
Abstracts and Keywords

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Modeling of Competitive Interaction between Employees of the Same Qualification

Keywords: model; algorithm; research; competitive interaction; employees; compromise solution.

Abstract. The paper examines the process of competitive interaction between workers of the same qualifications. The aim of the study is to develop a mathematical model of competitive interaction between workers of the same qualification. The objectives include mathematical formalization of the process, drawing up a model and finding a compromise solution. As a solution to the problem, it is necessary to find a compromise income. The study of the model of competitive interaction between employees of the same qualification is carried out in accordance with the algorithm for finding a compromise point, and the result is a winning strategy of the players.

M.A. Zyryanov, S.O. Medvedev, M.M. Gerasimova

Mathematical Modeling of the Technological Process of Preparing Forest Waste for Processing

Keywords: logging equipment; wood waste; productivity; natural production conditions; complex processing; profit; mathematical modeling.

Abstract. In order to maintain the competitiveness of the timber industry, an urgent task is the effective use of the forest resource base, provided through integrated wood processing. The purpose of these studies was to consider the possibility of using mathematical modeling to predict the volume of waste generated in the process of logging activities. In order to achieve this goal, the importance of the process of deep processing of timber production waste is analyzed and possible directions of their processing are identified. The hypothesis of the study was the justification of the use of mathematical modeling to study the processes of wood waste disposal. In the course of the research, a regression analysis method was implemented, which made it possible to obtain equations for the dependence of the productivity of logging machines on natural production conditions. The application of the obtained dependencies in practice will make it possible to predict the volumes of wood harvesting and, as a result, the volumes of waste generated in this case, as well as to plan the directions of their further processing.

A.I. Karpenko

The Technique of Sound Equalization Using Tune IN for Guitarists

Keywords: tune IN; sound equalization; research; guitar.

Abstract. The purpose of the study is to present a new plug-in called Tune IN, which appeared on the music market and is now used by various musicians. The creator of the plug-in is the Russian guitarist Alexander Karpenko, who has succeeded in various projects in Russia and abroad. The study aims to present the plug-in, which, in fact, is a solution for guitarists in the studio as it corrects the slightest flaws, whether it is a flaw in the pitch of a note, or not building a chord on the record. Just like auto tune for vocalists, it allows guitarists to "correct" inaccuracies. Auto-tuning was invented and launched as a ProTools plugin in 1997 by Andy Hildebrand. The study uses general scientific research methods. The novelty of the research is that it focuses on auto-tuning as a very effective way to retroactively "fix" notes that maybe they were a little out of tune.

The Development of Software for Assessing the State of Acetylene Hydrogenation Catalyst in Ethane-Ethylene Fraction Using Genetic Algorithm

Keywords: acetylene hydrogenation catalyst; ethane-ethylene fraction; genetic algorithm; advanced control systems; python programming language.

Abstract. One of the priority processes of the petrochemical industry is the production of ethylene-propylene. In the production of ethylene, catalysts are used that over time are able to lose their activity. Their condition is critical to achieving quality products and it is important to monitor and assess their condition on a regular basis. The purpose of the studies is to increase the catalyst life to the maximum permissible before regeneration by using a virtual analyzer. The study uses methods of comparative and system analysis of the technological process. As a result, a software tool for assessing the state of the acetylene hydrogenation catalyst in real time has been developed.

V.P. Kuzmenko

Modeling a Nonlinear Current Source of an LED Lamp in the Matlab Simulink Environment

Keywords: LED lamps; high-frequency harmonics; quality of electrical energy; nonlinear load of the electrical network.

Abstract. The main purpose of the study was to obtain an approximated function for modeling a nonlinear current source of an LED lighting device. The study used an integrated approach to mathematical modeling based on experimental data, Fourier transform, and cubic spline interpolation. The results of the study provide practical recommendations for improving the accuracy of modeling the nonlinear load of LED lighting devices in the electrical network to study the effect of these products on the quality of electrical energy in the mass use of LED lighting devices.

