Land Sciences

A.G. Ruzhnikov Ukhta State Technical University, Ukhta Rationale for Practical Approach to the Choice of Strategy for Vibration-Free Drilling Keywords: vibration; specific mechanical energy; mechanical penetration rate; rock strength. Abstract: The method proposed in this paper enables to offer a practical approach to the choice of strategy for vibration-free drilling, providing a decrease in entropy as a result of impact of BHA components on the borehole wall due to vibration processes, and increasing mechanical penetration rate.	page 9-14
 A.A. Tomskikh Transbaikal State University, Chita Content Analysis in the Study of Territorial Organization of Society Keywords: content analysis; data set; image of the region; scientific and educational structures. Abstract: The issues of territorial organization at the present stage of society development must be considered in different data sets presented in the global and branch information systems. The use of such methods and data presents new opportunities for social and economic geography in addressing regional development issues. 	page 15-19
I.A. Shevchenko Sakhalin State University, Yuzhno-Sakhalinsk Methods of Data Transmitting in Hydraulic Channel by Drilling Fluid Pressure Pulses Keywords: drilling; hydraulic channel; pressure pulse. Abstract: Geophysical borehole measurements made during wiring trunk are used to adjust the model of the geological structure of the deposit. The Features of drilling and the ensuing priorities necessitate the application of MWD systems. In some cases, without the use of these systems wiring wells with large deviations from the vertical is generally impossible. This article provides a brief overview of the methods of transmitting information along the hydraulic pipe	page 20-24

by drilling fluid pressure pulses to analyze the data telemetry systems.

Biological Sciences

T.B. Matveeva

Volga State Socio-Humanitarian Academy, Samara **Rationale for the Use of Corylus Avellana L. as an Indicator of the Degree of Contamination by Fluctuating Asymmetry Coefficient of Lamina** Keywords: bioindication; fluctuating asymmetry; suburban forests. Abstract: The author assessed the ecological state of the territory of suburban forests in Samara by integral characteristics of asymmetry of lamina Betula pendula Roth. and Tilia

cordata Mill. It was found that Corylus avellana L. is an effective indicator of the degree of contamination of forest areas and can be used in bioindicative studies.

Professional Training

A.D. Sviridov

University of the Russian Academy of Education, Moscow **Psychological Characteristics of Communication in Administrative Cooperation** Keywords: administrative communication; formality; distant; principle of dominance; written accompaniment. Abstract: This paper analyzes the characteristics and the fundamental principles of administrative communication, describes its objective functions: substantiates the existence of

Abstract: This paper analyzes the characteristics and the fundamental principles of administrative communication, describes its objective functions; substantiates the existence of the psychological component of administrative relations realized in communication and interpersonal interaction.

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Pedagogy and Psychology

A.O. Bagateeva Naberezhnye Chelny Institute – Affiliate of ''Kazan (Volga Region) Federal University'', Naberezhnye Chelny Structural Substantial Characteristic of Foreign Language Communicative Competence in Bachelors of Automotive Industry Keywords: automotive; foreign language communicative competence. Abstract: The paper presents the structural and substantial characteristic of foreign language communicative competence of bachelors of automobile industry; its structural components have been described.	page 35-37
N.G. Pechenevskaya, E.V. German, I.V. Pavlova Siberian State University of Physical Culture and Sports; Omsk State University of Railway Transport, Omsk Technique of Developing Flexibility of Swimmers Aged 10–11 years Keywords: flexibility; joint mobility; range of motion; swimmers; simulator, muscle elasticity; special exercises. Abstract: The paper describes the method developing flexibility, which includes a set of special exercises using V.T. Nazarov's simulator to improve technical readiness of swimmers aged 10-11 years.	page 38-42
L.G. Polyakov, M.A. Gavrilov, T.D. Polyakova Penza State University of Architecture and Construction; Penza State University, Penza On Developing Sufficient Level of Knowledge and Skills Keywords: reliability of education; training. Abstract: This article provides a rationale for the life cycle of the body of knowledge and skills. We consider the theoretical background of optimization of the process of improving educational reliability.	page 43-45
O.G. Syromyatnikova Siberian State University of Physical Culture and Sports, Omsk Differentiated Approach to Training Bachelor Students Majoring in "Physical Education for Disabled People" Keywords: differentiated approach; gymnastics; subject competence; training. Abstract: This paper seeks to examine the possibility of applying a differentiated approach to the formation of subject-specific competences of bachelor students majoring in ''Physical Education for Disabled People'' by means of gymnastics. Particular attention is drawn to the formation of subject specific competences depending on the future of professional activity.	page 46-50
K.G. Tarasov, N.I. Balchyunene Petrozavodsk State University, Petrozavodsk Some Aspects of Formation and Use of Professional Vocabulary in the Context of Globalization and Integration Keywords: globalization; integration; information; professional vocabulary; terms. Abstract: We show that in the context of globalization and integration the need to enhance verbal communication of representatives of one and (or) related areas of science, technology, business, education, as well as the need for terms and definitions that are specifically occupational is increasing,. We discussed some of the approaches to the development of professional dictionaries.	page 51-54

