

INFORMATION TECHNOLOGY FOR IDENTIFICATION OF PROBLEMATIC SITUATIONS AND THEIR STATES IN COMPLEX TECHNICAL SYSTEMS

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The fuzziness and the unstructured data problem situations and their states in the complex technical systems necessitate the development of the relevant information identification technology for their analysis, based on the characteristics of the studied subject. In this article:

- The problem of the identification of the problematic situations and their states in the complex technical systems is defined. The task is about identifying such situations and their current status (causes, conditions and factors) with the ones that cannot be known in advance. The problem per se is reduced to partitioning the sample problem situations in complex technical systems and their states into disjoint subsets, that is, to clustering;
- The classification features and the basic functions of the developed information technology are defined;
- The information technology, identifying problematic situations and their states in the complex technical systems is proposed. It is based on the appropriate method of identifying such situations and their states using the cluster approach, based on the information model identification process aforementioned situations and modified clustering algorithm for FOREL and K-MEANS .

The application of the developed information technology enhanced the identification quality of such situations by 5.2%.

Keywords – information technology, cluster analysis, identification, problematic situation