A.V. Piletskaya

Interchangeable and Non-Interchangeable Tokens in Smart Contract Automation Tools

Keywords: blockchain; Java; token, token; algorithms; transactions; Ethereum.

Abstract. The purpose of this article is to research and select an effective and reliable automation tool for Chainlink Keepers, Gelato Network and OpenZeppelin Defender smart contracts for the ERC-20 and ERC-721 token standards. The task of the study is reduced to the security and efficiency and performance of the code with the Ethereum blockchain. The research was carried out on Chainlink Keepers, Gelato Network and OpenZeppelin Defender smart contract automation tools for ERC-20 and ERC-721 token standards. The research methods are analysis of the effectiveness of the token standards code and display of the results, through Dynatrace - a code monitoring tool. Many blockchain applications exchange tokens, such as bitcoin, or implement them through smart contracts. The trend in blockchain is to apply token compatibility standards unchanged from platform to platform, simplifying design tasks with reliable and widely used specifications. However, using the semantics of the target language can lead to technological advantages and more efficient contracts. For systems with fewer constraints, reliability and efficiency are key properties. When Ethereum was introduced in 2012, the standard for the ERC20 token (ERC20) could only be applied to various derivative tokens. ERC721 (ERC7), although it was also developed for various derivative tokens, but had a different compatibility with the Ethereum standard, which allowed it to be implemented in Ethereum. Today, both Ethereum and Ethereum, the ERC4 standard already contains built-in mechanisms for integrating token types. However, as in the case of Ethereum, in order to apply the Ethereum standard for successful implementation, it is first necessary to understand and identify the type of token within this standard,

and then determine a solution that will meet the parameters necessary for integration. In the article, I would like to consider the application of the standard, taking into account the compatibility of ERC2 and EC20, in order to create an effective multi-document mechanism for integrating tokens of various types. These are legally signed tokens intended for their use, storage and transfer. Using Ethereum, it is possible to create networks that can be used to pay for goods and services, as well as to transfer encrypted data. Typically, in Ethernet networks, Ether3 and Ether4 tokens are used to provide security, and other types of tokens are used to increase the level of trust. To analyze the benefits of using Ethereum tokens and the Ethereum integration scheme, a study was conducted. The achieved results of the study – a reliable and secure OpenZeppelin Defender token automation tool has been selected.

A.D. Saifullina, A.M. Khafizov

Improvement of the Control System of the Furnace of the Hydrotreatment Plant

Keywords: tubular furnace; modeling; hydrotreatment.

Abstract. It is possible to ensure continuous automatic regulation of the tubular furnace by constructing a predictive model of the technological process of the installation. The application of the designed model in the CoDeSys software environment will help the formation of knowledge and skills among employees of enterprises in the organization of management. The program developed for a specific process in CoDeSys can be easily verified using graphical modeling and is available for correction directly during operation, taking into account changes in the process. The advantage is also that the CoDeSys complex with instructions for its use is freely available, which allows you to freely use this tool, adapt it to any technological process.

Б.С. Сапакова, А.А. Сарсембаев

Обзор методов классификации эмоций на основе анализа аудиоданных с помощью глубокого обучения

Ключевые слова: глубокое обучение; сверточная нейронная сеть; mel-частотный кепстральный коэффициент; многослойный перцептрон.

Аннотация. В последние несколько лет наблюдается все больший интерес к разработке технологий, направленных на определение эмоционального состояния человека. Основная цель данной статьи – это обзор и обобщение недавних исследований по распознаванию эмоций на основе анализа аудиоданных с использованием глубокого обучения. В исследовании представлен всесторонний анализ эффективности моделей сверточных нейронных сетей, также рассматриваются различные этапы моделирования эмоций, включая выбор и извлечение звуковых характеристик, таких как качество голоса, спектральные и просодические характеристики. В исследовании подчеркивается важность кепстрального коэффициента Mel-частоты как решающей функции для точного моделирования аудиоданных, также обсуждаются проблемы распознавания речи, в том числе использование спектрограмм в качестве визуального представления аудиоданных.

