

Biotechnology and Medicine

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The Efficiency of Diabetic Foot Syndrome Treatment in Conditions of Diabetic Foot Station

Key words and phrases: diabetic foot; treatment; efficiency.

Abstract: The affected limbs in patients with diabetes are a major cause of disability in these patients and inflict serious socio-economic damage to the society. The evaluation of the monitoring and treatment of patients with diabetic foot syndrome in conditions of diabetic foot station and outpatient care of medical institutions in Surgut was carried out. The main differences in the treatment tactics included correction of hypoglycemic therapy, antibacterial therapy, the use of modern dressings and foot discharge care.

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Pedagogical Sciences

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The Study of Psychological and Pedagogical Support of Students' Personal Safety under the Threat of Drug Addiction Increase

Key words and phrases: awareness; personal safety; youth; drugs; drug addiction increase; psychoactive drugs; psychological and educational support; student environment.

Abstract: The modern social and cultural situation gives numerous examples of the negative impact of the external environment on personal development of individuals. In today's world, young people are exposed to the dangers of drug addiction. This article describes the results of an experimental study on psychological and pedagogical support to the students under the threat of increased use of drugs in the society.

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Features of the Image of Oneself Created by Active Users of Social Networks

Key words and phrases: I-Image, I-real, I-Ideal, I-Virtual; virtual personality; Internet; social networks; active Internet users; users of social networks.

Abstract: In the modern society the number of active users of social networks is growing. Communication on the Internet is characterized by constructing a virtual image of oneself. This article describes the results of an experimental study of the image of oneself created by active users of social networks.

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Organization of the Information Environment in the System of Additional Professional Training in Distance Learning

Key words and phrases: distance learning system; additional education; information environment; electronic educational resources.

Abstract: The article focuses on the organization of the information environment in additional education system in terms of distance education at the Institute of Food Technology and Design in Nizhny Novgorod. It describes the connection of distance learning with practical oriented training of students. The information environment is based on the joint work of students, teachers and employers aimed at enhanced use of electronic educational resources, providing opportunities for individualization of the educational process, with regard to the level of knowledge and skills of students, their preferences and degree of motivation.

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Humanization of Moral and Legal Education of Students as a Pedagogical Problem

page 26-29

Key words and phrases: humanization; identity; youth; moral and legal education; education; values.

Abstract: The paper explores the process of humanization of moral and legal education of students. The author examined the positions of individual specialists. It is noted that the moral content of legal education determines the value of an individual's attitude to nature, society and oneself; therefore, the moral choice of an individual is closely related to the choice of objectives, forms and methods of legal education. The author's point of view on the problem under consideration was described and justified.

B.S. Kuliev

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Basic Pedagogical Components of Physical Education of Elementary School Students

Key words and phrases: activation; activities; task; game; component; skill; link; ability; lesson; shape; objective.

Abstract: The article deals with the important pedagogical components of physical education of elementary school students in conditions of modern education. The author investigated the differences between the lesson and other forms of education; the importance of moral and health aspects of the PE lesson was noted. The advantages of physical education lessons as a form of educational activity aimed at developing interest in sport were researched in the article.

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Interrelation of Ethnic Identity and Occupational Views of Individuals

Key words and phrases: personality; identity; object of activity; professional activity; occupational views; ethnic group.

Abstract: The paper is devoted to the analysis of the correlation between occupational views and ethnic identity of an individual. The components of social identity were revealed, the interrelation of its components was analyzed, the notions of ethnic identity and occupational views were considered. The literature on the identification of professional preferences among representatives of various ethnic groups was critically reviewed. The relevance of this study is caused by the character of the federal system of Russia and the increased migratory processes, which resulted in the increased number of various ethnic groups living in certain regions of the country. These groups have essential distinctions in a number of psychological parameters, including occupational views. The author concluded that occupational views and ethnic identity determine a professional activity and the object of activity. The results are explained by ethnic distinctions related to professional objectives, motives, as well as the influence of "national character".

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The Use of Distance Learning in the Course Protection against Hazardous Anthropogenic Situations

Key words and phrases: hazardous anthropogenic situations; protection; distance learning.

Abstract: This article reviews the basic elements of e-learning course Protection against Hazardous Anthropogenic Situations. Attention is paid to the implementation of some didactic principles when using distance learning.

page 42-44

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Motivation as a System of Various Incentives

Key words and phrases: motivation; innovation; incentives; competitive environment; motivational situation.

