

UDC 72.01 A. V. Korotich*

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THE PRINCIPLE OF THE UNIVERSALITY OF FORM IN DESIGN AND CLASSIFICATION OF REGULAR DISCRETE STRUCTURES

The article develops some topical aspects of geometric shaping of regular discrete structures in various areas of design and architecture in the context of the principle of universality of form. Practical examples of multifunctional use of any abstract geometric models for various design objects are analyzed; at the same time, this analysis was carried out on the examples of author's developments. The systematization of regular discrete structures according to the most important morphological characteristics into seven groups is carried out: the set of structures that form these groups is distinguished by the highest technical efficiency, manufacturability of production and artistic expressiveness. Keywords: design, regular discrete structure, universal form, multifunctionality, geometrical model, morphological features, spherical surface, folded shell, lattice structure, technological efficiency, algorithm.

UDC 72.037 N. G. Druzhinkina*

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FUTURISTIC TRENDS IN MODERN JEWELRY ART: THE PROBLEM OF ARCHITECTONICS OF THE FORM OF ARCHITECTURE, PAINTING, DESIGN

This article is devoted to the influence of the Futurism style on the development of architecture, painting, jewelry art. The configurations of the architectural fantasies of Sant'Elia echo the paintings of Italian and Russian futurists and switch to plastic and decorative and applied art. The mutual influence and interpenetration of the architectonics of the forms of futurism contributes to the development and renewal due to modern technical achievements. Keywords: futurism, design, architecture, painting, jewelry art

UDC 174.4 R. I. Mamina, E. V. Pirainen*

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PERSONAL BRAND AND BRANDING IN THE AGE OF DIGITAL TECHNOLOGIES

A personal brand and its specificity in the digital age are considered. Every electronic person has its own electronic profile and an electronic reputation now. This reputation is mobile and open, so we need to create a personal brand that will be trust and we need be able to manage our personal brand and reputation. Keywords: self-presentation, personal brand, authentic brand, branding, image, reputation, digital technologies

UDC 74.01/.09 V. L. Zhukov*, A. M. Smirnova, E. I. Parfenova

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STUDY OF THE INFLUENCE OF THE DYNAMICS OF TECTONIC PLANETARY EURASIAN PROCESSES IN THE CREATION OF THE IMAGES OF THE PERFUMES «FORGE OF HEPHAESTUS» AND «KUNLUN» IN THE ECLECTIC WITH PLASTIC ARTS

Cognitive modeling of images of design objects represented by ensembles of jewelry as visual cognitive information dynamic systems (VKIDS) with locally stable structures (LSS) imitating geological planetary processes was carried out. Keywords: image, design, volcanoes, cognitive technologies, Eurasia, mythology of ancient Greece and China

UDC 7.079 E. S. Prozorova*, L. A. Dzhikija

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MULTI-DISCIPLINARITY IN DESIGN AS A VECTOR OF EDUCATION DEVELOPMENT

The article reveals the importance of interdisciplinary approaches in modern design education based on the implementation of cross-border cooperation Russia — South-East Finland project «Contents for cross-cultural events» (C3E) and the development of new international educational programs. The results of interaction between students and teachers with the involvement of international experts and creative youth from Russia and Finland, the use of digital tools in design and communication, collaboration in the framework of creative industries are considered. Keywords: design, interdisciplinary collaborations, creative multimedia, design thinking, cross-cultural communication

UDC 74.01/.09 V. L. Zhukov*, A. b. Kirillova

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ANTHROPOGENESIS OF IMAGES OF DESIGN OBJECTS FOR ACCESSORIES OF CHESS ART RELEVANT TO THE WORK OF H. F. LOVECRAFT

The modern forms of chess have to become the domination module of interior environment composition. Such compositions are still able to show not only particular properties of their times but also the innovation ideas based of cognitive technologies and linguo-combinatorial method. Further development of images of these particular types of logic games rest on a base elements hybridization and temporal models Visual Cognitive Information Dynamic System with Locally Stable Structures (VCIDS with LSS) procreates innovation style-forming game properties during the current interaction with cyberspace. The facts above lead us to necessity of researching intellectual games styling images design process. The cornerstone of these games is an art of chess which acts as simulation model of logic rational actions. Keywords: science, chess art, design, interior, time measurement tools, symbolism, cognitive technologies