Статья завершается кратким изложением основных результатов и предлагает темы для будущих исследований в области классификации эмоций на основе звука. Гипотезы и методы, используемые в данном исследовании, основаны на обзоре существующей литературы и анализе различных моделей сверточных нейронных сетей, используемых для классификации эмоций на основе слуха.

S.V. Sidorov, V.A. Cherkasova

The Development of a Search API Based on the Vector Index Okapi BM25 for Indexing Data from Databases and Serving Multiple Web Resources

Keywords: information retrieval systems; algorithms; mathematical cybernetics; measure Okapi BM25.

Abstract. The objective of the paper is to develop an alternative solution for embedding search on the websites of Astrakhan State University named after V.N. Tatishchev. The tasks were to study the subject area, to select technological and architectural solutions, to implement the search engine algorithm and develop an API service, as well as to implement a search module and compare the quality of work. A hypothesis has been put forward that the developed search system provides a higher quality of search according to the metric than the built-in Yandex search. In pooling testing, the alternative solution was found to perform better. The developed search system is based on the Okapi BM25 measure, and cosine distance is used to assess relevance.

A.S. Udochkina, A.M. Khafizov

Improving the Control System of a Hydrotreatment Unit Using Virtual Analyzers

Keywords: virtual analyzer; monitoring; data analysis.

Abstract. The aim of the work is to improve the method of controlling the technological process of a hydrotreatment unit, which achieves high accuracy in regulating the quality of an oil product, which makes it possible to quickly respond to deviations in the technological process. Reducing the proportion of sulfur in diesel fuel is a major optimization challenge.

P.A. Fomina

An Improved Time-of-Arrival-Based Signal Mixture Separation Method Using SDIF and CDIF Algorithms

Keywords: digital signal processing; selection algorithms; pulse repetition period; cumulative differences histogram; sequential differences histogram.

Abstract. The article considers the types of signal modulation by period and algorithms for selection of radar signals based on the analysis of the time-of-arrival of pulses. Based on these methods, an improved algorithm has been developed, and existing approaches are optimally combined in it. Formulas for expanding non-overlapping histogram cells were presented, the use of which makes it possible to determine the pulse repetition periods more accurately with a minimum number of calculations. The expediency of combining histogram bins during the analysis was shown. The results proving that the new method is effective in a complex electronic environment and for different types of signals are presented.

N.G. Frizorger, I.L. Savostyanova

The Criteria for Choosing a Corporate Information System in the Modern Russian Economy

Keywords: corporate information systems; criteria for selecting information systems; optimization.

Abstract. The purpose of this article is to identify and describe the criteria that are necessary for choosing a corporate information system. The authors describe the criteria for choosing a corporate information system that will allow the latter to meet the needs of companies operating in the conditions of the modern Russian economy. The authors allowed themselves such a study because they are

implementing information systems. The authors explore the issue of defining the concept of corporate information system and their classification in this article as well.

M.D. Cherepanov, A.D. Bezrukikh, V.A. Melnikov, O.A. Ponomareva, E.V. Melnikova

Designing an Information-Analytical Audio File Management System

Keywords: immersion; information-analytical system; artificial intelligence; speech recognition; speech control.

Abstract. The purpose of the paper is to automate the process of managing audio files using voice in the work of a sound engineer. The tasks of determining the requirements and components of the information system, analyzing such products, modeling the processes and architecture of the project, and selecting implementation technologies have been set. The methods of an expert survey, comparison, neural network technology, conceptual design methodology were used. The hypothesis of the need to place the automatic recognition component on the client side in order to achieve the effect of immersion and proper speed of the process is confirmed. The results of designing an information and analytical system for speech control of audio files are presented. The analysis of the experience of implementing speech control systems in various fields allowed us to determine the requirements for the information system and typical practical problems, solutions to ensure the speed and synchronicity of speech recognition. An algorithm for creating a web application for file management using voice is proposed, with justification for the choice of technologies for the implementation of the project.

