

Pedagogy and Psychology

V.A. Gnezdilov

Work of Unit Commander to Unite Military Collectives Using Modern Technology

Key words and phrases: cohesion; interpersonal relationships; military collective training; unit commander.

Abstract: This paper is devoted to the problem of uniting military collectives of Interior Ministry troops of Russia. From the experience, the author proposes and describes the methodology based on the application of computer technology for unit commanders to organize effective events aimed at uniting military personnel at the initial stage.

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L.V. Klochkova

Functional Cluster of Indicators of Personal Maturity of Modern University Graduate

Key words and phrases: components of personal maturity; innovative terms of higher education; personal maturity; social order; student.

Abstract: The paper presents the results of a study of psychological changes of young people that reflect specific indicators of personal maturity in conditions of innovation in higher education.

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O.Yu. Litvinova, T.B. Dolakov

Qualitative Characteristics of Psychological Readiness of Security Officials to Extreme Conditions from the Position of a Subject

Key words and phrases: extreme conditions; professional identity; psychological readiness; subjective position.

Abstract: In the paper, psychological readiness of security officials to extreme conditions of service is seen through theoretical and methodological principles of subjective psychology, which enables to optimize psychological support for employees through “point” and specifying work with insufficient parameters

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T.A. Oganesyanyan

Spiritual Aspects of Creative Abilities

Key words and phrases: creative abilities; creativity; development; mental development; motivation; personality; spirituality.

Abstract: The paper is dedicated to the problem of interrelation and reciprocal effect of spiritual factors and creative abilities. This problem is examined through the analysis of concepts “spirituality”, “spiritual abilities”, and “creative abilities”. The connection and impact of spiritual development of personality on the manifestation of creative abilities is discussed.

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I.E. Plotnikova, S.Yu. Komova, S.I. Brezhnev

Distant Educational Technologies in the System of Continuous Professional Education

Key words and phrases: distant educational technologies; professional development of research and educational worker; system of continuous professional education.

Abstract: Implementation of innovation methods in the system of continuous professional education requires application of the newest resources to the maximum. This paper analyzes distance education systems, which are expedient to use in disciplines of medical profile and in professional development of research and educational workers: LMS Moodle, Flash MX, Aythorware.

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Professional Training

A.V. Kindergart, E.I. Fedak

Description of Procedural Elements of Developing Professional Responsibility of Dog Handlers of Interior Ministry troops

Key words and phrases: dog breeders; dog handlers; formation; professional responsibility.

Abstract: This paper discusses the nature, structure and content of the process of development of professional dog trainers' responsibility in Internal Troops.

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Philology

E.V. Komleva

To the Question of Semantic Structure of Appellative Text (Case Study of Modern German)

Key words and phrases: conceptually significant meaning; functional-semantic category of appellativity; German; macrocoherence; modality; semantic core; transformation of meaning.

Abstract: The paper explores features of semantic core of the appellative text. Conceptually significant meaning, which is a complicated semantic structure including subject information united by the common modal meaning, is considered as the main unit of semantic structure of the appellative text.

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Engineering

A.I. Alatortsev, Yu.V. Girin, A.A. Korobkov, A.V. Ostriuk, D.V. Smirnov, A.A. Cheprunov

Non-Stationary Deformation and Destruction of Composite Shell under Heat Power Loading

Key words and phrases: deformation and destruction of shells; gas dynamic devices; high-modular composite materials; radiations and particles fluxes; thermal and mechanical action.

Abstract: The paper describes experimental results of studies of composite cylindrical shell strength made by cotton winding method to the impact of thermal and mechanical non-stationary loadings. The authors examine a set of gas dynamic devices for generation of pressure impulses having a difficult existential profile and methods of reaction parameters measurement used in the conditions of action of non-stationary lateral loadings to shells. The influence of pressure impulse duration on a type of destruction of empty and filled shells is studied. Dependences containing characteristics of unevenly heated multilayered shells and parameters of non-stationary loading are given to assess the value of maximum circular deformation.

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Mathematical Methods and Models

I.S. Nurgaliev

Monitoring and Modeling World as Flow: from Demystified Nonsingular Cosmology to Emerging Adequate Technologies in Agro-Ecological Micrometeorology

Key words and phrases: cosmology; material point of the second type; micrometeorology; turbulent flow.

