

ABSTRACT&REFERENCES

DOI: 10.15587/2313-8416.2017.118424

IMPROVEMENT OF THE MECHANISM FOR MATERIAL SUPPLY FOR THE UNITS OF THE NATIONAL GUARD OF UKRAINE

p. 6-8

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The article proposes the improvement of the mechanism of material support of the units of the National Guard of Ukraine on the basis of the design of logistics chains of materials supply. The analysis of components of the real supply as a logistic product is carried out. The characteristic features of materials in the structure of supply chain logistics are investigated. The influence of exogenous and endogenous factors on the material supply of the National Guard of Ukraine as a distribution product is analyzed. A complex of strategic administrative measures for improving the mechanism of material supply of units of the National Guard of Ukraine is formed

Keywords: material supply, military unit, exogenous factors, endogenous factors, logistic chains

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DOI: 10.15587/2313-8416.2017.118216

THE PROBLEM OF PRESERVING CULTURAL HERITAGE IN 20-30 YEARS OF XXTH CENTURY

p. 9-13

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This article examines the prerequisites for the destruction of monuments of history and culture, characterized by a total totalitarian-administrative period, voluntaristic attitude to monuments and national traditions. The protection of cultural heritage should be the main task of the state, which always needs to be strengthened, it should be an important part of the state policy in the field of culture. It is the cultural heritage of the state that is an important link of national identity, historical memory and educating of national consciousness

Keywords: historical and cultural heritage, domestic historiography, destruction of monuments, preservation of cultural and historical values, power, totalitarian regime

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DOI: 10.15587/2313-8416.2017.118384

RESEARCH OF CORD BLOOD CELL CRYOSENSITIVITY: COMMUNICATION WITH DISTINCT BLOOD GROUP ANTIGENIC DETERMINANTS

p. 14-20

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The article is devoted to the search for possible links between the individual characteristics of the umbilical cord blood donor phenotype (the AB0 and Rh – belonging) and the keeping of cellular content during cryopreservation. The presence of such connections with the stability of red blood cells and erythroid progenitors has been revealed. The predicting of the risks for the quality reducing during storage will prevent the development of adverse effects by implementing of the additional cryoprotection measures

Keywords: umbilical cord blood, cryopreservation, AB0-group and Rhesus – belonging

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DOI: 10.15587/2313-8416.2017.119017

SPECIFICITY OF THE CONTENT OF THE PROFESSIONAL COMPONENT IN THE VERBALIZED PICTURE OF THE FUTURE OF EMBROIDERERS

p. 21-25

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The article presents the results of the study of three groups of adolescence according to the modified method Yu. Hilbuch "Epistolary product" in the framework of the scientific research "Psychological peculiarities of the formation of ethnic consciousness in adolescence by means of Ukrainian folk embroidery". The attitude of knots to embroidering as the basis of the chosen embroidery profession, which is reflected in the picture of the ethnic consciousness of the latter, is researched using this technique

Keywords: *ethnos, consciousness, phonosemantics, scale, features, emotionality, color, future, profession, embroiderer*

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DOI: 10.15587/2313-8416.2017.118803

RESEARCH OF NITROGEN REGIME AND HUMUS STATE OF BLACK SOILS DEPENDING ON SOIL TILLAGE TECHNOLOGIES

p. 26-29

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The influence of combined and zero soil tillage on the dynamics of nitrate and alkaline hydrolyzed nitrogen, the content of the total humus of common black soils under different systems of fertilizing grain crops of crop rotation are studied. The positive effect of minimum soil tillage on the content of moving nitrogen forms and the preservation of common humus in the arable layer of soil are determined

Keywords: nitrogen regime, humus, soil, soil tillage, nitrates, grain crops

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DOI: 10.15587/2313-8416.2017.118921

METHODOLOGICAL BASES OF INTELLECTUAL PROCESSING OF KNOWLEDGE

p. 30-36

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The paper considers the application of universal information technology of processing of knowledge which at the expense of theoretically reasonable methodology of processing of knowledge will allow to process and withdraw new valuable information. There are offered the methodological bases of processing of knowledge at the level of formalization by means of which are described naturally speech information and methods of its receiving. Development of methods of automatic segmentation of a compound sentence and ways of programming allow to solve an applied problem applying to text