History, Philosophy and Sociology

G.A. Abdusamedov Moscow State University named after M.V. Lomonosov, Moscow Olympiad Movement of Schoolchildren in Russia: Achievements and Challenges

(late XX – early XXI centuries)

Keywords: Olympiad; public policy; students; teacher; training; winners. Abstract: This paper shows the achievements and problems of Olympiad movement of Russian schoolchildren at the turn of XX -XXI centuries. The author emphasizes that, despite the difficulties of the transition period, in those years, Russia has always been among the top countries in the world, training participants for Olympiads. Olympiad movement of schoolchildren is addressed in the paper as a means to support talented youth, aiming to achieve scientific results.

Philology

G.T. Ismikhanova Baku Slavic University, Baku (Azerbaijan Republic) **Modern Azerbaijani Language. Polysemy of Words with the Meaning of Time in the Oguz Group of Turkic Languages** Keywords: language; lexicon; Oguz group of Turkic languages; polysemy; time. Abstract: The article deals with the polysemy of lexemes expressing time in Oguz group of Turkic languages. The author made a comparative analysis of some lexemes with the meaning of time and their polysemy in Azerbaijani, Turkish, Turkmen and Gagauz languages.

Engineering

M.E. Kunyavskiy, A.S. Vetrov

Saratov Socio-Economic Institute of the Russian Economic University

named after G.V. Plekhanov, Saratov

Reserves of Improving Repair Facilities in the System of Factory Service Keywords: repair facilities, classification of reserves of repair facilities, methods, criteria and

indicators of repairs.

Abstract: This paper focuses on the development of repair facilities at modern Russian machinebuilding enterprises. We analyzed the technical and organizational indicators of development of repair facilities.

The authors classified the reserves of repair facilities to permit the analysis of the effectiveness and economic potential of repair facilities of any enterprise. In addition, we described the criteria and indicators of repairs, analyzed different methods of repairing equipment, parts and components of machine building enterprises.

Mathematical Methods and Models

D.A. Ivanychev

Lipetsk State Technical University, Lipetsk

Solution of the Generalized Saint-Venant Problem for Anisotropic Hollow Rods Keywords: anisotropy; balance bars; basis of states; body cavities; method of boundary conditions; Saint-Venant problem.

Abstract: The method of boundary conditions was implemented in the solution of the generalized Saint Venant problem for bodies with cavities of a material with the general form of anisotropy. The basis of internal states, based on the general solution of the defining equations, was constructed. The authordefined the characteristics of the stress-strain state of the problem in terms of the circular rod with athrough-hole.

Quality Control

A.B. Afanaskin Russian Open Academy of Transport of Moscow State University of Railway Transport, Moscow Structural Decomposition of Risk Management of Communication Services in Railway page 62-65

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Transport Keywords: decomposition; risk management. **Abstract:** This paper considers the design of risk management process of communication services in railway transport.

Economic Sciences

E.V. Bagirova, T.S. Samotsvetova Kemerovo State Institute of Agriculture, Kemerovo Investment Potential of the Kemerovo Region and Its Role in Socio-Economic Development of the Region Keywords: investment; investment climate; investment potential. Abstract: The authors described the main economic advantages and disadvantages of the Kemerovo region, and the main challenges of creating a positive investment climate in the region. We analyzed the investment attractiveness of Kuzbass.

