

Land Sciences

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Changes in the Chemical Composition of Produced Water Influenced by the Development of Oil Fields in Verkhnekamskaya Oil-Bearing Area

Keywords: hydrogeochemical conditions; produced water; reservoir water; Verkhnekamskaya oil-bearing area.

page 7-10

Abstract: The author briefly considers geological condition of oil fields of Verkhnekamskaya oil-bearing area. Hydrogeochemical conditions of oil fields in South-West of Verkhnekamskaya oil-bearing area are shown. The results of changes in the chemical composition of produced water influenced by using fresh surface water (Mishkinskoe oil field) and mineralized groundwater (Smolnikovskoe oil field) are given.

Biological Sciences

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The Structure of Annual Shoots in Types and Forms of Junipers

Keywords: coniferous trees; elementary sprout system; escape; juniper.

page 11-13

Abstract: The author studied the features of systems of elementary monorhythmic shoots in *Juniperus scopulorum* Skyrocket, *Juniperus virginiana* Helle, *Juniperus squamata* Meyeri, *Juniperus sabina*, *Juniperus communis* columnar shape. The differences in the growth of shoots of apical, middle and lower parts of the plant and for different types and forms of junipers were shown.

Biotechnology and Medicine

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Research into the Influence of Chemotherapy on the Growth Rate of Malignant Tumours

Keywords: chemotherapy; mathematical model of tumor growth; tumor growth rate.

page 14-17

Abstract: The author analyzes the influence of chemotherapy on the growth rate of recurrent and metastatic tumors. The original mathematical model of tumor growth is developed for the solution of this task. On the basis of this model the computer program allowing for determination of kinetic parameters for each concrete clinical case is created. 130 patients with recurrent and metastatic tumors were investigated. They were subject to cytometric study of the tumors. As a result of calculations the author determined the parameters of the tumor structure influencing its growth and sensitivity to chemotherapy.

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Inulin, Levulin and Oligofructose – Prebiotics of the 21st Century

Keywords: anti-carcinogenic effect; functional foods; intestinal microflora; prebiotics and probiotics.

page 18-23

Abstract: This paper discusses general issues and benefits of Inulin application and its short-chain analogs as broad spectrum prebiotics, the possibility of combining with probiotic cultures and their metabolites.

Pedagogical Sciences

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Modeling as a Method for Studying Organizational and Psychological Phenomena

Keywords: approaches in the study of organizational and psychological phenomena; conceptual model of organization; methods; methodology of organizational psychology; modeling; model function; model; types of modeling,

page 24-28

Abstract: The paper examines the paradoxes and difficulties of empirical research in organizational psychology. The basic elements of methodological analysis in organizational psychology and modeling as one of the main methods of research into organizational and psychological phenomena are considered.

N.A. Voitleva

Adygea State University, Maykop

Some Aspects of Professional and Creative Training of Future Music Teachers

Keywords: art and figurative thinking; creative tasks; music teacher; professional and creative development.

page 29-31

Abstract: The paper explores the ways of development of art and figurative thinking of students; samples of creative tasks are given.

A.A. Gavrikov

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Implementation of the Model of Research Work to Develop Project Competence

Keywords: design activity; design competence of future military officer; research work of military engineering higher education institution.

page 32-35

Abstract: The paper describes the approbation of the model of organization of research work of military engineering university focused on the development of project competence of future military engineer; extracurricular activities and educational work have been recognized as the most effective forms in conditions of the experiment.

A.S. Grushin

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Ways of Improving Social Success of Rural Schoolchildren

Keywords: success; ways of achieving success; improving social success of rural schoolchildren.

page 36-39

Abstract: The paper discusses the problem of improving social success of rural schoolchildren, which involves promoting the dynamics from instructing to learning and self-developing. The ways of achieving social success given the social aspects of development at different age levels of childhood have been proposed; ways to achieve success, the content and direction of improving social success of rural schoolchildren have been described.

