

Summary

**N. V. Biley-Ruban, E. V. Sedouhova,
E. V. Galushchak**

STRUCTURIZATION OF A FASHION AND ITS INTERRELATION WITH CHARACTERISTICS OF REFERENCE GROUPS

In article elements of structure of a fashion with allocation of characteristic values in clothes and textiles fashion are systematized. The course of emergence of theories of a fashion with allocation of their founders and a conceptual orientation is analysed. The interrelation of the maintenance of each of theories with the reasons changing a fashion as process is visualized. On the basis of theories «trickle up» and «trickle down» are considered and analysed existing reference groups, the morphological analysis of which style features allows to synthesize the new ideas necessary for a practical embodiment of a design forecast of a youth fashion.

Key words: fashion structurization, characteristic of reference groups, morphological analysis, a style features, design-prognosis, youth fashion.

L. I. Galavska, T. V. Ielina

PROSPECTS OF THE USE OF THREE- DIMENSIONAL GEOMETRICAL MODELS OF THE KNITTED FABRIC STRUCTURES IN DESIGNING OF KNITS WITH THE PREDICTED PROPERTIES

In the article the theoretical aspects of possibility and expediency of the use of three-dimensional geometrical models of structure of the knitted fabrics in computer-aided design are considered, envisaging prognostication of the consumer properties of wares during the design process.

Key words: 3D-modelling, knitted fabric structures, geometry of the axial line of thread, knitted fabrics with the predicted properties, CAD of knitted fabrics.

D. V. Semenihih, N. E. Milchakova

PROCEDURAL DESIGN ORNAMENT WITH L-SYSTEMS

The article describes the method of application of fractals in the design of products with ornament and optimize the process of editing and selection of variants of a pattern. An algorithm for the construction of a procedural model of the product in the program Houdini.

Key words: design, fractals, procedural, L-system, Houdini.

V. I. Kumanin, N. E. Milchakova

THE MAIN STAGE OF FORMATION DESIGN IN RUSSIA

This article describes the basic stage of becoming design in Russia and also was defined a new stage in the development of design in recent decades. In Given article is shown the role of materials and technology in the development of design.

Key words: design, materials, technology, industrial design.

**V. L. Zhukov, V. V. Zhukov, Y. O. Cal-
las, G. Y. Osipova, V. A. Hmyznikova**

COGNITIVE MODELLING IN TECHNICAL AND AESTHETIC DESIGN

The theoretical and practical research of processes of cognitive modeling, design objects and their images. Opredelëny signs graphic patterns, properties that can be used in the design of objects of design

Key words: cognitive modelling, prototyping, pattern, image, object design, domain objects of design.

K. S. Ivshin

ERGONOMIC DESIGN MINI VEHICLE

Defined groups of factors ergonomic design of mini vehicle. The classification schemes ergonomic of mini vehicle. Borrowing and combining car and moto ergonomics in the design of the mini vehicle brings new ergonomic solutions in this segment. Conclusions and recommendations of the articles are approved in the design options and prototypes of mini vehicle.

Key words: design, vehicles, ergonomic scheme, factors, classification.

L. A. Terskaya

MODERN METHODS OF DESIGN FUR PLATE

The article is devoted to the arrangement and description of modern methods of design fur plates which provide new opportunities for using fur in different fields of light industry, making it a popular and adapted to the modern way of life.

Key words: design technology, fur plates, cutting techniques skins, design methods, the design center Saga Furs.

G. G. Harykovskaya, A. M. Medvedev
INCREASE OF EFFICIENCY OF EARLY STAGES DESIGN OF THE MULTIPURPOSE NURSERY OF CLOTHES WITH USE OF RESOURCE-SAVING TECHNOLOGIES

The article ways of increase of efficiency at early design stages of multipurpose children's clothes with use of methods of transformation and application of resource-saving technologies are investigated.

Key words: multipurpose children's clothes, transformation, useless space.