E.E. Emelyanova

Institute of Economic Studies named after G.P. Luzin Kola Scientific Center of Russian Academy of Sciences, Apatity The Influence of Regional Peculiarities of the North on Goals, Objectives and Possibilities of Implementing Municipal Investment Policy

Keywords: budgetary security, urban districts of the North, investment policy, municipalities, pa regional specificity.

Abstract: The paper addresses a number of key factors influencing the goals, objectives and possibility of implementing the municipal investment policy. The authors determined that the impact of these factors is exacerbated under the impact of regional characteristics of the North. We analyzed the socio-economic situation and summarized the most acute problems of municipalities in the Russian North.

S.G. Fedorchukova Moscow State Engineering University (MAMI), Moscow **Types of Virtual Enterprises Depending on their Concept of Organization** Keywords: advanced; horizontal; network enterprise.

Abstract: In the study of emerging forms of business enterprises, it is important to structure them according to different features. The author proposes the structure of virtual enterprises according to the concept of their organization.

Proceedings of the 4th International Scientific and Practical Conference

"Science. Society. Business"

Introduction by the Chairman of the Organizing Committee

O.V. Voronkova Chief Editor of "Science and Business: development Ways" St. Petersburg **Key areas of Research in the Russian Federation** Keywords: development of fundamental research; education system; life cycle of knowledge; national innovation system; results of scientific research. Abstract: In modern society, the basis for the creation of national innovation system is the development of fundamental research and education system in general. Since the life cycle of knowledge is getting shorter, and the result of scientific research is difficult to predict, the

unpredictability of the scientific sphere increases in the short term, and leads to the need for

allocation of the key areas of scientific research.

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Social Economic Problems of Society Development

Zh.P. Antipina, E.S. Gordeeva Samara State University of Economics, Samara; St. Petersburg Humanitarian University of Trade Unions, St. Petersburg **Trends in the Development of Competition in the Era of Globalization** Keywords: competition; globalization; competitiveness. Abstract: The article is devoted to the important problem - the transformation of competitive relations in the international markets. The authors distinguish and analyze the trends accompanying the process of competition changes in the context of globalization, including strengthening the role of intra-exchange in international trade, differentiation of institutional

business environment, dominance of innovative hypercompetition, increasing competitiveness through commitment to corporate social responsibility. This study led to the conclusion about current features of international competition and the external business environment, and enabled to establish the key factors of increasing the competitiveness of companies in the era of globalization.

M.E. Kazantseva

St. Petersburg Humanitarian University of Trade Unions, St. Petersburg Retirement resources as strategic reserves of economic growth

Keywords: infrastructural bonds; investment resources; pension savings resources; structure of investment portfolio.

Abstract: The author considers the dynamics of aggregate indicators of pension resources in the form of pension savings and pension reserves. The dynamics of some macroeconomic indicators of the Russian Federation is presented; these indicators were compared with the performance of pension accruals and reserves. The author describes the international experience of effective investment of pension funds in the national economy. The possibility of Russia's economic growth by investing cumulative insurance funds in infrastructure bonds is shown.

A.V. Klishina

Tambov State Technical University, Tambov

Features of Enhancing Interest in Cultural and Historical Heritage in St. Petersburg

Keywords: burial of famous historical figures; historical cemeteries of world cities; multifaceted reflection of national culture and history of nations.

Abstract: Since the burial of famous politicians, clergymen, academics, writers, composers, musicians, artists, actors, doctors and interesting people on historical cemeteries of world cities is a multifaceted reflection of the national culture and the history of the state, the growing interest in this kind of cultural heritage is of great historical and cultural value.

I.A. Kuznetsova, M.A. Dzyuba, I.V. Taranova, A.V. Aralov Essentuki Institute of Management, Business and Law Stavropol State Agrarian University, Stavropol Diagnostics of Interaction Problems between Mega-Corporations and Regional Economic System

Keywords: investment process; mega-corporations; method of capital combinations; regional pareconomic system.

Abstract: This article describes the main parameters of the interaction mega-corporations and regional economic systems. The authors analyzed the participation of mega-corporations in implementing the priorities of regional development, the subjects of the Southern Federal District and North Caucasus Federal District. The regularities of formation of strategies for socio-economic development of regions, subjects of the SFD have been identified.