Abstract: This article discusses the experience of motivational work in college, coming from a modern understanding of the specifics of this problem. The article presents the system of innovative approaches that combine tangible and intangible incentives in various aspects aimed at creating a professional identity.

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Architecture and Construction

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Principles and Tools for Reorganization of Historical Areas in Complex Urban Space

Key words and phrases: master plan; depressed urban area; type of urban space created by general plan; buffer zone; type of urban space created without general plan.

page 49-55

Abstract: The article presents the principles and ways of master planning of depressed areas on the complicated terrain exemplified by Ufa city. The depressed areas of the city of Ufa are listed with recommendations for their planning and construction. The application of this method in the practice of domestic urban development was analyzed.

Historical Sciences and Archeology

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Political Activity of Citizens in the Region

Key words and phrases: citizens; Samara region; political organizations; parties; movements; participation; activity; election campaigns.

page 56-59

Abstract: The authors considered political activity of ordinary citizens of the Samara region in the modern period. The main forms and motivations for their participation in the life of the city of Samara and the Samara region were shown. The most influential political parties supported by the population of the area, the public movements and organizations were identified. The work of a number of public organizations was described. By the results of the sociological survey conducted among 300 respondents of the Samara region on the studied subject, the corresponding conclusions and offers were made.

S.S. Ignatieva

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Methodology of the Analysis of Cultural and Symbolical Capital of the World Cultural Heritage

Key words and phrases: cultural capital; symbolical capital; cultural heritage.

page 60-62

Abstract: Methodological aspects of the phenomenon of cultural and symbolical capital in relation to the world cultural heritage were considered, the triple nature of the cultural capital was revealed. Special attention was paid to the foreign studies conducted by P. Bourdieu, Rasseron and others.

N.V. Kipriyanova

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Religiousness as an Element of Socio-Cultural Characteristic of Russian Merchants of the 18th Century

Key words and phrases: Russian merchants; socio-cultural characteristic; religious tolerance; religious education; providentsionalizm.

page 63-67

Abstract: The author analyzed the attitude of the Russian merchants of the 18th century to religion. It was shown that religiousness was a factor of everyday life. At the same time it was noted that interfaith opposition in the environment of merchants wasn't observed. All claims against merchants and people of other faiths were in professional (economic) sector.

A.Yu. Lombrozo

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The Conceptual Framework and Evolution of Russian Foreign Policy in the Balkans in the 1990s

Key words and phrases: Balkans; Bosnia and Herzegovina; Kosovo; foreign policy concepts; Russian policy; NATO; evolution.

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Abstract: The paper deals with the evolution and conceptual element of Russian foreign policy within the framework of the Balkans crisis in the 1990s. The author considered the most

significant doctrines and foreign policy concepts and made an evidence-based analysis. The actions and decisions of state institutions and decision-making persons were scrutinized, which made it possible to contemplate the transformation of the Russian policy. Special emphasis was placed on the changes in international structure of crisis management and the influence of internal dimension on the process of foreign policy formation.

N.M. Mamedova, N.A. Bondarenko

Plekhanov Russian Economic University, Moscow

Dephenomenologization or in Search of Lost Meaning

Key words and phrases: phenomenology; consumerism; virtual reality; information technology.

Abstract: The authors offer an interpretation of the destructive processes of social and individual consciousness expressed in the loss of the reflexive meaningful intentions as the process of dephenomenologization. In search of the existential meaning a man of modern culture refers to various types of simulation practices. They include consumerism, endless shopping, construction of virtual reality, a variety of shows that create the illusion of free choice, unlimited life prospects. The content of this communication does not appeal to the mind, exploring and creating meaning, but to the body and sensuality promoted by advertising, fashion, and the entire mass culture. This results in a total unification of meanings, reaching its apotheosis in consumerism. It is shown that the crisis of mind can be overcome through the revival of spirituality, appeal to the universal meaningful constants culture. Spirituality is understood as an internal need for the balance between cultural values an inner horizon of personality, which can be manifested in the sacred meaning of life, finding a personal scale of reference, with the highest degree of holiness on the top.

