

## ABSTRACT&REFERENCES

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### **ENERGY MODERNIZATION OF RESIDENTIAL HOUSES AS A CHALLENGE OF MODERN**

**p. 6-18**

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*The work is devoted to studying the need for thermo-modernization and improving the energy efficiency of the housing stock of Ukraine. The statistics of energy consumption by buildings of various types is analyzed. Thermal modernization measures necessary to reduce the cost of heat consumption are described. The economic feasibility of the reconstruction of certain types of residential buildings is determined, taking into account their energy efficiency. The main architectural planning and design techniques to improve energy efficiency on the example of building in the central part of the Kharkiv are implemented*

**Keywords:** energy saving, energy-efficient house, thermal capacity, energy efficiency, passive house, energy consumption criterion, energy modernization

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### **ANALYSIS OF METHODS, MODELS AND ALGORITHMS OF PERSONALIZATION FOR THE RECOMMENDER SYSTEMS DEVELOPMENT**

**p. 19-29**

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*In the article the methods, models and algorithms of personalization in the digital environment are investigated. The general characteristic of types of recommender systems, their methods, models and algorithms, advantages and disadvantages of application are given. The paper proposes to use taxonomy of knowledge for creating an intelligent personalization application to support the adoption of marketing solutions for enterprises in the digital environment. Additional data sources have been allocated to create recommendations*

**Keywords:** *personalization, methods, models, algorithms and taxonomy of knowledge for recommender systems*

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### THE USE OF CHOLISTIC MARKETING AS A CONDITION OF EFFICIENT MANAGEMENT BY INDUSTRIAL ENTERPRISE

p. 30-35

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*The strengthening of the role of marketing in the management system of an industrial enterprise are revealed in the article. The main factors and conditions contributing to the increase in the efficiency of management in the enterprise are investigated. Significant external and internal conditions of using marketing concepts are systematized. The level of marketing orientation of the enterprise is determined depending on the external and internal conditions. It is concluded that industrial enterprises need to use the concept of holistic marketing as the most promising*

**Keywords:** industrial enterprise, marketing concepts, holistic marketing, external factors, internal factors

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### **THE METHOD OF JOINT DETERMINATION OF THE HYDRAULIC PERMEABILITY OF A POROUS STRUCTURE AND ITS CAPILLARY RADIUS**

**p. 36-40**

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*A new method for joint determination of the hydraulic permeability of a porous structure and its capillary radius based on the Unarokov equation is developed., describing the kinetics of fluid absorption into a capillary-porous sample against gravity. The determination of these physico-technical characteristics of the porous structure is carried out on the basis of the results of two measurements of the coordinate of the motion of the capillary front and the time of the process in the framework of the experiment on absorbing liquid into the sample. The calculation of the hydraulic permeability and the capillary radius of the porous structure are based on the exact approximation of the Unarokov equation obtained in this paper by the Newton's binomial*

**Keywords:** *porous structure, permeability, capillary radius, absorption kinetics, Unarokov equation, approximation*

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### **CREATION OF METHOD AND SCHEMES FOR SUPPRESSION OF OUT-OF-BAND INTERFERENCE**

**p. 41-44**

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*Theoretical substantiation of the adaptive algorithm of suppression of out-of-band interference is given. Substantiation is based on the method of signal isolation from the background of additive interference. The essence of the method is in passing a mixture of signal and interference through a filter in which interference is suppressed while the signal practically does not change. In order to estimate the efficiency of the scheme of the additive compensator for out-of-band interference and to calculate the output signal-to-interference ratio the method of minimum mean square error is used*

**Keywords:** *out-of-band interference; interference suppression filter; signal/noise at the filter output; mean square error*

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### PRACTICAL RECOMMENDATIONS FOR THE CALCULATION OF CORNICE KNOTS OF CURVED GLUED FRAMES MADE OF GLUED WOOD, TAKING INTO ACCOUNT THE COMPLEX STRESS STATE

p. 44-53

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*On the basis of experimental data, the coefficients  $A_p$ ,  $A_c$  and  $B_{c.c.90}$  are specified for the strength of the cornice knots of the curved glued frames. Practical recommendations for calculation of cornice knots of curved glued frames are considered, taking into account the complex stressed state of glued wood, and the dangerous points along the length of the cornice knot for different correlations of the curvature of the cornice knots  $r/h$  and  $h_{max/L}$  are set. Flow charts for calculation of curved glued frames with correlations of curvature of cornice knots  $r/h < 4$  and  $r/h \geq 4$  have been developed*

**Keywords:** *glued wood, stress-deformed state, cornice knot, curved glued frame, complex stress state*

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## INVESTIGATION OF THE SOLVENT SUBLIMATION PATTERNS OF CATIONIC DYES

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*The basic regularities of removal of cationic dyes are established. The optimal collectors and absorbents are selected. The effect on the sublation process of the following parameters is studied: the type of absorbent, sublation duration, dyer:surfactant molar ratio, pH value of the aqueous phase, initial concentration of solutions of dyes. The highest degree of removal methyl violet, malachite green and crystalline violet is achieved with sodium dodecyl sulfate 97,43 %, 95,78 % and 98,94 % respectively, the optimal pH value is 5–7, dyer:surfactant ratio is 1:1, the duration of the process is 20 minutes, the volume of the organic layer is 10 cm<sup>3</sup>*

**Keywords:** dyes, solvent sublation, sodium dodecyl sulfate, malachite green, methyl violet, crystalline violet

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