L. A. Koroleva, A. V. Podshivalova, V. I. Gabryuk

DEVELOPMENT OF STRUCTURAL AND INFORMATION MODEL OF PROCESS OF FUNCTIONING OF INTEGRATED CAD SYSTEM OF CLOTHING

This article contains the results of scientific research devoted to the actual question of modeling composition, structure, and functions of the system of automated designed clothing in whole and of its parts taking into account principles of integration and intellectualization. In the work presented and mathematically describe the structural-information model of the functioning of an integrated CAD clothes.

Key words: automated design of clothing, integration, intellectualization, modeling of systems.

L. T. Zhukova, K. S. Ponomareva

STUDY GROUPS COLORISTIC PROPERTIES OF MINERALS CHALCEDONY

The paper analyzes the characteristics of color varieties of chalcedony with pronounced uniform color. The classification of chalcedony in color. The causes of the natural colors of the various minerals of chalcedony and methods of artificial change

Key words: chalcedony, color, design.

N. L. Zhuravleva

ANALYSIS OF FUNCTIONAL KNITTING FOR NEW TYPE OF UNDERWEAR SUIT DEVELOPMENT FOR A SET OF PILOTS AND COSMONAUTS EQUIPMENT

The article describes the shortcomings of underwear, which is used in the equipment of pilots and astronauts; on this base the demands to the materials were defined in order to find suitable knitting for new type of underwear.

Key words: underwear, functional knitted fabric, special clothes, demands to the textile materials.

K. A. Molosnov, A. V. Aranovich, A. V. Truevtsev

THE USING OF COMPOSITES REINFORCED BY WEFT KNITTED FABRIC FOR COPYING THE HISTORICAL OBJECTS

The paper is devoted to investigation of possibility of copying the historical objects using textile composite. The method is proved by copying the infantry helmet M26 using the composite reinforced by polyamide plain knitted fabric.

Key words: knitted fabric, textile composite, helmet.

A. Gudelaytis, L. Zhukova

PRODUCTION OF JEWELRY BY THE METHOD OF THREE-DIMENSIONAL MODELLING WITH USE OF MODERN HI-TECH PROCESSES OF PROCESSING OF MATERIALS

This article holds a comparative analysis of the methods, tooling and materials used in filigree products. It examines the characteristics and applications of additive processes for manufacturing of filigree jewelry. It demonstrates the results of experimental and theoretical research of reproduction filigree by additive technology and three-dimensional scanning. Results of work will help to improve the knowledge in the application of additive technology by the jewelry industry.

Key words: filigree, jewelry, additive manufacturing, CAD-models, 3D-printing, selective laser melting.

A. Gudelaytis, L. Zhukova, E. Sisfontes

REPRODUCTION OF FILIGREE ELEMENTS USING ADDITIVE TECHNOLOGIES

This article holds a comparative analysis of the methods, tooling and materials used in filigree products. It examines the characteristics and applications of additive processes for manufacturing of filigree jewelry. It demonstrates the results of experimental and theoretical research of reproduction filigree by additive technology and three-dimensional scanning. Results of work will help to improve the knowledge in the application of additive technology by the jewelry industry.

Key words: filigree, jewelry, Additive manufacturing, CAD models, 3D-printing, selective laser melting.

**A. G. Makarov, N. V. Pereborova,
V. I. Wagner, S. D. Kuzmin**

**OPTION OF THE RANGE OF THE
HEREDITARY AND VISCOELASTIC
RELAXATION OF KNITTED ELASTOMERS
AND POLYMERIC THREADS FORMING
THEM**

In the developed theory of nonlinear and hereditary viscoelasticity of the focused polymers the question of analytical interrelation between a nonlinear and hereditary kernel of a relaxation and a deformation and time range of a relaxation becomes complicated in comparison with a similar question in the linear theory. In the present article the solution of this task in relation to knitted elastomers and polymeric threads forming them is in details stated.

It is shown that the relaxation range with sufficient degree of accuracy is characterized by the first approach — a relaxation kernel, and the subsequent approximations quickly meet to exact value of a range. Rather great real values of structural and sensitive parameter simplify a task about interrelation between a deformation and time kernel and a relaxation range: already the first approach can be considered close to the exact decision. In process of reduction of numerical values of the specified parameter the difference between the first and the second approximations increases, however, in the majority of real cases already the third or, as a last resort, the fifth approach quite enough.

