CONTENTS & ABSTRACTS

Kuznetsov S.K., Potekhin A.I.

The main problems of train dispatcher work are considered. Substantiated is the need to develop the smart decision support systems, containing the means for predicting the situation development in case of delays in train traffic or malfunction of railway system objects. A review is given of several foreign systems, providing such functionality. Discrete event models of railway infrastructure components (stations, stages, etc.), models of trains movement group control are considered and represented in the form of Petri Nets in order to build automatic systems, providing safe trains movement control in real-time mode.

Keywords: dynamic management, railway transport, forecasting technique, discrete event model, railway infrastructure components, Petri Net, logic management, safety.

Ivanov N.N.

The execution time management algorithms are proposed for the generalized stochastic network, based on the implementation of the control arcs. The method is suggested of calculating the average execution time of the network with control arcs and of assessing it in different modes of their activation.

Keywords: generalized stochastic network, critical path, the control arcs, run-time network, simulation.

Loginovsky O.V., Maksimov A.A.

The results are presented of the analysis of approaches, conceptions, programs and established practice of regions development strategic management in our country and abroad. Based on trends revealed and taking into account the world global instability factors, the set is formulated of scientific provisions on forming the actual management strategy of social and economic development of the regions in modern Russia.

Keywords: strategic management, social and economic development, region, territory.

Kantor O.G., Kuznetsova Yu.A.

It is noted that the essential stage of the Innovation Centers in the Social Sector (ICSS) functioning effectiveness control from the side of state authorities consists in evaluating the social innovations development level. The methodological approaches are considered to the development of the system of comparable indicators, meeting the objectives of social innovations sphere monitoring both nationwide and on the level of state subjects. The evaluation of the activity indicators is performed of the ICSS of the Omsk region in accordance with the methods presented.

Keywords: social innovation, management, evaluation, performance, indicative approach, harrington desirability function, fuzzy sets theory, metric analysis, innovation centers in the social sector.

Zatsarinnyy A.A., Kozlov S.V., Shabanov A.P.

The method is developed of managing the organizational systems functioning, and technological solutions are suggested to provide the interoperability between their information systems. It is noted that the practical significance is in ensuring the possibility of creating the united information and control environment for consolidatable organizational systems, solving the common tasks on the permanent basis and the tasks resulting from run-time situation including emergencies.

Keywords: organizational system, management, information, knowledge base, unified information management, efficiency.

Garbuk S.V., Bakeev R.N.

Problems and approaches are considered to data processing technologies quality assessment. The review is given of existing domestic and foreign competitive procedures in the field of data analysis technologies and machine learning (competitions, tournaments, etc.). The methodology is suggested of intelligent data processing technologies quality assessment by comparing it with human operator work quality.

Keywords: machine learning, data analysis technology, intellectual technologies, competitive quality assessment.

Saltykov S.A., Rusyaeva E.Yu.

A mediation approach is proposed in science of science, combining the advantages of an expert and of a scientometric approaches, the conceptual foundations of this approach are indicated. The algorithm of expert scientometric estimating is described.

Keywords: mediation, expert scientometric approach, assessment factors, strata of scientists.

Slugin V.G., Zubarev A.A., Shevtsov O.U., et al.

It is noted that the efficiency of an air defence complex functioning is determined by the technical capabilities and the quality of control under operation participants. The method is developed allowing the effective solution split second forming for arbitrary number of targets and combat vehicles, taking into account the full or partial ammunition load of each of them, and providing the balanced load between them.

Keywords: targets distribution, efficiency, modeling, optimization, decomposition, operations study.

Chadaev A.I., Tropova E.I.

The main stages of the development are stated of the fuel-oxidant flow rates ratio control systems for the «Sojuz» launch vehicles (LV) family — from the LV «Sputnik» to the LV «SOJUZ-2».

Keywords: launch vehicle, fuel-oxidant flow rates ratio control system, propellant-consumption control system.