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A.A. Savelyev

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Evolution of Foreign Direct Investment Theories

Key words and phrases: foreign direct investment (FDI); multinational corporations; “flying geese” paradigm; monopolistic advantage theory; internalization theory; eclectic paradigm.

Abstract: The paper deals with the evolution of theoretical and methodological approaches to the study of foreign direct investment. The author traced the main stages of the development of foreign direct investment theories, from the first theoretical developments which involved FDI issues to the modern concepts explaining the intensification of FDI flows from developing countries.

page 82-87

A.S. Safonova

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The Structure and Peculiarities of Formation of Youth Political Culture

Key words and phrases: base component; youth; variable component; political culture; political socialization; structure of political culture.

Abstract: The approaches to the definition of youth political culture are discussed in the article. The author proposes a structure of the political culture with regard to persistent and labile factors; on its basis the features of formation of youth political culture are highlighted.

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Linguistics

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Strategic Competence as a Component of Communicative Competence

Key words and phrases: communication; language; discourse; speech; verbal communication; competence; speech situation.

Abstract: The article deals with the communicative competence as acquisition of knowledge and habits necessary for information exchange within a certain culture. The article also investigates the strategic competence as a tool of generating and interpreting speech utterances.

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L.M. Kalyanova

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Reading of Professional Literature in the Classes of Foreign Language

page 97-100

Key words and phrases: scientific and technical literature; scientific terminology; common words; special vocabulary; language style; equivalence and adequacy of translation.

Abstract: This article discusses some problems of teaching reading of scientific and technical literature with the aim of expanding language skills of students, the formation of basic skills needed for understanding and extracting information from printed sources.

Machine Building and Engineering

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On Plasmachemical Technologies of Alternative Power Engineering

Key words and phrases: alternative power engineering; nanostructures; plasmachemistry.

Abstract: Experimental investigations and modeling of physical properties of materials and nanostructures for innovative technologies of warm and electrogeneration are executed. Modeling and analysis of these processes allowed doing the following complex of works: experimental investigations of plasmachemical, warm and electrophysical processes in the systems of particles of low energy near a surface of nanostructures; physical modeling of properties of materials used in energy nanotechnologies

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P.V. Budnik, I.R. Shegelman

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Technological Network of Forest Harvesting and Wood Processing to Produce Bleached Chemi-Thermomechanical Pulp

Key words and phrases: bleached chemi-thermomechanical pulp; perforated technological process; wood processing; deciduous trees; aspen.

Abstract: The paper describes a perforated technological process of forest harvesting and wood processing with getting bleached chemi-thermomechanical pulp. The technological process allows solving the problem of deciduous trees processing.

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I.G. Rotanov

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A Way to Improve Reliability of Mining Equipment in Severe Conditions of the North

Key words and phrases: hydraulic system; mining equipment; reliability; failures; method of increasing performance.

Abstract: The topicality of the developed method is a decrease in the machines failures. The development of the method is influenced by systematic analysis of the causes of failures and different methods of modeling predictable terms of maintenance of mining equipment. The developed method is used for self-propelled drilling machines and for scoop trams, with hydraulic fluid used in actuators.

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A.A. Sopoiev

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Alternative Installations in Hydropower Engineering

Key words and phrases: hydropower station; energy in currents; converter; cylinders; vortices.

Abstract: This paper discusses some ways of using the kinetic energy in the form of ocean, sea and river currents to convert them into electrical energy by means of various types of hydroelectric power plants (HPP). The attention is drawn to the phenomenon of vortex shedding around cylindrical body by the fluid flow and the use of energy fluctuations of the body to create a new type of power that can be successfully used in remote mountainous areas without large capital expenditures.

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Information Science, Computer Engineering and Management

M.F. Valishin

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Assessment of the Use of Algorithms for Digital Image Processing to Counteract Hidden Data

Key words and phrases: steganography; Steganos; LSB steganography; bit error rate; algorithms of digital processing of images; ImageMagick.

Abstract: In this paper the author considered the problem of countering the hidden data by applying active attacks on the container. The paper presents a way to quantify the efficiency of destruction of steganographic data based on the model of a binary communication channel with interference. The estimates of the effectiveness of the application of known and most common algorithms for digital image processing to counteract the hidden data in graphic files were presented.

page 116-120

A.M. Gadzhiev

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The Concept of JSM-Method Application in Automated Expert Systems

Key words and phrases: machine learning; JSM-method; forecasting; decision support system; expert system.