UDC 739:621.01/03 L. T. Zhukova^{1*}, S. E. Petrova^{1, 2} 1 Saint-Petersburg State University of Industrial Technologies and Design, Saint Petersburg, Russia 2 M. K. Ammosov North-Eastern Federal University, Yakutsk, Russia

MECHANISMS WITH A SPRING TO TRANSFORM THE APPEARANCE OF JEWELRY

The paper considers jewelry with spring mechanisms for the transformation of appearance. Based on the results of the study, the classification of mechanisms with a spring for transforming the appearance of jewelry and an algorithm for designing modified jewelry with a spring mechanism have been developed. Keywords: mechanisms, changing jewelry, design, engineering

UDK 535.6.07 E. M. bashenina, M. M. Chernykh*, A. A. Zagoruiko

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MATERIAL SELECTION OF THE SCREEN OF INTERACTIVE DEVICE IN THE FIELD OF COLORISTICS

The article examines various materials that scatter light, and the method of expert assessments selects a rational material for built-in screen of device to study the addition and subtraction of color and light dispersion. Keywords: coloristics, scattering power, scattering capability, built-in screen, expert assessment method

UDC 675.035 D. K. Nizamova*, G. R. Rakhmatullina, V. P. Tikhonova, R. F. Akhverdiev

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STUDY OF THE INFLUENCE OF SILVER NANOPARTICLES AND NON-EQUILIBRIUM LOW-TEMPERATURE PLASMA ON THE QUALITY OF SKIN FROM SALMON SKINS

The paper considers the possibility of using silver nanoparticles and plasma modification in the technology of leather production from salmon skins. Keywords: fish skin, silver nanoparticles, salmon, non-equilibrium low-temperature plasma, contact angle, mechanical properties

UDC 687.023 A. M. Korinteli*, I. V. Cherunova

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METHODOLOGY FOR DETERMINING THE FUNCTIONAL COMPLIANCE OF CAD SYSTEMS FOR THE DESIGN OF WORKWEAR

The article substantiates the CAD selection methodology, taking into account the peculiarities of the work of a sewing enterprise specializing in the production of workwear. Based on the conducted research, the paper presents an algorithm for the formation of special requirements for CAD, taking into account the characteristics of the design object at the enterprise. Keywords: personal

protective equipment, computer-aided design systems, algorithmization, clothing industry, clothing design

UDC 74.01/.09:159.93:001.8 j. A. Munkhanova, T. S. beketova*

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EXPLORING THE PREFERENCES OF THE TARGET AUDIENCE OF A DESIGN PRODUCT bY THE METHOD OF SEMANTIC DIFFERENTIAL

The article discusses the experience of practical application of the semantic differential method in pre-project design research. Despite its popularity in sociology, marketing, and other fields of science, psychosemantic methods have limited application in design. At the same time, determining the most preferable (for the target audience) visual solution remains an important practical task, and therefore it seems relevant to develop an appropriate psychosemantic approach. Keywords: design, semantic differential, psychosemantics, target audience, questionnaire, survey, sports emblem, logo

UDC 677.025 G. Sh. Allaniyazov, G. Kh. Gulyaeva*, N. M. Musaev, M. M. Mukimov

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TECHNOLOGY FOR PRODUCING NEw STRUCTURES OF TwO-LAYER KNITwEAR

The article presents the results of scientific work devoted to the study of the influence of the structure of knitwear on its dimensional stability and other quality indicators. Structures and methods were developed for the production of 5 variants of two-layer knitwear, which differed from each other in structure. Samples of two-layer knitwear were produced on a Long Xing 252SC flat-fanged machine. Keywords: two-layer knitwear, production technology, press sketches, flat-fanged machine, weft thread

UDC 7.036.5: 673.3 L. S. Karasev¹, S. A. Shorokhov¹, D. M. Tsvetkov¹, S. I. Galanin¹, D. A. Shatsillo² ¹ Kostroma State University, Kostroma, Russia ² LLC «Minicub», Volgograd, Russia

