

## عنوان مقاله:

Proper process selection during flight schedule disruption using a fuzzy multi-criteria decision-making expert system

## محل انتشار:

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## خلاصه مقاله:

The aviation industry is a complicated, sensitive, and challenging phenomenon. One of the major issues in the operation of streamlined processes in this industry is the management of proper decisions during the disruption of flight schedules. Such disruptions commonly reduce customer satisfaction and the profitability of the airlines. Since there are multiple reasons for the disruption of the flight schedules along with the different possible decisions, a correct decision is very difficult to make requiring the opinions of the specialist staff. In this research, an expert model using a "fuzzy multi-criteria decision-making" method is proposed to provide a correct decision during the disruption of the flight schedules. The results show that the most important factors that make disruption of flight schedules are arrival delays and technical failure of the airline fleet. Besides, the most important possible decisions are the announcement of the delay and canceling of the flight. Thanks to utilizing the fuzzy analytical network process, the outcomes of the proposed expert model are in good alignment with the opinions of the specialist staff. The fuzzy analytical network process determines the values of 0.5124 and 0.2621 for the magnitude of the arrival delay and technical defect respectively. This method also determines the values of 0.7042 and 0.2076 for flight delay and flight canceling as the two most important possible decisions.

## کلمات کلیدی:

Flight schedules disruption, expert system, Fuzzy System, Multi-criteria Decision Making

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