D.L. Kolomiyets, E.V. Maltseva

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Pedagogical Guidance of New Teachers of Primary School in Conditions of Educational Standards Implementation

Keywords: assessment of professional qualities; conditions of pedagogical guidance; educational standards; forms of professional development; new teachers, primary education; self-assessment of teaching.

page 40-44

Abstract: The paper describes the results of the analysis of the main difficulties which new teachers of primary school face in their professional activities. Self-assessment and expert assessment of professional qualities acquired through university training were carried out among the new teachers of primary school in Yoshkar-Ola educational establishments. The results of the research gave an opportunity to reveal the conditions of pedagogical guidance of new teachers while they fulfill the main teacher's professional activities in accordance with the requirements of educational standards. The authors emphasize the practical importance of the results aimed at the improvement of the system of future teachers' training preparing to deal with typical professional tasks at a certain educational institution.

L.A. Petrukovich, G.A. Kruchinina

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Study on the Use of Information and Communication Technologies in Bilingual Professionally- Oriented Language Education

Keywords: bilingual competence; blogs; interactive whiteboard; professional foreign language training, self-education, wikis.

page 45-51

Abstract: Public information and communication space is a favorable environment for the development of bilingualism. Modern communication techniques may be more effective using computer technology. The paper deals with the study of the necessity and possibility of using means of information and communication technologies in the professional foreign language training at university.

I.A. Simonenko

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Psychological Features of Family Relationships of Children with Psychosomatic Disorders

Keywords: affection; functional systems; identification; psychosomatic disorder.

page 52-55

Abstract: This paper presents a model of functional systems of a child's relationships with the family at the level of the dyad and triad. An object of affection is considered as a member of the primary dyad relationship of a child in the family. We introduce the concepts of the communication partner and the identification partner as participants of the triad system of relationships of a child in the family. We describe indicators of functionality-disfunctionality of such systems and their link with psychosomatic disorders in children.

E.I. Fedak, D.S. Tsygankov

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Pedagogical Aspects of Raising Motivation for Professional Activity of Internal Troops Officers of the RF MIA

Keywords: professional activity of officers; formation of motivation; process.

page 56-59

Abstract: The paper explores the essence and structure of the process of raising motivation for professional activity of the internal troops officers in Russia.

Historical Sciences and Archeology

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Factors of Transformation of the Role of Siberian Women in the Family in the First Decades of Soviet Power

Keywords: role of women in the family; way of life; Soviet woman.

page 60-62

Abstract: This paper presents the author's view on women's role in the Soviet society. The author analyses the transformation of the way of life of Soviet women in family.

A.B. Korchagina

Yuri Gagarin Saratov State Technical University, Saratov

Works of Leading Architects of Saratov at the Turn of 19th – 20th Centuries (A.M. Salko, Yu.N. Terlikov, P.M. Zybin)

Keywords: buildings; leading architects of Saratov; architecture; A.M. Salko; Yu.N. Terlikov; P.M. Zybin.

page 63-66

Abstract: The works of the leading architects of Saratov at the turn of the 19th – 20th centuries are considered in this article. The author analyzes the influence of the general tendencies of development of styles and the directions of architecture of that time on the processes of urbanization and construction of the city, and also influence of the works of the leading architects on works of other masters.

I.I. Nazipov

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External Sovereignty over North-Eastern Russian Lands in 13th – 15th Centuries as an Attribute of State Horde-Russian Unity

page 67-70

Keywords: courts in Horde; Horde; external sovereignty; Khan's labels; Russian lands; state attribute; tribute of blood.

Abstract: Manifestation of the state attribute – external sovereignty – is investigated in the context of Russian-Horde relations analysis on the state accessory of Russian lands to the Horde. The aim is to find out if Russian princes and Veche possessed external sovereignty against the Horde and the Khan in the 13th – 15th centuries. The system of the Khan's labels to Russian princes and metropolitans as manifestation of the Khan's authority over Russian princes and lands, "tribute-in-blood" as manifestation of Russian lands external policy subjection to the khan are studied in the article. Also, numerous tribunals over Russian princes and boyards in the Horde have been investigated. They came on the Khan's call themselves, without being captivated, and it characterized the absence of an important sovereignty attribute – judicial immunity. It may be concluded that Russian lands and princes did not possess an external sovereignty against the Horde.

M.A. Suvorov

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Problem of Social Influence on Religious Consciousness in the History of Religiousness

Keywords: archaic; manipulation of religious consciousness; modern religious consciousness traditional; new religious movements; social influence; traditional consciousness.