Abstract: The paper provides a review of formalized working algorithm for JSM-method without application to any informational system. The algorithm is presented as sequence of JSM-arguments finalized in plausible deductions. The sequence contains the analysis of subject domain, the division of objects into the main and required ones, the formulation of rules of plausible deductions, the construction of the consistent set of hypotheses, the analysis of the teaching section and imitation of the process of generating plausible deductions. The method of concomitant changes was selected as the main method for building an automated solution in the target system. Also, high-level conceptual architecture and module structure were described to implement the method in the target information system. The author concluded that it is possible to implement JSM-method as a forecasting method in the expert system of management decision support system.

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N.V. Gorbunov, A.S. Kamenev

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Implementation of Table Algorithm of Modular Addition on FPGA

Key words and phrases: residue number system; modular addition; FPGA; VHDL.

Abstract: The article describes algorithms of modular addition. The authors described the functional diagram of table RNS-adder, on which VHDL-model was designed. Logic utilization and timing of written VHDL-model on chip Altera Cyclone ® IV EP4CE22F17C6N FPGA were estimated. The results can be interesting for the design and study of data transmission systems using error-correcting properties of modular codes.

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A.A. Oskolkov, E.V. Matveev

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Vulnerability of RFID Technology

Key words and phrases: Faraday shield; foil; reader; RFID; tag.

Abstract: RFID technology, rapidly gaining in popularity, was considered in this article. Its mission is to control important and valuable objects at enterprises: different documents, digital media, consignments and even employees. Unfortunately, even the latest technologies have disadvantages. The authors described vulnerability, which can be used by every person.

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A.V. Pozhidaev, N.M. Pekelnik, O.I. Khaustova, I.A. Trefilova

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Some Power Integral Inequalities for the Gaussian Distribution

Key words and phrases: probability density; gamma function; complementary error function; logarithmic concave function; unimprovable estimates; Gaussian distribution; power estimation; distribution function.

Abstract. This work is devoted to obtaining power estimations of the function $1 - \operatorname{erfc}(x) = \operatorname{erf}(x)$.

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$-\Phi$, where $\Phi(x)$ is the Laplace function. This difference is the lower cut of the integral of the standard Gaussian distribution density and shows the probability of getting a random variable distributed by the standard normal law into the interval (x, ∞) . Because of the wide spread of applications and theoretical studies of the Gaussian distribution it is necessary to obtain estimates of the function. The peculiarity of the obtained results is that the power of the function $Q(x)$ is evaluated not by the value of the integrand at some point, but through the values of the function at the point ax , where a is an arbitrary number from a closed interval. The difficulty of obtaining these estimates is that the density of the normal law is logarithmically concave function. In the paper we estimated the third and fourth degrees of the function $Q(x)$. The theorem 1.1 shows that for $x \in \mathbb{R} \forall \epsilon \in (0, 1; 3a \in \mathbb{R} \in \mathbb{R}$ inequality $Q^3(x) < Q(ax)$ is correct. A similar result 1.2 is formulated in the theorem for the fourth degree of the function $Q(x)$ and interval $[1; 2]$. It is important to note that the obtained estimates cannot be improved for the parameter a . Thus, the theorem 1.3 shows that the right border for the parameter a cannot be improved, and the theorem 1.4 shows that the left boundary cannot be less than 1.

P.S. Titaev

Tver State Technical University, Tver

Methodology for Integrated Forecasting of Fires Using Satellite Remote Sensing Data

Key words and phrases: assessment of fire risks; technique of integrated forecasting of fires; geographic information systems; satellite remote sensing.

Abstract: This paper proposes an approach to the assessment of the risks of fires, which allows a single methodology to take into account the effect of different components, such as the traditional factors that cause emergencies in the region, long-term changes in the climate and environment, changes in meteorological parameters, regional changes in ecosystems and wildlife management (manifested in the dynamics of natural fuel).

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Economic Sciences

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Assessing the Impact of Inflation on the Price Formation in the Market of Educational Services in the City of Moscow

Key words and phrases: cost; educational services; inflation; higher professional education; Moscow region.

