ing qualitative and quantitative scale should be combined. The proposed hybrid models enable different Decision-Makers (DMs) on the assessment, and use Fuzzy numbers (FN). In order to indicate the validity of the suggested hybrid model, an example is provided to demonstrate and clarify the proposed analysis procedure. Also, an empirical experiment is conducted to validation the effectiveness. The results indicates that the applicability of the proposed hybrid FELECTRE Model.

Mathematical models and approaches in problem of volume planning of ISS cosmonauts trainings

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To prepare cosmonauts for the mission on the International Space Station Cosmonaut Training Center must provide trainings for all sorts of the operations and emergencies. All the operations and emergencies combined into sets named onboard systems.

In general three crew qualification levels are defined; user level, operator level and specialist level. For every onboard system a set of minimum qualifications needed to safely operate and maintain the system is pre-defined. Each crewmember, while being specialist for some systems, will be operator or only user for other systems. Consequently, the training programme for each crewmember is individually tailored to his or her set of tasks and pre-defined qualification levels.

The following problem has been considered, the pre-defined set of minimum qualification levels should be distributed between members of a crew with minimum training time differences.

In this paper we compare different possible mathematical models and propose two heuristic algorithms with complexity of O(n) operations based on peculiarities of the problem. Both have been compared with the results received from Constraint Programming method.

Analytical Results for Online Conversion - An Introduction to Balanced Analysis

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