E.S. Chikmarev, S.V. Pridvishkin, O.M. Zvereva

Implementation of an Integrated Approach to the Design of Engineering Systems Using BIM Technologies: Automation with Dynamo Tool

Keywords: engineering systems; script; calculation; automation; process; energy consumption model.

Abstract. The purpose of this paper is to describe an integrated approach to the design of engineering systems, where the digital information model (BIM-model) of the construction object is used as the information basis, and scripts created in the Dynamo visual programming environment are used to improve the efficiency of design processes. The hypothesis of the study is that this approach reduces labor costs and improves the quality of documentation, which, as a result, creates the prerequisites for being a success in supporting the remaining stages of the life cycle of a construction object. The study has used such methods as a comparative analysis, modeling, observation, conducting a full-scale experiment. The created approach had been successfully implemented in one of the design companies in Yekaterinburg.

V.P. Shuvalov, S.V. Timchenko, I.G. Kvitkova

Methods of Maintenance and Repair of Fiber-Optic Lines

Keywords: technical system; fiber-optic line; methods of maintenance and repair; classification; guidance document.

Abstract. The article presents an expanded classification of existing methods of maintenance and repair, provides an overview and analysis of some works by native and foreign authors devoted to optimizing maintenance strategies. Based on the analysis of the existing guidelines of the communications industry, the features of corrective and preventive maintenance of fiber-optic transmission lines in our country are considered.

M.A. Agasiev, M.R. Serdyukov, A.A. Morin, A.S. Blagorazumov

Prospects for the Implementation and Development of Biometric Vein Pattern Authentication in the Banking System of the Russian Federation

Keywords: information security; authentication; unauthorized access; biometric authentication; vascular authentication.

Abstract. This article describes the problems of biometric authentication and its usage in the banking system of Russian Federation. The analysis of various biometric authentication methods was conducted in order to determine the disadvantages of such methods. These disadvantages may create a possibility of unauthorized access to banking information. Introduction of palm vein pattern authentication, also known as vascular authentication, is suggested as a solution to described problems.

V.V. Krokmal, O.N. Matsko, A.S. Gabriel, N.A. Mokhova

The Required Gas Pressure Level in the Pneumatic Spring Chamber of the Mechatronic Test Bench

Keywords: mechatronic stand; centrifugal force; pressure; inertial forces; pneumatic spring; centrifuge.

Abstract. When studying the processes occurring in the chamber of the pneumatic spring during the rotation of the rotor of the mechatronic test stand of the centrifuge (vibrofuge), it was deduced that the pressure in the chamber is redistributed. Accordingly, it is necessary to pump a certain level of pressure into the chamber of the pneumatic spring before starting the operation of the mechatronic stand.

To calculate the required pressure, the corresponding calculation formula is presented in this paper, which was derived on the basis of the pressure redistribution formula. A graph of the dependence of the initial pressure level on the speed of rotation of the rotor is presented and the required pressure level in the working chamber of a pneumatic spring of a given rotation speed of the rotor of a mechatronic vibrofuge of 10 rad/s is calculated.

P.E. Agafonov

Prospects for the Coal Industry in the Russian Federation

Keywords: opportunities; public policy; Russian Federation; coal industry; sustainable development; economy; energy transition.

Abstract. The coal industry in the Russian Federation has experienced significant growth in recent years, with production rising from 323 million tonnes in 2010 to 439 million tonnes in 2019. Russia is the world's second largest coal producer after China, with most coal reserves located in Kuzbass in Western Siberia. Coal consumption in the country is also growing, accounting for about 20 % of total energy consumption, mainly for power generation, followed by industrial and domestic heating. The Russian coal industry is dominated by several large companies, including SUEK, Kuzbassrazrezugol, Mechel and Rospadskaya. The industry faces challenges related to the growing demand for renewable energy and environmental policies. However, the Russian government has a policy of supporting the industry, including tax breaks and subsidies. The government has also announced plans to increase coal production to 448 million tonnes by 2024. The study aims to provide an overview of coal production, consumption and export figures, key market players, coal industry centres and trends that may affect the industry. The hypothesis is that the Russian coal industry will continue to play a vital role in the country's energy mix despite the challenges and opportunities posed by technological advances, changes in global energy markets and geopolitical factors. The study used statistical analysis to determine the mean, median and standard deviation of coal production over the past four years. The results showed that the mean is 451.25 million tonnes, the median is 438.5 million tonnes and the standard deviation is 34.67 million tonnes.