M.A. Shukan, V.V. Sitnikova Amur State University, Blagoveshchensk **Comprehensive Approach to Solving Problems of Inclusiveness of Disabled Persons in the Amur Region** Keywords: people with disabilities; integration; integrated approach; persons with disabilities; rehabilitation equipment. page 91-94

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Abstract: The problem of integrating disabled persons into society currently remains relevant in the Amur region. Integrated approach to solving this problem involves a set of interrelated, mutually agreed activities of social policy, the solution of social problems through program activities and different types of intervention in social problems.

Development and Improvement of Energy Complex

A.M. Kumaritov, E.A. Sokolova North-Caucasian Mining and Metallurgical Institute (State Technical University), Vladikavkaz Development of the System of Data Analysis and Processing on Strategic Management of Fuel and Energy Complex Keywords: fuel and energy complex; system analysis and control. Abstract: This paper offers an algorithm for strategic management of enterprises of fuel and

energy complex and the system of information analysis and processing; joint work in management of fuel and energy complex increases the efficiency of the development of the complex as a whole in response to changing market demands.

Automation and Robotics

Tran van Khanh, Yu.A. Kholopov, N.B. Preobrazhenskiy

Moscow Institute of Physics and Technology

Institute of Precision Mechanics and Computer Technology named after S.A. Lebedev, Moscow Research and Development of Advanced Control Techniques of Distributed Control Systems in Real Time

Keywords: control over parameters of complex control systems; distributed control system; ferroelectric effect; non-volatile memory; real-time.

Abstract: The paper describes the features of schematic implementation of control mechanism for complex control systems. The authors showed the features of the digital implementation, providing versatility, flexibility and increased autonomy, the ability to configure the system operational organization and monitoring of recorded data. The possibility of effective use of this system in the process of testing and commissioning of distributed control system complex object has been noted.

Development of Information Technology

A.O. Voytin, V.M. Tyutyunnik Tambov Affiliate of Moscow State University of Culture and Art, Tambov Generalized Procedural Model of Three-Dimensional Representation

of the Object of Cultural Heritage

Keywords: data collection; object of cultural heritage; procedural model; three-dimensional modeling.

Abstract: We allocated the three groups of cultural heritage objects and constructed a model of three-dimensional representation of these objects. The authors developed and presented in the form of an algorithm a procedural model of data collection for 3d modeling of each object of cultural heritage, both naturalistically existing and lost. The collected information was digitized (from traditional media), and divided for convenience into two categories: reproducing the shape of an object and describing it.

P.A. Mitroshin, D.Yu. Dunyushkin

Dmitrov Institute of Continuing Education Affiliate of International University "Dubna", Dmitrov

Modern Methods of Monitoring and Forecasting of Educational Process

Keywords: assessment of competence; competence; e-learning; forecasting the development of competencies; modern monitoring system of the educational process.

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Abstract: The paper describes the main points concerning the use of e-learning in the educational process as innovative means of monitoring. An original scheme for the construction of the educational process, which allows for continuous monitoring and control in automated mode. A comparative analysis of mathematical methods of forecasting of the competence development of the student in the training program.

Advanced Pedagogy

B. Tuzhani

State Institute of Russian Language named after A.S. Pushkin, Moscow Socio-Cultural Function of Reference Points (Fulcrum) Teaching Foreigners **Understanding** Russian Media Texts (Linguodidactic Aspects) *Keywords: reference points mediatext, internalization, foreign students.*

Abstract: This article describes how to use reference points (fulcrum) for a media information interiorization by foreign students studying Russian language. The article draws attention to the important socio-cultural aspect of the problem.

Important Issues of Accounting, Analysis and Auditing

A.R. Atabekov

Peoples' Friendship University of Russia, Moscow Corporate Social Reporting in Russia: Economic and Legal Regulations in International Context

Keywords: corporate ethics; corporate investment; corporate social reporting; social responsibility.

Abstract: The article introduces some key laws, legal acts and provisions that govern the corporate social responsibility and reporting in foreign countries and focuses on the legislation to put the above concepts into the Russian Federation business practices. The analysis of corporate social responsibility development in Russia is conducted from the federal level down to regional authorities and public organizations ' activities.

G.N. Voronkov

Tambov State Technical University, Tambov Innovation in Logistics Technologies

Keywords: logistics innovation; logistics systems; material production.