Abstract: In the paper, an attempt of the comparative analysis of mechanisms of social formation of religious consciousness in archaic, traditional society and the society of an era of a modernist style is made. The author considers "vertical" and "horizontal" ways of formation of religious consciousness, from traditional and organized religions perspectives, respectively, and their interaction leading to the formation of syncretism. The author carries out the comparative analysis of these strategies with proselytism of new religious movements which can be connected with a manipulation of religious consciousness, and comes to a conclusion that the mechanism of social indoctrination and manipulation in new religious movements has a structural similarity with the mechanism of systematically cultivated mysticism in historical and traditional religions, and represents the process of social instruction. As a result, the author gives his understanding of the term "psychological manipulation", which can functionally include indoctrination mechanisms, implying an achievement of a reference point, which is universally approved and even serves as a standard in society.

page 71-75

P.P. Turun, I.V. Chernova

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Geographical Features of Military Cossack Colonization of the North Caucasus in the 18th Century

Keywords: colonization and economic development of North Caucasus; formation of a network of settlements; military Cossack colonization; rural settlement.

Abstract: The influence of the military Cossack colonization in forming a network of rural settlements and towns of the North Caucasus is considered in the article. The main directions of colonization directions have been identified. Regional features of settlement in the period under review have been shown.

page 76-80

Philosophical Sciences

A.V. Shchipkov

Online Magazine "Religion and Media", Moscow

Neo-liberal Political Eschatology as an Example of Quasi-Religious Consciousness

Keywords: absolute evil; anti-fascism; fascism; imperialism; irredentism; neo-liberalism; quasi-religiosity; particular evil.

Abstract: This paper describes the principles of political eschatology and the characteristic of fascist and neo-liberal discourses as a quasi-religious.

page 81-83

Linguistics

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Spatial Preposition “Nazdike” of the Persian Language from the Perspective of the Russian language

Keywords: concept; meaning; Persian language; Russian language; spatial prepositions.

page 84-89

Abstract: Prepositions which refer to the location have special place in the Russian language. The author used the comparative analysis and properties of the preposition “nazdike” to study its equivalents in the Russian language. The conducted analysis will eliminate probable mistakes of the learners from Iran.

A.B. Sozaev, A.A. Sozaeva, O.Kh. Khavpacheva

Berbekov Kabardino-Balkaria State University, Nalchik

Morphological Category of a Verb in Russian and Karachaevo-Balkar Languages

Keywords: comparative analysis; comparative grammar; coherent speech; development of the Russian speech; native language; typological similarities and differences.

page 90-92

Abstract: The paper explores some aspects of the comparative and typological characteristic of morphological category of a verb in the Russian and Karachaevo-Balkar languages. It allowed establishing similarities and distinctions in two languages. The research contributes to focusing the system of work on the development of the coherent Russian speech of pupils of the Balkar schools to overcome the interference phenomena.

Machine Building and Engineering

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Russian Electrode Industry

Keywords: electrode; Russian market of welding electrodes; welding materials.

page 93-96

Abstract: This paper describes the development prospects of the electrode industry of Russian Federation, the main trends of reducing the share of welding electrodes, as well as the challenges facing manufacturers of electrodes.

S.G. Nikolaev, Yu.V. Ivshina

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Modeling Calibration of Strapdown Inertial Navigation Systems

Keywords: accelerometer; calibration; error model; fiber-optic gyroscope; instrumental error, Strapdown Inertial Navigation System.

page 97-101

Abstract: The authors studied modeling of calibration of Strapdown Inertial Navigation Systems based on fiber-optic gyroscopes in static mode on motion test device using the model system. The accuracy of determination of the calibration coefficients of inertial measuring of Strapdown Inertial Navigation Systems depending on the intensity of the noise was investigated.

S.G. Nikolaev, A.L. Kuznetsov

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Marine Vector Gyrocompass

Keywords: accelerometers; earth’s rotation angular velocity; gyrocompass; gyroscopes; gyrocompass speed error; gravity force acceleration; ship log.

page 102-106

Abstract: The problem of constructing marine gyrocompass using strapdown inertial sensors module and ship log is investigated. The authors proposed a method to determine ship head angle using gravity and Earth movement angular velocity vectors relative to ship’s navigational frame gathered by inertial module and ship’s velocity vector gathered by ship log. Variants using velocity measurements from ship’s log and using latitude information from external source were investigated.