A.F. Borisov, E.E. Tarando, T.A. Trofimova

Social Technologies for the Formation of Emotional Intelligence of Civil Servants

Keywords: sociology of emotions; social intelligence; emotional intelligence; social management; social technologies.

Abstract. The purpose of this article is to analyze social technologies for the formation of emotional intelligence as the sum of skills and abilities to recognize emotions. In the article, by the methods of scientific analysis and synthesis reveal the technologies for the formation of the emotional intelligence of civil servants, analyze the main approaches to their definition, and reveal the subjects and objects of the technologization of social processes. The article concludes that social factors are derived from biological, personal and managerial factors that have the most significant impact on the development of the emotional intelligence of civil servants.

M.V. Zibarev

The Model of "Monetary Communism" Based on the Theory of Real Money by Sergey Blinov

Keywords: unconditional basic income; "monetary communism"; theory of real money; Sergey Blinov.

Abstract. The purpose of the paper is to shape the model of mass small initial financial assistance for everyone, contributing to the economic growth according to the theory of real money by Sergey Nikolaevich Blinov. The model is based on the unconditional basic income approach carried out in different countries. To achieve this goal, the following tasks were identified: experiments on the introduction of unconditional basic income in different countries and the reasons of their failures were studied; the theory of real money by Sergey Blinov was studied.

Research methods are historical analysis, mathematical modeling, synthesis, and generalization.

E.I. Kulikova

On the Issue of Developing Savings Systems for Russian Citizens

Keywords: long-term savings; pension savings; pension reserves; non-state pension funds; co-financing; tax deductions.

Abstract. The purpose of the article is to identify positive and negative consequences for the economy and citizens of the Program of long-term savings of citizens proposed by the Ministry of Finance and the Central Bank of the Russian Federation. The main tasks are to analyze the legislative innovation and identify possible risks during its implementation. For the study, the method of comparative analysis and software packages for processing financial information were used, which allowed us to confirm the hypothesis of the study, which consists in the fact that the measures proposed by the author will increase the efficiency of the formation of pension savings, which will have a beneficial effect on both the economy and all the mechanisms of savings of citizens and will help to level the identified risks.

D.K. Ligai, O.V. Vatolina

The Role of Digital Platforms in Transformation of Public Administration

Keywords: digital platforms; public administration.

Abstract. The article considers the GosTech digital platform as the basis for the digital transformation of public administration, as well as foreign experience in digitalization in the field of public administration. The purpose of the work: to determine the directions of transformation of public administration. The hypothesis is the assumption that digital platforms are an important tool for the transition to a digital economy and the transformation of public administration. The study uses methods of analysis, synthesis, classification and comparison. The results are as follows: the analysis of the state and ways of digital transformation of public administration in various countries, including the Russian Federation.

N.S. Oglezneva

Marketing Research Methods in the Outerwear Retail

Keywords: marketing research; survey; focus group; consumer behavior; product design; marketing campaign.

Abstract. The article discusses the methods of marketing research in the field of outerwear retail. It is noted that in the outerwear retail industry, market research is an important tool for making informed decisions, increasing customer satisfaction and competitiveness. The purpose of the article is to study the methods of marketing research in the field of outerwear retail. It has been found that using various marketing research methods, companies can obtain valuable information about consumer preferences, buying behavior and market trends to improve product design, pricing strategies and marketing campaigns, as well as to monitor and adapt to changes in the market. It is concluded that working ahead of market trends by tracking changes in consumer behavior, evaluating the effectiveness of strategies allows the company to succeed in a dynamically developing industry.