Key words: relaxation, relaxation range, viscoelasticity, polymeric materials, mathematical modeling, knitted elastomers.

E. G. Grigorjeva

COMPLEX KNITTED STRUCTURES

The paper is devoted to the technology of complex jacquard fabrics, produced of curcular knitting machines. The structure of the fabric includes plain, rib and eyelet stitches.

Key words: complex jacquard structure, curcular knitting machines, consumer properties.

A. A. Azanova

**PLASMA MODIFICATION OF KNITTED
FABRICS**

The article shows the main effects of the plasma treatment: plasma treatment increases the wettability of the surface rough knitted fabric, so as bleaching and boiling. shows the results of coloring cotton knitted fabric with pre-treatment of low-temperature plasma.

Key words: knitted fabrics, plasma treatment, capillarity, coloring.

T. Y. Jeltoukhova, L. T. Zhukova

STONE PAINTING FROM CUBE MODULES

Considered a fulfillment technology of cube module mosaic from coloured stone. The main peculiarity of dialing artistic picture is careful convergence of stone textures in touching places with module elements. This technique provided to create pictures from nature texture and named stone painting.

Key words: cube module, russian mosaic, stone painting, texture, decorative surface.

**M. M. Chernykh, E. V. Kargashina,
A. V. Ladesov**

**INVESTIGATING SINGULARITIES OF
SATURATION COMPOSITIONS ARE
APPLIED FOR WOOD IMPREGNATION IN
AN ELECTRIC FIELD**

The article covers various points of view for sorption capacity of wood in relation to characteristics of wood structure. We found that characteristics of impregnation composition affect its penetration quality. We demonstrated that it is better to choose combination of aniline dye and brine solution with the smallest particle sizes of dispersed phase and the highest values (positive or negative) of ζ -potential.

Key words: wood, dye, saturation composition, sorption, colloid, ζ -potential, viscosity.

I. B. Kuzmina

**LIGHT-TO-DARK LAWS AND TONALNO-
GRAPHIC MEANS IN ARTS AND CRAFTS**

In article laws treatments of light and shade (natural phenomenon) and tone (art means), tonalno-graphic means and their value in arts and crafts are considered.

Key words: a treatment of light and shade, tone in drawing, graphic drawing, tonalno-graphic means and laws, arts and crafts.

O. A. Pechurina

**AT SOURCES OF TECHNOLOGIES OF
WEAVING: THREAD, SPINDLE AND
PRYASLITSA**

In the article for the first time an attempt is made to explain the origin of tools, used in the manufacture of ropes, and later yarn of vegetable fibre in the era of the late Palaeolithic and Mesolithic. Identification of spindles, coils, pryaslitsa and adaptations for a sucheniye of threads is carried out. This research will give the chance to understand an origin of technologies of weaving, their role in formation of culture of the person of the Stone Age.

Key words: weaving, rope, thread, spindle, coil, pryaslitsa.

M. A. Maximov

THE VYG-LEKSA COMMUNITY AS THE BIGGEST OLD BELIEVERS' POMORIAN SCRIPT STYLE TRADITION'S BOOK CENTER

The article examines the history of creation of book manufactories in the Vyg Old Believers' hermitage. The script school, its characteristic features, development processes are being examined. Stylistic methods' basics, technologies and artistic properties. The formation of Pomorian artistic style on Vyg as the center of Russian North book art traditions.

Key words: the Vyg community, Pomorian art style, script school, ornament, manuscript.

V. L. Zhukov, V. A. Hmyznikova

HOLOGRAPHY IN THE THEORY AND PRACTICE OF DESIGN AS AN INTERIOR

This paper studies the design objects that represent the dominant design in interior spaces, modules completed by registration of the visible part of the spectrum of coherent electromagnetic radiation-holography.

Key words: geometric and non-linear optics, lasers, holography, design, phase transitions, 3D-television.

M. S. Shirokovskikh

TEXTILE ART OF SWEDEN IN THE XV–XX CENTURIES: ORNAMENTAL MOTIVES AND TECHNICIANS

This article is about the particular characteristics of textiles, woven by artists, professional weavers and farmers in different regions of Sweden. The author notes the influence of traditional peasant culture on the development of original works of hand weaving. Outstanding textile artists of the twentieth century are listed.

