and the hesitancy of the decision makers, but also can decrease subjective and increase objectives of the decision making results. Then, the error analysis method is provided to obtain the weights of the criteria with hesitant fuzzy linguistic information. Furthermore, we make comparisons between the proposed model and other decision making methods, and present its advantages and drawbacks. Finally, a case study on hospital decision support systems is made to illustrate the validity and applicability of the proposed model.

Keywords: Hospital decision support system; Multi-criteria decision making; Hesitant fuzzy linguistic term set; Projection model; Error analysis method.

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