

SELECTED ABSTRACTS OF PH.D. THESES SUBMITTED AT MOSCOW STATE UNIVERSITY OF RAILWAY ENGINEERING

Garlitsky, E. I. Improvement of track maintenance technology. Abstract of Ph.D. (Eng.) thesis. Moscow, 2015, 24 p.

The thesis proposes and justifies the use of the method of aggregates for simulation of the system «connecting station – non-public tracks» and constructs a corresponding mathematical model. It defines criteria for selecting optimal scheduling of cargo fronts, taking into account possible penalty payments.

Evreenova, N. Yu. Selection of parameters of transport interchange hubs, formed with the participation of railway transport. Abstract of Ph.D. (Eng.) thesis. Moscow, 2014, 24 p.

The author offers a classifier and systemization of transport interchange hubs (TIH), technology of passenger flows service that takes into account logical patterns in the organization of their movement in the simulated space. The model of TIH functioning, criteria and indicators for assessing the quality of service provided to passengers and visitors are developed.

Kaportsev, B. V. Economic rationale of management system for warehouse complex of oversized and heavy cargo on Russian railways. Abstract of Ph.D. (Economics) thesis. Moscow, 2014, 24 p.

The scientific novelty of the research is the development of methodological tools for feasibility study of formation of a model layout of warehouses on the railways of Russia, based on a sequential use of planar, network and discrete models. The problem is solved with technological and legal aspects of transportation, integration of transport systems of the Eurasian continent, as well as the characteristics of the infrastructure, market environment and prospects for exploitation.

Kashin, D. I. Method and algorithms for assessing the quality of transmission and processing of information in channels of fiber-optic networks of railway transport. Abstract of Ph.D. (Eng.) thesis. Moscow, 2014, 24 p.

The research results are mathematical model and algorithm of the generator of standard digital test signals, mathematical models and calculations of power spectral density (PSD) of electrical digital test signals of fixed and pseudo-fixed structures for different ways of line coding, PSD of modulated optical test signals, including various formats of modulation and coding

methods and under the action of nonlinear effects in the optical fiber on signals.

Ignatov, N. A. Methods and algorithms for optimization of resource maintenance of complex information computation systems in rail transport. Abstract of Ph.D. (Eng.) thesis. Moscow, 2014, 24 p.

The author developed a mechanism to optimize resource maintenance of information computation systems, which reduces the cost of operation by using virtualization technology. A simulation model is built that estimates the number of requests rejected for service and resources' response time to a request.

Ye Win Khan. Substantiation of pneumatic spring of spring suspension for metro cars of city Yangon, Myanmar Republic. Abstract of Ph.D. (Eng.) thesis. Moscow, 2014, 22 p.

This thesis carried out correction of mathematical model of pneumatic spring with one extra tank in the time domain, developed a model for the study of vibrations of bouncing, pitching and rolling motion of bogie's body. The expediency of the use of pneumatic spring of this type in the design of core stage of spring suspension of metro cars is shown.

Serova, D. S. Improving methods to assess technical and technological parameters for predicting delivery of export cargoes to ports. Abstract of Ph.D. (Eng.) thesis. Moscow, 2015, 24 p.

The study identified and ranked parameters influencing the time spent by freight flows on transport directions, analyzed the process of moving goods with different technical means of signaling, interlocking and communication, set speed and size of passenger traffic, values of carrying capacity filling ratio. A complex mathematical model is compiled, which allows determining the exact time of delivery of cargo to the port.

Chestnov, P. E. Economic risks management of railway organizations. Abstract of Ph.D. (Economics) thesis. Moscow, 2015, 24 p.

The author identified risks by types of budgets, offered classification and determined methods of economic risks evaluation in accordance with types and causes of emergence. Assessment model was formed, designed to be part of budget management, and with its participation financial risks of investment projects of transport infrastructure of Moscow region were classified.