T.F. Pepelyaeva, V.Yu. Ivankin

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Optimization of Replacement and Repair of Company Equipment

Keywords: preventative maintenance; repair, repair on actual condition.

Abstract: The paper explores the questions of optimization of process equipment maintenance to reduce the terms of repair, improve the quality and increase the intervals between repairs.

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Information Science, Computer Engineering and Management

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The Analysis of Anti-Persistent Time Series and Tresholding Pilot Signals Using Matlab Wavelet Toolbox

Keywords: anti-persistent time series; noise component; time series; thresholding; wavelet transform.

Abstract: The signals represented by heavy noisy anti-persistent time series are subject to wavelet filtering to remove unwanted noise components. As a result, the pure signals are obtained with partial elimination of high-frequency component. Parameters of the wavelet filter, such as a maximum level of decomposition and the number of zero points have been optimally selected. Software implementation was carried out using Matlab Wavelet Toolbox.

page 110-114

E.Yu. Vorobyeva, G.A. Pushkarev

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On the Negativity of the Green Function of the Two-point Problem for a Differential Equation of Second Order with Retarded Argument

Keywords: boundary value problem; functional-differential equation.

Abstract: The authors considered a boundary value problem for a quasilinear functional differential equation

$$(\Delta x)(t) = x''(t) + \int_a^b x(s) d_s R_1(t, s) = f \left(t, \int_a^b x(s) d_s R_0(t, s) \right), t \in [a, b], x(a) = \alpha, x(b) = \beta,$$

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in the assumptions: functions $R_0 : [a, b] \times [a, b] \rightarrow R^1$ are measurable in the square $[a, b] \times [a, b]$; variation total $\int_{s=a}^b R_0(t, s)$ is integrated on $[a, b]$; $R_0(t, s)$ does not decrease on S in almost all $t \in [a, b]$; functions $R_1 : [a, b] \times [a, b] \rightarrow R^1$ are measurable in the square $[a, b] \times [a, b]$; variation total $\int_{s=a}^b R_1(t, s)$ is integrated on $[a, b]$.

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Nonlinear Dynamic Analysis in the Identification Problem of Noise Signal Components

Keywords: Hurst indicator; fractal analysis; fractal dimension; noise component; persistent time series; time series; wavelet transform.

Abstract: The authors investigated sensor signals of physical quantities – the characteristics of a process with different levels of noise pollution. Fractal analysis methods were used to solve the problem of detecting very noisy signals. It is shown that the identification of noise can be carried out using fractal analysis of key concepts such as the Hurst exponent and fractal dimension. The effectiveness of using wavelet filters to remove noise components from signal was verified; it was shown that purified persistent signals are represented by time series.

page 121-125

Economic Sciences

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On the Increase in the Efficiency of Regional Economy through Optimum Control of Banking System Resources in Crediting Real Sector of Economy

Keywords: algorithm; automated control systems; bank resources; credits; efficiency of regional banking systems; gross regional product (GRP); optimum control; regional economy; regional banking system; regression equation; strategic management.

Abstract: The influence of the regional banking systems (RBS) on development of regional economy is investigated. The scheme of informative cooperation of RBS and economic entities with analytical and planning bodies of regional development is proposed. The authors consider the effect of crediting of the real sector of economy on GRP, and its influence on the solution of the task of optimal redistribution of RBS resources under crediting given the economic entities' profit maximization in conditions of risks, and achieving maximum possible positive influence of RBS on the increase in the efficiency of the real sector of regional economy.

page 126-132

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Accounting as an Important Component of the Information Base for Customs Control after the Release of Goods

Keywords: accounting; control after release of goods; foreign economic activity; fractal; information base; international contract; national economic security; similarity.

Abstract: Foreign economic activity under conditions of economic and resource imbalances becomes an important tool for the harmonization of the economic life of modern Russia, which income from foreign trade accounts for a significant part of the state budget. To improve the quality of foreign trade activities the burden of bureaucratic procedures was transferred to customs control after the release of goods in accordance with the basic provisions of the Kyoto Convention. For quality monitoring after the release of goods it's necessary to have the information base that reflects the basic principles of systematic movement of material and financial resources of the organization. Accounting, financial and economic activities under a separate contract must be arranged in a fractal information structure. If the principle of similarity is violated, we can speak of the abuse of financial and economic activity inherent in the organization and determine the grounds for the exit customs inspection.

page 133-139

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Management of Innovative Environment Formation for Sustainable Development of Monotowns in the Region

Keywords: innovative activity; innovative environment; development of monotowns; development model; management principles.

