

Pedagogical Sciences

A.V. Pozhidaev, N.M. Pekelnik, Yu.I. Demyanenko

Siberian State University of Communications, Novosibirsk

Enhancing Students' Independent Work in the Study of Mathematics at Technical University

Keywords: activation; control of students' independent work; methodological support; research work; planning; network training complex.

Abstract: The paper considers the problem of enhancing students' independent work as a special kind of educational activity. In this paper the urgency of the problem in the study of mathematics at technical university. The main teaching tool is a network educational-methodical complex. It provides effective open access to necessary educational information and new learning technologies and enables students to test knowledge of the core sections. The most important result of increasing students' independent work is the broad participation of students in research work.

page 7-10

O.L. Shepelyuk

Surgut Oil and Gas Institute – Branch of Tyumen State Oil and Gas University, Surgut

Training Students for Professional Work through Studying Chemistry of Oil and Gas

Keywords: chemistry of oil and gas; professional activity; Federal state standards; competences.

Abstract: The paper summarizes the materials about training for professional activity of students majoring in oil and gas business through studying discipline Chemistry of oil and gas.

page 11-13

I.S. Yakimanskaya, A.M. Molokostova

Orenburg State University, Orenburg,

National Research University 'Higher School of Economics', Moscow

Perception of Organization by Managers of Different Levels

Keywords: communication system; content analysis; group interview; organizational structure; organizational characteristics; recourses; hierarchy; system of rewards and punishments.

Abstract: The concept of organizational structure is used to clarify the idea of interconnected elements, predict employees' behavior in conditions of internal and external changes. Legal or unwritten organizational norms are related to sustainability and reliability of system. The structure of the organization is a mechanism of business relations between individual employees, subdivisions and all parts. After analysis of the existing methods we have concluded that most important factors could be assessed in a group interview. The two groups were composed from different employees: first group consisted of middle managers, the other comprised top managers. Thus, we identified two visions concerning characteristics and sustainability of the organization. The organizational characteristics for content analysis included the Structure and size; Information and communication system; Recourses; Hierarchy and System of rewards and punishments.

page 14-20

Culturology

V.A. Nifontov

Tyumen Institute of Advanced Training of MVD of Russia, Tyumen

Phenomenon of Leadership in Modern Management Literature

Keywords: leadership; organization diagnostics; organization model; adaptation; integration; legitimacy.

Abstract: The paper reviews the studies devoted to leadership, including the theories and concepts of leadership, and also various aspects connected with this phenomenon. The structure of sociological diagnostics is considered, and the applied nature of this diagnostics is characterized.

page 21-23

A.V. Chekareva

Lomonosov Moscow State University, Moscow

Features of “Intellectual Migration” in Modern Russia

Keywords: migration; intellectual migration; social mobility; IQ; opportunities; chances; movements.

Abstract: This paper deals with modern migration processes, migration statistics, causes of migration of young people; the “intellectual migration” is defined and its status in modern Russia is assessed from the perspective of the theory of chances and opportunities, IQ research as a possible cause of migration among young people in the world.

page 24-26

Machine Building and Engineering

S.S. Bednarzhevskiy, N.P. Zapivalov, G.I. Smirnov

Siberian Branch of the International Institute for Nonlinear Studies of the Russian Academy of Sciences, Novosibirsk,

Institute of Petroleum Geology and Geophysics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk

Rehabilitation Cycles of Nonlinear Dynamics of Petroleum Fields to Improve their Efficiency

Keywords: petroleum fields; nonlinear dynamics; rehabilitation cycles.

Abstract: The paper describes the possibility of emergence of nonlinear dynamics cycles of oil and gas fields allowing for restoration of the potential of deposits.

page 27-31

S.S. Mitrofanov, A.S. Burkov, K.S. Povarov

St. Petersburg National Research University of Information Technologies, Mechanics and Optics, St. Petersburg

The Study of the Possibility to Create Small Angular Encoders on the Position-Sensitive Photodetector

Keywords: encoders; position-sensitive photodetector; possibility of nonlinearity; reproducibility of measurement; stability.