Key words: embroidery, carpet, rolakan, bonad, hand weaving, Sweden, ornament, craft, peasant art, tradition, eight-pointed star.

T. Y. Deryabina, L. T. Zhukova

TRADITIONAL DESIGN OF THE CHURCH EMBROIDERY

It is investigated the influence of color, rhythm, invoice and method of the fixation of materials on the cloth to the aesthetical properties of the decor of the liturgical articles. Were examined basic the church of embroidery technique: by pearls, by cords, by gold thread, on the cardboard, by silk threads. For the scientific substantiation of the facts, fixed during the study the technician of church embroidery, it was proposed to carry color, rhythm, invoice and method of the fixation of materials on the cloth to the group of the technical

parameters of embroidery. The data base for the analysis of laws governing the transformation of the aesthetical properties of the decor of object under the effect of changes in the technical parameters of embroidery is formed. The obtained results of a study can be used during restoration and reconstruction of the artifacts, which are stored in the museums of Russia and for designing the contemporary liturgical articles.

Key words: church embroidery, design, dressing.

S. V. Mirzoyan

LENINGRAD HIGHER SCHOOL OF INDUSTRIAL ART

This article refers to the history of recreation, in the premises of the Central School of Technical Drawing of Baron Stieglitz, of Leningrad School of Industrial Art (formerly known as Baron Stieglitz School) with an eight-year term of study and with the department of three-year study for craftsmen (the last masters' graduation took place in 1962); about MIPIDI joining the College in 1952, and how the name of V. I. Mukhina was conferred to it in 1953.

Key words: Leningrad Higher School of Industrial Art, Institute of Applied and Decorative Arts (MIPIDI), V. I. Mukhina.

S. V. Mirzoyan, S. P. Kelmyanov

BARON STIEGLITZ CENTRAL SCHOOL OF TECHNICAL DRAWING DURING THE RUSSIAN REVOLUTIONS OF 1917 AND IN THE POST-REVOLUTIONARY PERIOD

This article refers to reorganization of art education in the post-revolutionary period, about the epoch of radical changes in the Academy of Fine Arts in 1917, about the Petrograd Free Artistic- Industrial Workshops (PG-SHUM), VHUTEMAS and VHUTEIN.

Key words: Academy of Fine Arts, Petrograd Free Artistic- Industrial Workshops, Higher Artistic and Technical Studios, Higher Artistic Art and Technical Institute.

I. I. Orlov

«CASA PAIRAL» IN CATALONIA

The author analyzed the theoretical concepts of «Casa Pairal» in Aragon and South France XIII–XV century. In rich amendments to the article the author describes social-ideological context of the period of church construction and character.

Key words: Casa Pairal, Aragon, Catalonia, South France, idea, creative concept.

E. P. Berger

ANALYSIS OF CORRELATION BETWEEN ORGANIZATIONAL CULTURE TYPE AND ORGANIZATION JURIDICAL FORMS OF ACTIVITY

The article considers the main standard characteristics of organization cultures in modern science of management, their constructing criteria are emphasized for the aim of organizational culture types' key characteristics bringing into correlation with organization juridical forms of activity characteristics; the implemented analysis results demonstrate the correlation between organizational culture type and the choice of organization juridical forms of activity.

Key words: organizational culture type, classification criteria, organizational structure, organization juridical form of activity.

P. S. Zhukova

FACTORS OF DEVELOPMENT OF VETROENERGETIKA

The paper discusses the factors of wind power development. The positive impact of wind power and ability in solving community environmental and socio — economic problems.

Key words: energy source, energy resource, wind energy, wind energy factors

A. A. Losa, P. O. Loginov

MAJOR FACTORS OF DEVELOPMENT OF THE ENTERPRISES OF LIGHT INDUSTRY

The main factors of light industry enterprises development are considered in this article. Shown, that increase in efficiency may be based only on innovations and technical rearmament. Market potential, competitiveness of product, financial abilities and human resources assessment have to be the initial base at the planning of production staff renovation.

Key words: light industry, renovation, technical development organizational and technical level, production, development strategy.