Abstract: The paper studies the main objects of creating favorable innovative environment as a motivation factor for innovative activity in monotowns of the region and explores the priority directions of their development. The author defines the principles and the essence of management process of innovative environment formation. The author describes the structure of resources determining the innovative environment potential and presents a model of creating innovative environment in the region.

page 140-145

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The Formation of Market Resources of Poultry in Russia and the Irkutsk Region

Keywords: agroindustrial complex; food; increase in efficiency of poultry farming; investments; market capacity; market of poultry; measures of state support; poultry; poultry farming, poultry production; quotas; resources; structure of poultry market.

Abstract: This paper deals with the formation of market resources of poultry in Russia and the Irkutsk region. Poultry production is an important branch of agriculture, aimed at providing the population with high-calorie dietary-food products that can create a highly developed system in the form of Russian poultry-producing agriculture and supply the population of the country with high-quality poultry and protein. This article presents the analysis of the above problems

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on the example of the Irkutsk region. The leaders of poultry production in the study region are poultry farms “Sayan Broiler” and ZAO “Angara Poultry Factory”. The state of poultry farms in 2013 was analyzed; the volume of production of poultry farms and their share of the total needs of the region in the production of poultry was calculated.

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Evaluation of the Company HR-Function Efficiency

Keywords: personnel; efficiency of human resource management; human resource management; HR-function.

Abstract: The method of assessing the efficiency of the company’s HR-function using HR-metrics is offered in this article. The main directions of evaluation of the efficiency of HR-management and some criteria for its performance are presented.

page 152-156

K.V. Simonov

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Pricing in Expo-Business: Policy, Strategy, Methods

Keywords: expo-business; exhibitor; pricing; trade fair; trade fair market.

Abstract: Features of expo-business income and expense structure are shown. The purposes of expo-business pricing policy are formulated. Expo-business pricing strategies are discussed. Specifics of pricing are revealed and applicability limits of various pricing methods for expo-business are designated.

page 157-161

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The Analysis of the Internet Resources Used by Banks to Promote Banking Products and Services

Keywords: indicatives of the presence of banks in the social networks; indicators of activity of banking communities; social networks; social media; system nippelapp.ru; users of banking communities.

Abstract: The use of social networks in order to improve the competitive advantages of banking services is now becoming an integral part of marketing tools for the banking sector. Managing contacts and active interaction with real and prospective customers today has been made possible by social networks. The purpose of this study is to analyze the behavior of banks in social networks.

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Formation of Integrated Structures as a Factor in the Development of the Theory of Formation of Through Technologies in Forest Industry

Keywords: formation; integrated structures; timber production; through technology.

Abstract: It is shown that the country has intensified the creation of integrated timber structures. This, in turn, necessitates the development of the theory of formation of through timber production technologies.

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Legal Science

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On Additional Qualification of Crimes upon Entry into Force of the New Criminal Law Establishing or Excluding Criminality of a Deed

Keywords: criminalization; decriminalization; definition; disposition; ex post facto law; offense; object; criminality; criminal law; Criminal Code (CC).

Abstract: Within the subject matter of the study; it appears feasible to draw particular attention to classification of criminal acts upon enactment of the new criminal law excluding or determining the criminality of a deed.

Any exclusion or determination of the criminality of a deed is based exclusively on disposition

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of the criminal law. Thereby; additional classification of crimes in case of partial change in criminality of a deed by the criminal law shall depend on the correlation between dispositions of the previous and the new laws conditioned by quantity of forbidden acts (omission).

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Socio-Historical Features of Illicit Trafficking in Narcotic Drugs, Psychotropic Substances, their Analogues and Precursors in Russia

Keywords: legislation on administrative offenses; drugs; drug trafficking; precursors; psychotropic substances; social and historical features; criminal law.

Abstract: In this paper, the author examines socio-historical features of the origin and development of the problem of illicit trafficking in narcotic drug,; psychotropic substances and their precursors. The author believes that the accumulated historical experience, geographical features of Russia and the mentality of the Russian people – all this should form the basis of effective fight against drug abuse and drug trafficking in the Russian Federation.

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