Keywords: information systems, information technology, models and methods of information technologies, natural language constructions

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DOI: 10.15587/2313-8416.2017.118801

INVESTIGATION OF PHASE COMPOSITION AND ELECTRICAL CHARACTERISTICS OF NANOCRYSTALLINE ZINC OXIDE, DOPED BY TRANSITION METALS

p. 36-42

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The prerequisites for the use of transition metals as alloying elements in the nanopowder zinc oxide synthesis are considered. The doping effect with nickel, manganese and cobalt on the sintered materials, based on nanocrystalline zinc oxide, phase composition and dielectric conductivity is studied. The research results can be used in the development of obtaining modern materials effective technologies for electrical engineering purpose with enhanced functional properties

Keywords: nanostructured materials, zinc oxide nanopowder, doping, phase composition, dielectric conductivity

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DOI: 10.15587/2313-8416.2017.118212

DEVELOPMENT OF AUDIO-VISUAL SPEECH RECOGNITION SYSTEM

p. 42-47

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A model of the audiovisual system based on the hidden Markov models is proposed, which allows recognizing the lan-

guage in real time. The model provides a language recognition tool that can be used in conditions where other means may not be possible, for example, in the absence of an audio component. The model is researched and tested on the example of digital recognition, expected results are obtained

Keywords: audiovisual system, hidden Markov models, viseme, coupled hidden Markov models

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DOI: 10.15587/2313-8416.2017.118799

DEVELOPMENT OF TOOLS TO SUPPORT DATA FLOW DIAGRAMS ANALYSIS PROCESS

p. 48-53

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Basic features of existing business process management systems, their role in automation of organizational knowledge storing and sharing activities, represented by business process models including data flow diagrams, have been considered. Tools used to support data flow diagrams analysis process under business process management system Bizagi have been developed

Keywords: data flow diagrams, business process management systems, modeling, analysis, tools

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DOI: 10.15587/2313-8416.2017.118793

COVERAGE OF PEAK LOADS IN ELECTRICAL NETWORKS DUE TO THE UTILIZATION OF PRESSURE DROP ON THE GAS DISTRIBUTION STATIONS

p. 53-57

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The reduction of natural gas pressure at gas distribution stations and points is associated with a loss of energy. Installing an expander to utilization of the pressure drop allows to use this energy. But due to a significant gas temperature reduction after the expander, it is necessary to increase the amount of fuel gas for preheating. The authors performed a fuel-economic calculation to compare the balance between costs and energy production in cash equivalents

Keywords: GDS, GDP, GTS, electricity generation, energy utilization, pressure drop, natural gas

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DOI: 10.15587/2313-8416.2017.117920

GEOMETRIC MODEL OF MOBILE DEVICE TO LAUNCH UNMANNED AERIAL VEHICLES

p. 57-62

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A geometric model of the trebuchet-type mobile metal launching device, designed for launch (catapult) of small unmanned aerial vehicles, is developed. Structurally, the launch mechanism is coupled with a car that facilitates its mobility. In addition, the car itself is used as a counterweight in the trebuchet design. The calculations of the motion of the launch mechanism are made using the Lagrange equations of the second kind. The test calculations are given

Keywords: *geometric model, unmanned aerial vehicle, trebuchet, Lagrangian, Lagrange equation of the second kind*

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DOI: 10.15587/2313-8416.2017.118409

INTEGRATED TECHNOLOGIES AND PHYSICO-CHEMICAL PROPERTIES OF THE POWER IMPULSE OF THE PULSE ARC FOR DEFECTS IN WELDING OF ALUMINUM ALLOYS

p. 62-66

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The influence of the pulse arc welding force by a non-consumable electrode in the inert gas atmosphere (argon) on the

weld metal during the process of welding of aluminum alloys is investigated. In particular, the issues of the power effect of pulse-arc welding on the degassing of the weld pool and the destruction of surface oxide films in the zone of influence of the welded seam when joining products made of aluminum alloy AMg6 by welding are considered

Keywords: pulse arc welding, electrode, argon, aluminum, welding pool, films, arc impact

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DOI: 10.15587/2313-8416.2017.118298