Abstract: Mathematical model of the turbulent flow is presented using conception of the material point of the second type suggested by the author earlier. The model is applied in two areas: agro-ecologic multi-layer boundary system of green-house gases (GHG) exchange between soil, canopy and atmosphere and in cosmology. Turbulence as an attribute of the any flow is described as the phenomenon sensitive to the presence of the nonzero vorticity. Generalized advection-diffusion-reaction equation is derived for arbitrary number components in the flow as a universal mechanism to describe energy-mass circulation in Nature. It is shown that taking into consideration vorticity-related component of cosmological motion averts singularity and explains acceleration of the expansion. No mystic matter with dark energy is needed. That energy belongs to the local rotational motion (vorticity). Einstein's idea on static universe occurs to be encompassing conception for the standard cosmology as well as for the emerging new (oscillating) one.

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Information Science

A.V. Vasilyev

On The Construction of Graphical User Interface, Model-Based Widgets and the Framework of Google Web Toolkit

Key words and phrases: Google Web Toolkit; User Interface; Widget Model.

Abstract: In today's rapidly developing world requirements for information systems are constantly changing. This fully applies to the UI (User Interface, UI). Often, these changes must be made in a short time, which is quite difficult, given the need to design, develop and test. Model widgets described in this paper allows you to create and modify UI on the fly. The whole structure of UI stored in the database, and any changes are applied immediately. The model described is very flexible: it is easily supplemented in accordance with the new requirements. Widget in the classic sense is defined as a primitive graphical user interface [1]. In this paper, we will understand how the widget more complex entity – some logically coherent structure that can exist independently of the other page elements. The purpose of this paper is to describe the model widgets, transactions with them and how they work. We also discuss the details of the practical implementation model. Currently, the framework described in this paper is used in the information system Netkite to display and edit data stored in the format of an adaptive model [2]. The paper consists of three parts. The first part explains the general idea of the approach and the main points needed for its understanding. The second part describes the core group of widgets on which to build a typical configuration of enterprise systems. The third part presents some details of the implementation of the entire structure.

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G.N. Khubaev, S.N. Shirobokova

Visual and Simulation Modeling for Quick Estimation of Resource Capacity for Technological and Management Processes

Key words and phrases: automated synthesis of the models; manufacturing process; resources consumption; simulation modeling; visual and simulation models.

Abstract: The method and tools for automated quick estimation of resource consumption for goods and services are proposed. At the first stage the IDEF0-model has to be converted to the UML-diagram of activity by automated way, while the second is automated synthesis of simulation model and quantitative estimation of the resources consumption for the manufacturing process. At the second stage the automated synthesis of simulation model and quantitative estimation of the resources consumption for the manufacturing process have to be performed.

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Economic Sciences

T.M. Aldarova

The Concept of Overall Materiality and Performance Materiality in the Audit

Key words and phrases: audit; international standards; working materiality.

Abstract: The paper describes the problems of materiality evaluation and application at different stages of the audit: planning, conducting and forming an opinion of the auditor. It defines the concepts of materiality for the financial statements as a whole as “the general level of materiality” and materiality in performing an audit as “performance materiality”, which can be treated as performance materiality in relation to any part (form) of financial statements and their separate clauses.

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Z.T. Vakhitova

State Support of Agriculture in the WTO

Key words and phrases: agricultural producer; public support; subsidies; WTO.

Abstract: The paper examines conditions of support of agriculture within the WTO. Possible negative consequences due to the reduction of direct support for agriculture have been estimated. Measures for improvement of the agricultural producers under the WTO have been proposed.

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T.N. Vnukovskaya, I.V. Lavrentyeva

Mechanism of Reproductive Labor Risk Management

Key words and phrases: mechanism of reproductive labor risk management; reproductive labor risks; value of human resources.

Abstract: It is proved that the growth of the value of human resources depends on considering the risks of reproductive labor. A mechanism of reproductive labor risk management in the

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process of formation and development of human resources is proposed. Wording for the basic elements of a regulatory mechanism: goals, objectives, principles, functions, methods of regulating reproduction risks are proposed..

D.N. Devyatlovskiy, E.N. Mazurova

Specifics of Corporate Social Responsibility in Russia: Overweight towards Large Business

Key words and phrases: corporate social responsibility; integration of efforts; non-profit organizations; small business; social policy.

Abstract: The paper describes the concept of corporate social responsibility, history of emergence of CSR of Russia, the assessment of CSR activity of the Russian companies is given; its peculiar features are defined. Problems of small business are revealed under implementation of CSR programs, options of their solutions and strategy of behavior of enterprises are proposed.