Abstract: We considered the position-sensitive multi-scanning photodetector to build converters rotation angles. The photodetector is a semiconductor with three-layer structure made in the form of a sector of a ring. The output voltage of the photodetector is a linear function of the position of the light spot on the photosensitive layer of the photodetector. The considered photodetector has a small amount of non-linearity of the output signal, high reproducibility of measurement and stability.

page 32-36

O.E. Raskin, R.A. Yuryeva, N.K. Maltseva

St. Petersburg National Research University of Information Technologies, Mechanics and Optics, St. Petersburg

Design Features of Optic Electronic Robotic Complex for Pipeline Diagnostics to Ensure Secure Data Exchange

Keywords: robotic in-line inspection; information exchange; information security.

Abstract: The paper discusses the use of analyzers for monitoring secure information exchange over twisted pair. This protection method not only provides secure exchange of information, but also controls exit from the system that influences greatly the resiliency of the robotic in-line inspection.

page 37-39

A.A. Sopoev

All-Russian Research Institute for Electrification of Agriculture, Moscow

Power Density as a Factor in Assessing the Feasibility of Developing Renewable Energy Sources

Keywords: power density; oscillating cylinder; hydroelectric power station.

Abstract: This article deals with the estimation of feasibility of development of renewable energy sources. Power density parameter is discussed. The development of renewable energy sources related to the new technology development or upgrade of existing ones requires a

page 40-42

universal parameter to evaluate the potential of installations that are being developed. The comparison between different renewable energy sources was made using the power density parameter.

I.R. Shegelman, G.V. Klyuyev, L.V. Shchegoleva
Petrozavodsk State University, Petrozavodsk

New Technical Solutions against Forest Fires

Keywords: protection; forest fires; patents.

page 43-45

Abstract: The paper examines the patents in the field of protection against forest fires. The research showed that establishing the location of a forest fire and fire hazard control as well as methods and designs for fighting forest fires are prevalent.

Information Science, Computer Engineering and Management

A.A. Oskolkov, E.V. Matveyev

Perm National Research Polytechnic University, Perm

Checking Equipment Processing Sensitive Information for Electromagnetic Leaks

Keywords: electromagnetic leak, information; security.

page 46-50

Abstract: This paper discusses the results of checking confidential information for electromagnetic leaks from PC. The necessity of the research is explained by lack of cheaper and practical active or passive equipment of resistance to electromagnetic leaks.

Yu.P. Petrov, S.G. Karnishin, E.P. Murtazina, A.A. Petrenko

Perm State National Research University, Perm,

Perm Military Institute of Internal Troops of the Ministry of Internal Affairs of the Russian Federation, Perm

High-Sensitive Broadband Geophone Based on Combined Electromagnetic Suspension

Keywords: combined electromagnetic suspension; frequency; inductance; magnet; passband; resistance; solenoid.

page 51-56

Abstract: The paper discusses designs of devices intended for seismic waves' registration. High coefficient of electromechanical coupling for these devices is under discussion. The possibility to work out the swivel three-way geophone is described.

Economic Sciences

N.S. Bakutina

Lobachevsky Nizhny Novgorod State University, Nizhny Novgorod

Management of Science and Innovation in Modern Russian Federation

Keywords: innovation; modern state; the Russian Federation; innovation policy; development.

Abstract: The paper deals with the process of transition to innovative development in modern Russia. Currently, many states, including Russia, are trying to get to the innovative way of development and investing heavily in the training of innovative policies and programs, creating innovation zones, parks, developing innovative entrepreneurship, etc. They are turning to innovative policy to achieve not only sustainable economic and technological development, but also social and political stability. In the context of the global economic crisis this question is particularly relevant because the innovative way of development is seen as an opportunity to overcome the continuing downturn in the economy and its negative political trends

page 57-60

Z.A. Voitleva

Maikop State Technological University, Maikop

The Advantages of Holding Companies in the Agrarian Sector of the Russian Economy

Keywords: agricultural holding; benefits of joining the association; efficiency of agriculture.