Abstract: In accordance with the objectives, the author evaluated the affordability of educational services in the majors of 38.03.01, 38.03.02, 38.03.04 for the population of Moscow; the calculation was based on the comparison of the growth rate of nominal wages of workers in the Moscow region, and the growth rate of educational services for the period of 2011–2014.

The results revealed that the least affordable major for the period was 38.03.04 – State and municipal management (the average elevation of price growth over wage growth was 8.1 %).

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Methodology of the Geopolitical Analysis of Theoretical and Metatheoretical Levels in the Context of Influence of National Economic Systems on Economic Dynamics

Key words and phrases: geographical space; geopolitical analysis; globalization; interdisciplinarity; metatisation; systematization.

Abstract: The author considered the systemic geopolitical, ontologically interpreted, theoretical and metatheoretical analysis of the issues of modern geopolitical instability and instability. An attempt to comprehend phenomenologically the interdisciplinarity of the theoretical approach to the problems of changes in the status and role of the national states was made. Economically interpreted determinants influencing the dynamics and stability in the scale of national economic systems were characterized and specified.

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V.F. Ershov

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Financial System of Russia in the Context of Modernization of Social Space of the CIS and the Neighboring Countries

Key words and phrases: banking services; banking system of Russia; bankization; business culture; social responsibility.

Abstract: The article is devoted to the banking system of Russia in the sphere of development of socially significant functions of credit institutions in the context of modernization of the Russian economy and financial institutions. Special attention is paid to the formation of socially oriented principles of business ethics of banking community and an increase in financial literacy of citizens of the former Soviet Union. The author concludes that constructive policy of development of financial sector in Russia and the CIS countries raises qualitative standards of public life, promotes formation of innovative bank culture and development of integration processes within the Euroasian Economic Union.

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The Analysis of Funding Options for Rolling Stock Purchase

Key words and phrases: funding option; credit; leasing; rolling stock; equity; economic efficiency.

Abstract: The article analyzes the options of investment projects for purchase and operation of rolling stock. The results of calculation of economic efficiency of rolling stock in international road transport were analyzed.

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E.A. Savinova

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The Statistics of Dynamics of Pension Payments in Russia

Key words and phrases: dynamics; inflation; indexation; pension payments.

Abstract: The paper touches on the issues of social security in Russia. Using the data on the average level of pensions for the period of 2008–2013 the author analyzed and compared the dynamics of pension growth with the inflation rate in the country.

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Legal Science

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Instruments for Defense of Ethnic and Cultural Rights of Komi-Permyak People: Special Status of Administrative Territorial Unit

Key words and phrases: Komi-Permyak area; ethnic and cultural rights; instruments of defense; international and constitutional law; agent of ethnocultural development; administrative territory with a particular status; the right of nation for self-determination.

Abstract: The paper deals with the juridical analysis of the norms that regulate relations between the state and ethnic groups. The current norms of constitutional, international and local law as well as different defense instruments of international and national standards are in the focus of the study. The peculiarities of life of Komi-Permyaks in the Perm Region were discussed. The author proposed to replace the concept “ancient ethnos” with “national minorities” and introduce the research category “ethnic self-feeling”. Sociological data on the ethnic situation in the Komi-Permyak area of the Perm region were analyzed.

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M.G. Smirnov

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Interrelation between the Problem of Disarmament and International Humanitarian Law

Keywords: principles; disarmament; international law; humanitarian law; League of Nations; ICRC; UN Charter.

Abstract: The paper investigates the evolution of such important principles of the modern international law as the principle of protection of human rights and the principle of

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disarmament.

The author examined the historical background and evolution of the social view of the armed conflicts, and interrelation between International Humanitarian Law and both disarmament and demilitarization, which are the basis of international security. The work of the scholars and social activists on the development of International Humanitarian Law and international security norms were discussed.

A.V. Fedorov

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The Revolutionary Terror in the Russian Empire: to the History of the Development of Political Extremism

Key words and phrases: political extremism; terrorism; revolutionary party; counter-terrorism.

Abstract: The paper provides an overview of the origin and development of political extremism in Russia. On the basis of historiographical analysis the author identified two stages of this phenomenon. The article reveals how essential the content and the characteristics of the first and second periods were. According to the author, a characteristic feature of political extremism in the Russian was in the activities of the revolutionary terrorists. The paper presents the statistical data on terrorist escalation of the revolutionary organizations at both stages.

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