N.V. Ukolova, L.N. Pototskaya, E.V. Sharonova

Current Status and Trends in the Development of Organic Plant Production in the Russian Federation

Keywords: organic crop production; efficiency improvement; organic products; agricultural production.

Abstract. The relevance of the chosen topic is due to the strategically advantageous location of the Russian Federation for optimizing the sales market, availability of sufficient infrastructure, demand for organic grain in modern world political conditions, creation of a competitive segment of the organic grain market focused on domestic demand and the demand of neighbouring countries through the expansion of international cooperation, exchange of experience, possibility of influencing the sustainable development of rural areas, solving sectoral and general environmental problems. The increase in the volume of production of organic crops is mediated by an increase in demand for it not only abroad, but also in Russia, based on the statistics of the development of this market segment, namely, in terms of the volume of the organic market in value terms. Over the past 10 years the volume of the Russia's organic market has increased several times, and many analysts estimate the potential for development not less than those in the US or the EU taken together (in terms of the number of free net areas for organic). Dynamics of application of mineral fertilizers and work on chemical land reclamation in the Russian Federation in 2017-2021 confirms the likely positive trend in the development of domestic organic crop production. An increase in the number of regional producers of organic products in the study period and an increase in production volumes, assortment and sales were revealed. Factors hindering the production of organic products are insufficient state subsidies and development of local regulatory and legal frameworks in many regions, taking into account zonal characteristics.

Yu.A. Shikhanova, N.V. Ukolova, N.A. Novikova

The Effective Budget Policy and Measures of its Implementation in Conditions of Modern Challenges

Keywords: budget; budget policy; state policy; budget funds; budget system.

Abstract. The purpose of the study was to consider measures to implement an effective budget policy in the context of modern challenges. The research objectives are to consider what is meant by effective policy; to show that the effectiveness of budget policy is determined by the existing institutional sphere. The hypothesis of the study is manifested in the implementation of measures to implement the effectiveness of budget policy in the context of modern challenges. The research used scientific research methods, such as abstract-logical method, system-functional method. The results of the study can be expressed in the statement that it has proved that measures to implement an effective budget policy can be successfully implemented under certain conditions.

O.V. Vatolina, E.D. Li

Genesis of the Concept of the Digital Economy

Keywords: digital economy; digital technologies; the sixth technological order.

Abstract. The article is devoted to the study of approaches to the definition of the digital economy, as a result of which both general approaches and contradictions among various authors are identified, and the main components of the digital economy are described. The research hypothesis is the assumption that the current stage of economic development is the beginning of a new era of technological development. The research results are as follows: definition of the digital economy is offered; the analysis of the concepts of "digital economy" and "digital economics" is made. The methods of analysis, synthesis, and classification were used in the work.

S.S. Safina, A.A. Bychkova

Creative Industry as a Factor of Economic Development of the Heilongjiang Province of the People's Republic of China

Keywords: "ice and snow industry"; creative industry; creative design; cultural industry; Heilongjiang Province; old industrial region.

Abstract. The problem of revitalization of China's old industrial regions has been of paramount importance since the early 2000s. Heilongjiang, as a province which used to be the industrial center of the country, is now undergoing a structural crisis and is inferior to the eastern and central regions in many socio-economic indicators. The central and regional governments face the task of restructuring the economy, modernizing industry, stimulating the private sector and developing a unique brand of the region, which will raise competitiveness and provide value-added growth. The creative industry has proven that it can be an alternative way out of the economic stagnation of old industrial regions, and creative design can be the main tool in this process. The aim of this article is to study the peculiarities of cultural industry development in Heilongjiang Province. To achieve the goal, the following tasks were carried out: to identify the significance of the cultural industry for the PRC and Heilongjiang Province; to identify the dynamics of the number of cultural institutions, employment; to determine the main vectors of the region brand development to increase the added value of both the cultural industry and the basic industries. The method of statistical analysis was used in the work. The following conclusions were made: the entertainment industry and the sphere of cultural events started to develop intensively quite recently with the beginning of the stagnant period in the 2000s. There is a significant regional disparity in the cultural industry, and the significance of the Northeast region, in which Heilongjiang Province is located, is the lowest, less than 1 %. Despite the obvious growth in the number of cultural institutions, employment is growing very slowly and not in all segments – predominantly

administration. Nevertheless, the brand of the region is already being forged. The main emphasis on the environmental component and agriculture has already created the name Heilongjiang region with quality environmentally friendly products.

