

Pedagogical Sciences

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The Influence of Weather Conditions on Young Students Depending on Meteosensitivity Level (Case Study of the Middle Ob)

Keywords: diagnostics; magnetic-and meteosensitivity; health deviations; Lyusher's test, meteosensitivity level.

page 5-8

Abstract: The paper discusses the influence of magnetic storms and atmospheric pressure upon mental functions of young students.

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The Importance of Engineering Practical Tasks in Mathematics Classes for Enhancing Learning and Cognitive Activity of Technical University Students

Keywords: engineering practical tasks; learning and cognitive activity; mathematics; students.

page 9-11

Abstract: The article discusses the importance of engineering and practical problems and the influence of their use to intensify learning and cognitive activity of students in mathematics classes at technical university.

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Methodology of Choreographic Training of Esthetic Gymnasts at the Stage of Sports Specialization

Keywords: esthetic gymnastics; hip-hop; psychomotor and musical abilities; methodology of choreographic training; teenagers.

page 12-14

Abstract: The article describes the basic provisions and results of approbation of the experimental methodology of choreographic training of esthetic gymnasts, combining classical and modern dance.

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Organizational and Methodological Aspects of Military Education of Military School Cadets of the Syrian Arab Republic

Keywords: organizational and methodological bases; Syrian Arab Republic; educational process; cadets of military schools.

page 15-17

Abstract: The article examines the organizational and methodological foundations of military education of military schools cadets, as well as the tasks, the nature and methods of education used in the educational process.

Machine Building and Engineering

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The Adaptive Observation Identifier of the Process Parameter

Keywords: robot; actuating drives; inertia moment; resistance moment; identification; adaptive observation device; adaptive control.

Abstract: During operation the actuating drives of robots cause non-programmable changes in the moments of inertia on the motor shaft, resulting in a decrease in the accuracy and stability of the drive. Introduction of adaptive control allows for steadily high quality of control over the electric drive under such operating conditions. The most common adaptive control of electric drives is constructed in the class of adaptive systems, a characteristic feature of which is the presence of basic control loops and self-adjustment loops. The introduction of self-adjustment loop into feedback allows for the improvement of the quality of control at the expense of increase in the volume of information on object parameters, the part from which cannot be directly measured. The inertia moment on an engine shaft is one of such parameters. It is impossible to measure the inertia moment on an engine shaft directly. In this regard, there is a

page 18-24

problem of obtaining this information indirectly, and it is solved by means of the adaptive observation devices, algorithms and block diagrams of which are developed with the use of methods of the theory of identification. The adaptive observation device is intended for restoration of a variable of a condition of control object – the angular velocity and identification parameter of loading including the value of the inertia moment on the engine shaft is presented. The input signals for the adaptive observation device are the current of an anchor and the angular velocity of the engine measured by sensors of the current and angular velocity. The algorithm of operation of the adaptive observation identifier is received by an indirect method with the application of the model of control object, with self-adjustment of identification parameter, and is described by the system of two differential equations of the first order. The adaptive observation device with the use of analog and digital modeling checks the stability and accuracy of identification of the object parameter. The adaptive observation device can be recommended for application in control systems of electric drives of direct current functioning in conditions when the inertia moment on the engine shaft changes in wide limits and in a predictable manner. It is expedient to consider the further operation of the adaptive observation device in engine control systems of direct current, allowing for observation of changes in real and estimated values of a condition variable of the control object – the angular velocity and the identified parameter at various engine operating conditions.

O.V. Tomazova

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The Methodological Approach to the Choice of Economically Viable Option of Organizing Equipment Repairs in Oil and Gas Industry

Keywords: pro-activity; repairs; equipment; oil and gas companies; methodological approach.