Abstract: The author considers the advantages of holding companies in the agricultural sector of the Russian economy, and analyzes the structure of a group and the benefits of cooperation and integration of the various structural elements.

page 61-63

K.G. Gabdullina, G.A. Khaziakhmetova, G.P. Maltseva, O.V. Khafizova
Nizhnekamsk Institute of Information Technology and Telecommunications – Branch of
Tupolev Kazan National Research Technological University – KAI, Nizhnekamsk,
Kazan State Power Engineering University, Kazan

Theory of Economic Analysis in Historical Context: Its Development and Features

Keywords: domestic and foreign theory; research; economic analysis; stages of development; features of the theory of analysis.

page 64-72

Abstract: The future of the theory of economic analysis is largely determined by the developments of the previous generations of researchers, the history of which dates back to ancient centuries and is presented in the teachings of the philosophers of the Ancient East (Confucius), Ancient Greece (Xenophon, Plato, Aristotle), Ancient Rome (Varro, Seneca). The article presents a chronology and overview of the main provisions of domestic and foreign theories of economic analysis.

A.P. Gantimurov, A.E. Brom
Bauman Moscow State Technical University, Moscow

Principles of Organization of Modern Information Interaction between Industrial Enterprises

Keywords: industry informatization; flow of information; basic unit of interaction; quality; main characteristic of products and services; loop quality; motivated staff.

page 73-75

Abstract: The article explains the special role of information innovation for industry; the quality criterion as a primary characteristic of products and services in the information society is discussed. The relation between the quality of products and services and the quality of information interaction of an industrial enterprise is substantiated. The approach to quality management is described. Motivation as a component of quality is analyzed.

O.N. Gilkova
Peoples' Friendship University of Russia, Moscow

Features of Pricing in the World Market of Military Helicopters

Keywords: pricing; purchase price; export price; market monopolization; pricing methodology; apparent multiplicity; tender.

page 76-79

Abstract: Pricing in the world market of military helicopters is an extremely complex phenomenon, the formation of which is substantially influenced by the specificity of the investigated market. This article identifies the main factors influencing the pricing in this market and deals with the general principles of pricing for military helicopters.

D.A. Gribanov
St. Petersburg State University of Economics, St. Petersburg

Improvement of Complex Evaluation of Quality of Metal Materials after High-Speed Loading

Keywords: complex evaluation of quality; ring specimens; magnetic pulse expansion method; Harrington desirability function.

page 80-86

Abstract: A modification of the Harrington desirability function as a tool for the complex evaluation of the quality of dynamically loaded metal materials is proposed. The author proposes to introduce the coefficient of economic effect to the complex index of Harrington desirability, which allows for simplification of the scheme of selecting the most suitable quality of materials in terms of price and quality. Based on this approach a study of the quality of aluminum ring specimens tested at different modes of high-speed loading of magnetic pulse method was carried out.

M.A. Guryeva, A.V. Matsenko
Tyumen State Oil and Gas University, Tyumen

Major Researchers in Green Economy

Keywords: green economy; sustainable development; major scientists in global environmental problems; economic perspective.

page 87-90

Abstract: The article deals with the emergence and establishment of green economy and sustainable development, the main emphasis is on the systematization of information about scientists in this area of research.

M.V. Zharikova

Peoples' Friendship University of Russia, Moscow

The Analysis of Integration Process in Europe: Euro-Optimism vs. Euro-Skepticism

Keywords: Euro-optimism; Euro-skepticism; Euro-pessimism; European Union; integration processes; European integration; international economic integration; economic cooperation; globalization.

page 91-95

Abstract: In the article the author examines the main problems related to intensification in the European integration, and studies two opposite points of view on the problem from the economic perspective. The current condition of the integration processes in the world is given in this research in line with the economic advantages for integrated economies. Additionally, the reasons for the euro-skepticism were analyzed and statistically proved.

R.F. Ildarkhanov, A.A. Buguev, A.S. Zakharov, E.S. Popov

Naberezhnye Chelny Institute – Branch of Kazan (Volga region) Federal University,

Naberezhnye Chelny

Quality Assessment of Motor Vehicles

Keywords: quality; competitiveness; quality factor; cars.

page 96-99

Abstract: The paper describes the quality assessment of motor vehicles. The author proposes analytical formulas to determine the quality factor. The calculated quality indicators of the compared semitrailer tractors are given.