Chen ChunXiao

Challenges and Measures for the Development of the Science and Technology Services Industry in the Context of Ageing Population of China

Keywords: China; population ageing; social services; science and technology services; quality of life; economic development.

Abstract. The purpose of this article is to articulate the challenges of China's growing aging population and to identify ways to alleviate the social pressures that it imposes through the widespread use of scientific and technological services. The article uses methods of scientific analysis and synthesis. The main conclusion is that, in the long term, including the S&T industry in China's population aging strategy can ensure the viability of the regional economy and at the same time contribute to the development of the S&T industry itself, which in turn will enhance China's technological competitiveness and contribute to economic development of the country.

A.A. Kurochkina, K.A. Namazov

The Impact of Digital Transformation on Business Processes in a Trading Organization

Keywords: trade; digital transformation; business processes; Industry 4.0; digital technologies.

Abstract. The purpose of the article is to study the impact of digital transformation on business processes in trade organizations. Achieving this goal is accompanied by the completion of a number of tasks, namely: the study of the impact of digital technologies as part of digital transformation on business processes in trade, as well as the impact of changes in consumer preferences and expectations on business processes as part of the digital transformation of the economy. The research hypothesis is as follows: the implementation of digital transformation measures leads to omnichannel sales and the formatting of a single space for interaction between the client and the seller. Research methods are: collection and analysis of information, analogy, classification and generalization of the data obtained. The result of this study is that in order to achieve maximum efficiency of interaction with the client and its comfort, trade organizations come to omnichannel sales.

A.A. Kurochkina, E.Yu. Semenova, A.A. Kuzmina

Research into Investment Attractiveness and Prospects of Development of Tourist Destinations of the Republic of Karelia

Keywords: Republic of Karelia; tourism; investment attractiveness; tourism development.

Abstract. The relevance of this article is due to the fact that the development of tourism is an important factor in economic growth and attracting investment to the region. The purpose of the article is to study the investment attractiveness of tourist destinations in the Republic of Karelia. The hypothesis of the study is based on the assumption that the uniqueness of the natural resources and cultural heritage of the Republic of Karelia, as well as its favorable geographical location make this region attractive to investors and can contribute to the development of tourism in the region. The main research methods are the collection and analysis of information, analogy, classification and generalization of the data obtained. Based on the results of the study, the authors formulated recommendations for the development of tourism and attracting investment to the Republic of Karelia.

Key Trends in HR and Career

Keywords: hybrid work format; quiet hiring; manager support; hiring of non-core specialists; sustainability support; trends in personnel management.

Abstract. The purpose of the article is to form a comprehensive view of promising trends in HR, as well as to study the possibility of applying these areas in working with personnel in domestic companies. In connection with this goal, a number of tasks were identified that had to be performed during the work: to reveal the essence of all the trends under consideration; to consider the advantages and disadvantages of new HR trends; to assess what opportunities the introduction of the trends under study can give the company. The hypothesis of the study is based on the assumption that the change in the trends currently developing in the work with the personnel of the organization has a significant impact on the dynamics of modern business development. The research methods are synthesis and generalization of various Internet sources, conducted in order to obtain the most accurate and versatile representation of the trends under study, as well as analysis of the results of research conducted outside the scope of the work.

The result of this study is the consideration of trends in HR and career, which reveal quiet hiring, hybrid work format, the need to support managers, a tendency to hire non-core specialists, support for sustainability, the use of artificial intelligence, a decline in soft skills.