USE OF PHOTO-CURABLE POLYMER MINICUBE FIRE 2HD FOR 3D MODEL MAKING IN ARTISTIC CASTING bY MELTING MODELS

This article presents a study of properties of the photo-curable polymer Minicubefire 2HD when it is used for making 3D-models for the art casting. Deviations in the size of castings and models from the drawing, hygroscopicity and burnability of the material under the conditions of typical regime of casting molds hardening were determined experimentally. Keywords: photopolymer; photopolymer burnout, photopolymer hygroscopicity, 3D-printing, photopolymer shrinkage, geometrical deviations in 3D-printing, prototyping, additive technologies, artistic casting by melting models

UDC 7.02 E. N. Tugolukova*

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INTERIOR SOLUTIONS BASED ON COGNITIVE MODELING BASED ON THE WORK OF FAUVIST HENRI MATISSE WITH THE USE OF STYLIZATION IN PASTEL TECHNIQUE

The study of cognitive processes of creating interior solutions using art panels made using stylization methods in the pastel technique on the example of A. Matisse's creativity in open and closed cyber-physical systems. Keywords: design object, pastel, creative realization, interior, exterior, design, composition, dominant center

UDC 745.52 T. A. Karyuk*

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THE DISTINCT FEATURES OF STUDIO LOJA SAARINEN'S TEXTILES AT THE CRANBROOK ACADEMY OF ART

Studio Loja Saarinen's textile design at the Cranbrook Academy of Art is considered to be an outstanding phenomenon of applied arts of the 20th century. Despite the uniqueness of textile patterns, the work of Studio Loja Saarinen is often beyond the research interest.

The article considers the main decorative principles and technological aspects of fabrics, created by Loja Saarinen and other weavers. It analyzes Studio's work, studies the decorative motifs of certain textiles, describes their stylistics and reveals its origins. Keywords: textile, textile design, rug, L. Saarinen, Cranbrook Academy of Art, design

UDC 7.02 T. Yu. Deryabina*

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DESIGN OF THE EASTER HOLIDAY ATTRIBUTE. EASTER EGG

Theoretical and experimental research in the field of Easter egg design was carried out. Materials and technological methods of church embroidery are used for the design-design of Easter eggs decor. Keywords: Easter egg, design, décor

UDC 7.03 N. Y. Shkandrii*

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THE PLACE OF ART IN PAINTING

This article examines the history of imprimature in painting and its place in the training of designers. In painting, the preparation of the surface for work is of prime importance, since it lays the tonality, color and safety of the work in the future. The use of natural materials for the basis for painting is considered separately. The works of old masters that have survived to this day are given as an example. The article also examines the impact of new technical capabilities on the educational process. Keywords: painting, base, primer, imprimatura, color, art, host, design

UDC 539.434: 677.494 M. A. Egorova, I. M. Egorov, A. A. Kozlov, V. I. wagner*

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MATHEMATICAL MODELING AND PREDICTION OF DEFORMATION PROCESSES OF NON-wOVEN MATERIALS

The issues of spectral modeling and prediction of deformation processes in nonwovens, including complex deformation-recovery processes, are considered. The mathematical model of deformation processes in nonwovens is based on the spectral-time theory of the smallness of the delay times. The introduction of confidence-based forecasting methods for the deformation processes of nonwovens is simplified due to their computerization. Keywords: mathematical modeling, forecasting, nonwovens, deformation processes, recovery processes

UDC 539.434: 677.494 N. V. Pereborova, A. G. Makarov*, E. I. Chalova, K. N. busygin

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SPECTRAL ANALYSIS OF DEFORMATION AND REDUCTION PROPERTIES OF NON-wOVEN MATERIALS

The article deals with the issues of spectral analysis of the deformation and recovery properties of nonwovens, which are widely used in various areas of the economy. An important direction in the study of the deformation and recovery properties of nonwoven materials is the identification of elastic, viscoelastic and plastic components of the deformation of these materials. Keywords: spectral analysis, mathematical modeling, forecasting, nonwovens, deformation processes, recovery processes