M.V. Korotkova, S.O. Nikitina, E.E. Cherkas

Ulyanovsk State Pedagogical University named after I.N. Ulyanov, Ulyanovsk

Ways of Increasing the Efficiency of Forms and Methods of Regulating Economic Clusters: Regional Aspect and Management Solutions

Keywords: municipal corporation; municipal government; municipal services; regional economic cluster; economic management; operational management; municipal property.

page 100-103

Abstract: The paper deals with the issues of improving the management efficiency of regional economic clusters; management methods, organizational and economic mechanisms of regional cluster management are discussed.

E.V. Korytova

East Siberian State University of Technologies and Management, Ulan-Ude

Changing the Approaches to the Content of Minimum Wage: Case study of the Republic of Buryatia

Keywords: wages; minimum wage.

page 104-107

Abstract: The article gives an overview of changes in the approaches to the definition of the minimum wage in the Russian Federation; the problem of determining the level of the minimum wage in the Republic of Buryatia is discussed.

N.G. Leonova, N.D. Shishkova

Pacific National University, Khabarovsk

Pension Problems of Russia and Other Countries: Comparative Analysis

Keywords: pension; average pension accruals; GDP; pensioners; correlation analysis; crisis; inflation rate.

page 108-110

Abstract: The author explore the factors influencing the level of average pension accruals. We calculated linear regression parameters which are used to construct the pension model.

S.V. Ogneva

Institute of Tourism and Hospitality – Branch of Russian State University of Tourism and Service, Moscow

The Relationships between Government and Business to Ensure the Quality of Services

Keywords: quality of services; interaction of government and business; business confidence.

page 111-117

Abstract: The article considers the link between the goals of the government and business in ensuring the quality and safety of products and services aimed at improving the quality of life. The necessity of changing the government's role in market relations and the development of relationships aimed at increasing businesses' trust in actions and measures of state regulation.

The authors proposed to use market mechanisms aimed at ensuring the quality and safety of products and services, such as outsourcing and self-regulation.

B.D. Ochirov

Buryat State University, Ulan-Ude

Economic and Social Resources for Regional Development to Improve its Competitiveness

Keywords: economic resources; social resources; region; development of unique resources.

Abstract: The article discusses the resource base of the regional development. Economic and social resources as complementary parts for the development have been allocated. The necessity of the integrated use of unique resources has been discussed.

page 118-120

A.A. Savelyev

Plekhanov Russian Economic University, Moscow

Economic Integration in South-East Asia and its Implications for Development of Intra-Regional Investment Cooperation

Keywords: ASEAN; capital movement; investment cooperation; foreign direct investment (FDI); regional economic integration.

Abstract: The article dwells on the main stages of economic integration in South-East Asia. The author reveals that the economic integration of the region had a major impact on the intensification of intra-regional investment cooperation (in contrast to intra-regional trade). Almost complete elimination of tariff barriers in intra-regional trade and the provision of national investment regime in most sectors of the economy to the regional investors in 2010 contributed to a rapid increase in intra-regional foreign direct investment flows. The main investors within ASEAN are more developed countries such as Singapore and Malaysia. They receive a number of benefits associated with the possibility of using cheaper resources (raw materials, labor) in less developed Southeast Asian countries. In turn, less developed countries have access to financial resources of more developed countries of the region. The main beneficiaries of increased intra-regional FDI flows resulted from deepened economic integration are the countries attractive to resource-oriented and efficiency-oriented investors.

page 121-126

S.V. Sevryukova

Branch of Moscow Psychological and Social University, Bryansk

Modeling of Transformational Mechanisms for Formation of Organized Savings

Keywords: model of savings behavior; income; savings; savings activity.

Abstract: The article considers the possibility of modeling of unorganized savings in population and turning them into organized regulatory instruments for attracting investments into the economy of the country.

page 127-130