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V.V. Kolmakov, I.S. Simarova

Proprietorship Relations as a Fundamental Reason for Territories Differentiation

Key words and phrases: economic space; property management; proprietorship relations; public-private partnership regional development; space relatedness; spatial differentiation.

Abstract: The paper provides rationale for using methodology of spatial economics theory in resolving reasons of differentiation of regions. It derives that the multitude of parameters that determine the characteristics of a territory's production processes is topped by economic distance, which is above other traditional productivity factors and can be interpreted as availability of preconditions to interactions between subjects. The nature of interaction is determined by the extent of proprietorship relations development, the roles of distribution and achievement of effective balance of interests. Public-private partnership is meant to be the priority instrument for such a consonance.

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E.V. Miloenko

Development of Social Infrastructure of Rural Areas as a Factor of Food Security of Russia

Key words and phrases: doctrine; concept; food security; rural settlement; self-sufficiency in food; social infrastructure; sustainable development.

Abstract: The paper presents a comparative analysis of the food security doctrine Russia and the Urals Federal District. The author discusses the main indicators of the availability and improvement of rural settlements of the Tyumen region objects of socio-engineering infrastructure within the framework of the regional program for sustainable rural development and food security in Russia.

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S.I. Seversky, I.B. Pyankov

Estimation of Creating Technically Complex Facilities for Marine Engineering in the Early Stages of Conceptual Design

Key words and phrases: conceptual design; technically complex facilities of Marine Engineering; virtual prototype.

Abstract: The paper describes algorithms for determining the cost of technically complex facilities of Marine Engineering (TCF ME) at the early stages of conceptual design. The authors performed the work on the review of valuation methods used; it was concluded that all methods that use refinement coefficients assigned by an expert have a large error and are estimates. The authors proposed reordering of conceptual and schematic design of newly created products, improvement of relevant standards that supplement the standard stages of development work by virtual prototyping stage of the designed TCF ME. The specified virtual prototype will be developed until it become possible to calculate the cost of a full life cycle of an object with an accuracy of 10 %. According to the authors, the proposed approach will cause rise in specific stages of creating TCF ME, and lead to a significant increase in economic efficiency of development work in general.

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E.V. Stelmach, V.G. Shvedov, V.L. Shevtsova

Justification of the Organization of Pleistocene Tourism on the Territory of the Jewish Autonomous Region

Key words and phrases: landscape; Pleistocene tourism; re-wilding; recreational resources; tourist potential.

Abstract: This paper deals with the perspectives of the Pleistocene park organization in the

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Jewish autonomous region. The short characteristics of landscape and geographical conditions by this district are described. The travel dislocation and attraction for foreign tourists into the planned park has been reviewed. The structural organization of its internal territory has been analyzed.

B.A. Tkhorikov, A.V. Nikitin

Indicators of Indicative Management in Social Sphere in the Russian Federation

Key words and phrases: indicators; labor cost; organization of social.

Abstract: In accordance with the new doctrine of indicative management in Russia specified in the May Presidential Decree, one of the indicators of the effectiveness of the executive authorities of the Russian Federation is to ensure the given level of wage growth in the social sector organizations and decrease in mortality. In this paper, using the mapping method the authors grouped the subjects of the Russian Federation by the wage levels of different categories of social sector employees; on the basis of the correlation analysis, the influence of salary size in social sector organizations on mortality has been studied.

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Legal Science

O.M. Ovchinnikov

The Role of Examination as Investigative Measures to Combat Penitentiary Crime

Key words and phrases: convicts; examination; investigative activities; investigative units; penitentiary crime.

Abstract: The paper highlights the current state of penitentiary crime and its negative consequences. Particular attention is drawn to the possibility of investigative units in combating crimes committed in the penitentiary system. In particular, the emphasis is placed on examination as an operational investigative activity; the positive aspects that improve its efficiency have been highlighted.

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Ecology and Nature Management

M.M. Sangadzhiev, L.I. Khokhlova, V.V. Seratirova, V.A. Onkaev

The territory of Mirages: Desertification in Yashkul District of Kalmykia

Key words and phrases: desertification; Federal highway Elista-Astrakhan; Kalmykia; Yashkul district.

Abstract: The data of satellite imagery and years of research show the zone of destruction of the soil layer in the places of settlement. The paper considers the questions of the origin of arid areas along the Federal highway P-216, Elista-Astrakhan. The main part of the settlements is located within 20–30 km from the Federal highway. The zone of degradation of the surface layer was identified. The evidence of formation of arid areas was given.

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