QUADRATIC SIEVE ACCELERATION BASED ON THE SEARCH OF ADDITIONAL B-SMOOTH NUMBERS

p. 67-71

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The quadratic sieve method is the fastest for integers under 100 decimal digits or so. To get the best speed and less amount

of memory it is necessary to successfully choose the size of factor base and sieving interval. This paper describes method, which will allow to reduce size of factor base and sieving interval without reducing the size of B -smooth numbers

Keywords: quadratic sieve method, additional B -smooth numbers, factor base, sieving interval

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DOI: 10.15587/2313-8416.2017.118277

DEVELOPMENT OF ENERGY-SAVING ELECTRICAL HEATING SYSTEMS WITH NIGHT HEAT ACCUMULATION

p. 71-76

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It has been proposed a special method and program for electrical heating systems with night heat accumulation calculation as well for determine the monthly heat consumption of the building and estimate the cost of heating using different energy resources (centralized heat supply, gas heating, pellet heating).

It has been found that the cost of electric heating with night heat accumulation is two times lower than in the case of centralized heat supply

Keywords: energy saving, electrical heating, night heat accumulation, cost of different energy resources

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DOI: 10.15587/2313-8416.2017.118284

METHOD OF CONVERTING A SET OF POSSIBLE SOLUTIONS IN THE THEORY OF DECISION-MAKING

p. 77-81

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The problem of multi-criteria choice is considered in the paper, which are first reduced to single-criterion and then to the linear programming problem. For the effective solution of the problem provides a method of converting a set of possible solutions (the corresponding domain of admissible solutions) by eliminating from consideration deliberately unpromising alternatives with the opportunity to further their directional search. Numerical results of algorithm work are given in the presence of three to five criteria

Keywords: decision theory, multi-criteria problem, set of possible solutions, convex hull

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DOI: 10.15587/2313-8416.2017.118281

DETERMINATION OF TIME DELAYS OF THE WAVES IN PROBLEMS OF ACOUSTIC LOCATION

p. 82-85

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In the article the problem of acoustic location is considered – the question of determining the relative time delay between received acoustic waves. In case of lack of hindrances it is offered to use the way based on creation of hypothetical transient function between receivers. In the presence of hindrances the way of creation of mutual correlation function with application of Gilbert transformation is offered. Theoretical justifications of the offered ways and their model researches for pulse signals are given

Keywords: acoustic location, direction finding, time delay, correlation function, impulse transition function

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DOI: 10.15587/2313-8416.2017.117676

RESEARCH OF A MOVING CRACK IN ANISOTROPIC MATERIAL

p. 85-89

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The problem of determining the stress-strain state in the vicinity of the Ioffe crack moving with a steady velocity in an elastic homogeneous anisotropic space under the action of a concentrated load applied to its shores, which moves along with the crack, is solved. Using the method of generalized complex potentials, a system of linear conjugation problems

is obtained, which are solved analytically by the corresponding algorithm

Keywords: moving crack, anisotropic space, stresses, linear conjugation problem, complex potential

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DOI: 10.15587/2313-8416.2017.118874

INTEGRATION OF SINGULARLY PERTURBED SECOND ORDER DIFFERENTIAL EQUATIONS BY DOUBLE SERIES

p. 89-93

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A short historical analysis of the problem of constructing asymptotic solutions of linear differential equations and systems with a small parameter is presented. The method of integrating singularly perturbed differential equations of the second order by double series is developed. This approach is based on the construction of the investigated equation to

the corresponding singularly perturbed linear system of differential equations. The advantages of applying the theory of double series are emphasized

Keywords: differential equation, double series, small parameter, formal solutions, asymptotic solutions

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DOI: 10.15587/2313-8416.2017.118942

FORGIVENESS OF LOAN DEBT (PROBLEMATIC ISSUES OF JUDICIAL PRACTICE)

p. 94-98

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In this study, the analysis of judicial practice and normative documents regarding the forgiveness of debt by the creditor is carried out; the tax consequences of such actions for the debtor are studied.

Particular attention is paid to the aspects of double liability and situations in which the creditor conducts forgiveness of the debt solely on the grounds of receiving a tax refund, while continuing to recover the formally forgiven debt

Keywords: *normative acts, dual responsibility of a person, restriction of the rights of citizens and business*

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