Abstract: The aim of this study is the choice of economically viable options of organizing repair work at oil and gas companies. To achieve this, the author offers a methodological approach to the justification of the evaluation criteria and selecting the most appropriate technology options of organizing repair work. The article describes in detail the factors affecting the choice of economically viable option of repairs at oil and gas companies. It is recommended to consider these factors in the practice of oil and gas companies. According to the author, the key factor, which has the biggest influence on the choice of option, is the owner of tools and equipment needed for repairs. The function of pro-activity and the methodological approach to the selection of optimal option of organizing repairs have been considered.

page 25-29

Economic Sciences

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Territorial Development of the Region through the Development of Regional Ecological, Economic and Social Systems

Keywords: region; territorial development; local ecological, economic and social systems; forms of implementation; support institutions.

Abstract: The article deals with the territorial development of regions. The economic, social and environmental development issues are discussed. The lack of interconnection of regional innovation subsystem with other subsystems of the region is described. It is determined that this problem can be eliminated with the help of investment institutions, special economic and legal activities, business infrastructure support institutions and other forms of system development. The implementation forms and support institutions of local ecological, economic and social systems of territorial development have been classified.

page 30-33

A.P. Gantimurov

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Assessment of the Effect of Introducing Innovation

Keywords: industry computerization; innovation exchange system; search and introduction of innovation; handbook of innovation; employees' KPI calculation.

Abstract: The article highlights a special role for information innovation in industry. The necessity of innovation exchange system within the group of industrial enterprises has been stressed. The influence of innovation on profitability parameters of the group of industrial enterprises has been assessed.

page 34-36

D.S. Mityukhin

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Improving the Sustainability of the Market Infrastructure in the Region

Keywords: development; management; market infrastructure; mechanism; principles of management functions; region; sustainability.

Abstract: The article is devoted to the improvement of the mechanism of sustainability and development of market infrastructure in the region. The article highlights the principles on which the system of mechanisms used in the region is based. The functions and management tools at the regional and municipal levels have been defined. A model of the mechanism of sustainability and development of the market infrastructure in the modern economy has been developed; the algorithm of the simulation model of the mechanism of sustainability and development of the market infrastructure in the region has been described.

page 37-41

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Fair Price in Real Estate Market

Keywords: fairness; fair price; price; real estate; property.

Abstract: This article describes the possibility of forming a fair price for the real estate market. The author discusses different definitions of fair price in general, as well as the views of some philosophers and economists on the issue of fairness. The author describes the characteristics of real estate objects. In conclusion, a possible definition of fair price in relation to the real estate market is offered.

page 42-47

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Problems and Prospects of Foreign Economic Relations between the Republic of Buryatia and Mongolia

Keywords: international economic interdependence; trade and economic relations; border territories; commodity turnover; economic growth.

Abstract: The article is devoted to the problems of development of international economic relations between the Republic of Buryatia and Mongolia; some directions for the solution of the existing problems and prospects of development of trade and economic cooperation are offered.

page 49-52

Linguistics

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Theoretical Aspect of National and Territorial Branding

Keywords: national branding; territorial branding; image; brand.

Abstract: The article focuses on the basic concepts of terminology of "national branding", "place branding", "place marketing", describes different approaches to the interpretation of the concepts, proposes interpretation and correlation of the concepts of "national brand", "territorial brand", "territorial marketing", "image of territory", "brand territory".

page 53-57

Historical Sciences and Archeology

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Asceticism and Hedonism as Two Main Aesthetic Principles in the Late Middle Ages

Keywords: asceticism; hedonism; dualism of opinions; humanism morality.

Abstract: The paper describes the coexistence of two opposite ideologies in Europe: Christian theology and humanism. In the age of Renaissance, the interpretation of an individual as a creative free personality was predominant.

page 58-60

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The Sources of Studying Political Elite of North Ossetia in 1921–1953

Keywords: documentation; information; sources; regional party committee; plenum; regional elite; social professional characteristic.

page 61-63

Abstract: The information potential of archival documents and periodicals for studying North Ossetia political elite in 1921–1953 is analyzed in the article. The author considers the specific structure of the Party and Soviet office work and the possibility of their use in the analysis of membership and main social characteristics of regional political elite.