Abstract: Logistics innovation is used in the organization and management of material production and to improve the operations used in logistics systems. Logistics innovation, needing constant updating of technical means, affect the development of scientific and technological progress, which encourages research and development in new equipment, technology and materials used in logistics systems.

M.Yu. Darienko

Novosibirsk State Technical University, Novosibirsk

Comparison of the Criteria Power on the Trend Absence Applied to Exchange Quotations Keywords: criterion of trend absence; currency market; forecasting; functional dependence; trend.

Abstract: We consider several criteria of trend absence; their power is compared on the models, which can approximate the movement of exchange rates in the Forex market.

O.I. Zhuleva

Saint-Petersburg Humanitarian University of Trade Unions, St. Petersburg Development of Aquaculture as A Way to Solve the Problem of Overexploitation of Marine Biological Resources (Case Study of Fishing Industry in the Murmansk Region)

Keywords: aquaculture; fisheries for sale; overexploitation of aquatic biological resources overquoted production.

Abstract: This article describes the prospects for the development of aquaculture as one of the

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strategic directions of development of the domestic fishing industry (for example, the Murmansk region), which is particularly relevant in the light of all the problems of overexploitation of marine biological resources.

N.L. Zelenina

St. Petersburg Humanitarian University of Trade Unions, St. Petersburg Motivational System of Emergence and Operation of State Ownership

Keywords: community development; formation of public ownership; government; operation of state property; public goods; social needs; state assignment; state institutions; state ownership. Abstract: This paper deals with the problem of identifying the fundamentals and functioning of state property. The author justifies the existence of three specific areas of functioning of state property: the area covered by the reproduction of the economic power of the state; scope, covering the activities of all economic agents and the areas covered by the public sector.

A.A. Israilova

International University of Kyrgyzstan, Bishkek (Kyrgyzstan) The Analysis of Inflationary Processes in the Kyrgyz Republic

Keywords: inflation; monetary policy; National Bank; non-monetary factors of inflation. Abstract: This paper examines the causes of inflationary effects in post-Soviet Kyrgyzstan and ways to improve the anti-inflationary measures of the National Bank.

Yu.F. Kolesnikova

Lipetsk State Pedagogical University, Lipetsk

The "Element" of Modified Industrial Economic Cluster "Special Economic Zones" *Keywords: cluster; cluster member; collaboration; microkernel; synthesis.*

Abstract: The purpose of this paper is to develop theoretical concepts, revealing the the content, features of the organization and development of network models of economic clusters in special economic zones based on functional-structural and evolutionary organic approaches. It has been proven that the main effect of the clustering concept is based on emergence, i.e. the emergence of innovative (special) feature of the new system, the presence of which is neither inherent to its elements nor to the sum of elements which are not connected by specific systemic links; irreducibility of system features to the sum of the features of its components; in other words: the emergence of ' 'systemic' ' effect. The author studied the innovative features of clusters that are manifested in the effects of creating new goods and values. The achieved result the occurrence of synergistic effect in the economic cluster, depending on the institutional structure, the elements included in the cluster; it is the manifestation of collective action based on collaboration.

E.S. Marasanov

St. Petersburg Humanitarian University of Trade Unions, St. PetersburgInstitutional and Economic Engineering as a Theoretical and Methodological Toolof Geo-Economic Competitionpage 164-167Keywords: competitive space; geo-economic competition; institutionalism; social engineering;
spatial economics.Abstract: This paper discusses alternative mechanisms to enhance the competitiveness of the
domestic economy.

I.A. Pitaykina

Penza State University, Penza

Correlation Forms of Human Capital and Sustainable Development of the State

Keywords: health capital; human capital; post-industrial society; sustainable development. Abstract: Russian accession to the path of sustainable development is complicated by the presence of deep systemic contradictions. Strengthening the role of the person and the problem of the survival of the state in the twenty-first century causes the need to study the forms of relationship between human capital and sustainable development. These issues are addressed in the paper.

E.G. Kholnova

St. Petersburg Humanitarian University of Trade Unions, St. Petersburg Impact of Social Responsibility of Banking Business on the Development of Russian Education and Preservation of the National Cultural Heritage Keywords: commercial banks; national culture; Russian education; social responsibility of page 154-157

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business.

Abstract: This article explores the approaches to the essence of corporate social responsibility, the influence of social activity of banking business to preserve the national cultural heritage and the development of education in Russia at the present stage; social programs of Russian commercial banks as part of their corporate social responsibility functions are given as examples.

A.Ya. Chilap, T.N. Ustyuzhanina

Zelenodolsk Institute of Engineering and Information Technology – Affiliate of Kazan State Technical University named after A.N. Tupolev-KAI, Zelenodolsk **Mathematical Modeling of the Investment Problem** Keywords: investment problem; mathematical model; project.

Abstract: This article examines mathematical modeling and solution of the problem of investment. The problem is set as a choice under uncertainty of investment effectiveness.

K.E. Shalunov

Moscow State University of Civil Engineering, Moscow Major Trends and Stages of Development of Housing and Communal Services in the Russian Market Economy

Keywords: housing and utilities; housing construction; housing fund; housing and communal services; State Corporation "Fund of assistance to reforming housing and communal services"; target approach.

Abstract: The current state of housing and communal services requires reforming. As the industry refers to key life-sustaining sectors and affects the interests of the state and every Russian citizen, the implementation of reforms is impossible without understanding the historical experience of the development of housing and communal services in the Russian post-Soviet period. The paper examines the main trends and stages of development of housing and communal services in the Russian market economy.

A.I. Shlafman

St. Petersburg Humanitarian University of Trade Unions, St. Petersburg

Conditions for Sharing Innovation in Business

Keywords: business integration processes; entrepreneurship; integration of businesses; integration; innovation; innovative activity; management innovation.

Abstract: This article presents a set of theoretical and practical knowledge and experience in the implementation of innovative solutions for enterprises. The conditions for the development of innovative processes in terms of concentration of capital in the markets have been determined. The crucial role of innovation, delineating responsibility for the content of new activities interacting business structures, has been highlighted. The conditions for increasing the innovation activity of enterprises and problems in implementing innovation in a dynamic market environment have been determined. The key directions of innovative activities involved in the development of integration processes have been identified.

Issues of Modern Philology

Daradzhi Khalid Fakir Belgorod State Institute of Arts and Culture, Belgorod Arabic Calligraphy Keywords: Arabic calligraphy; emergence of writing; Islam; ornament; Sumerians. Abstract: The article highlights the history and development of writing, the variety of styles of Arabic calligraphy, its role in the applied arts.

Shahla Musaeva Azerbaijan Institute of Languages, Baku (Azerbaijan Republic) Forms of Adverbial Participle in the Azerbaijani Language Describing the Main Verb by the Type of Action in the English Language Keywords: Azerbaijani and English languages; forms of adverbial participle; main verb; typological comparative analysis.

Abstract: The paper examines forms of adverbial participle in the Azerbaijani language describing the main verb by the type of action in the English language. The appropriate forms were determined through typological-comparative analysis of these languages, which belong to

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different linguistic groups. This is of particular importance in terms of applied and theoretical linguistics, and can be considered one of the main linguistic challenges in the translation process.

T.S. Nizgulov

Perm State National Research Universit, Perm Analysis of Legislative Acts Regulating the Russian Language Policy at the Federal Level Keywords: language policy; legal framework; Russia.

Abstract: Modern Russian language policy has an extensive legal framework governing the various issues. Much attention is paid to the status of the state language of the Russian Federation, the place of the languages of Russia, as well as the development of the Russian language and the change in its status.

Important Issues of Biotechnology and Medicine

V.M. Tyutyunnik

International Information Nobel Centre (IINC), Tambov Mechanism of Cell Cryodestruction and Development Trends of cryomedicine

Keywords: cell cryodestruction; Cryomedicine development.

Abstract: Tendencies of cryomedicine development from its selection from cryoscience

in an independent direction in the middle of the 20th century to the present are reviewed. Prospects of cryomedicine (cryosurgery, cryotherapy, etc.) development are linked not only with improving medical and hardware technologies, and deep knowledge of the theoretical foundations of cryomedicine, associated primarily with the mechanisms of molecular biological processes in cell system of the living organism under the influence of cooling, right down to the cryodestruction and subsequent die-off of cells. page 200-202

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