Information Science, Computer Engineering and Management

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Algorithm for Additional Measures to Improve Monitoring of Security of Tourism Organizations

Keywords: system analysis; security assurance model; rendering of services; tourists' security; security assurance efficiency index.

page 64-69

Abstract: Federal Agency for Tourism Rosturizm facilitates work aimed at comprehensive development and improvement of the efficient and safe functioning of the tourism industry of the Russian Federation. To achieve a higher level of tourists' safety, the Federal Agency for Tourism Rosturizm must implement a series of additional monitoring measures. In this regard, the proposed algorithm can be used.

A.V. Dvornikov, A.N. Afanasyev, G.I. Zagrebin

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Testing of Methods of Automated Quality Selection of Settlements at Automated Small-Scale Mapping Using the Example of the Tambov Region

Keywords: automated generalization; GIS; small-scale mapping.

page 70-75

Abstract: The article provides a step by step description of the process of automated testing techniques of qualitative selection of settlements for automated small-scale mapping using the example of the Tambov region.

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Optimal Mathematical Models of the Processes for Retaining Walls Design

Keywords: design; retaining walls; technical system; evaluation model construction.

Abstract: The development of high-quality projects of optimal design of retaining walls requires a multi-optional, complex study of design alternatives, including the use of mathematical tools based on multi-criteria and uncertainty of knowledge about the nature of the objective function, which generally complicates the decision-making processes. Uncertain and contradictory objectives, the stochastic nature of the parameters of the environment, man-made impact, etc. complicate the process of decision-making.

page 76-78

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Complex Evaluation of Electric Energy Quality Using Hardware and Software Tools

Keywords: indicators of quality of electric energy; component; portrait; indicators of quality of electric energy.

page 79-82

Abstract: In this article, the use of indicator models and component depiction of the electric power in electric power assessment by means of modern portable microprocessor-based devices is considered.

Biological Sciences

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Features of Psycho-Physiological Adaptation to Cancer

Keywords: adaptation; physiology; oncopathology; stress response; adaptive mechanisms.

Abstract: The human body is faced with the need to adapt to a whole range of inadequate environmental conditions that affect virtually all major aspects of life and which could physically affect the spare capacities and resistance to various diseases. From the psycho-physiological perspective the situation of cancer is regarded as extreme. However, the changes that cause cancer on psycho-physiological and emotional levels can persist for many years after treatment. Thus, the result of adaptation depends on morphological and functional, genetic and the other features of patients. The resolution of the emergency situation is explained by the possibilities of psycho-physiological coping with cancer, which includes a set of protective and adaptive mechanisms.

page 83-86

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Morphometric Features of Neurons of the Anterior Parietal Cortex Brain of White Rats under the Influence of Lead

Keywords: lead acetate; brain; necrotic neurons; perikaryons; anterior parietal cortex.

Abstract: Using the experimental model we investigated morphological and morphometric characteristics of neurons anterior parietal cortex brain of white rats exposed to lead acetate. We applied microscopy of histological sections of the cerebral cortex, using the MT 4000 Series Biological Microscope with Bio Vision Version 4.0 software for image analysis. Photographing of preparations was made using the built-in digital camera at magnification of 10×10 , 40×10 and 100×10 .

page 87-95

Political Science

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Development Scenarios of Political Processes in Sweden

Keywords: Sweden; political processes; political parties; political forecasting.

Abstract: The article is devoted to the political processes in Sweden from the perspective of participation of the main political institutions in electoral process. The author of the article analyzes the external and internal factors, influencing the possibilities of parties in electoral process.

page 96-101

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On the Problem of Modern Terrorism Sources

Keywords: terrorism; terrorist and extremist activities; source of terrorism; factors of terrorism.

Abstract: The article investigates the database of the sources of terrorism as a necessary element in the analysis of the concept of terrorism and as a domain specific component when developing target directives in the system of extremism and terrorism prevention.

page 102-106