

NIKOLAI F. Metlenkov

**POST-INDUSTRIAL FORMAT OF ARCHITECTURAL EDUCATION**

To a certain extent, post-industrial architectural education is already included in the universities' educational process. However, it has not received yet its theoretical support, which makes education less oriented towards the contemporary social culture and hence hardly effective on the way of training the competitive university graduates. This determines the relevance of conceptual searches for the model of nowadays post-industrial architectural education.

Key words: Post-industrial architectural education, social culture, advanced education, education model.

Margarita V. Perkova

**FEATURES OF ARCHITECTURAL EDUCATION IN RUSSIA AND ABROAD: TRADITIONS AND INNOVATIVE DEVELOPMENT**

The professional practice of architecture and architectural education – the two are strictly inter-related directions of development of architecture. In the context of the formation of a post-industrial society, they are also undergoing qualitative changes. What are these changes and where will they lead the architecture profession both in Russian architecture and in Russian architectural education, as well as in foreign architectural schools? What methods are used by teachers in teaching students to make them competitive in the labour market? The article reviews the reports of the round table «Architectural education». It is revealed that in the course of scientific discussion several directions were formed: General problems of architectural education and modern trends of professional training; new approaches and methods of training architects and urban planners in Russia and abroad; regional specifics of practice-oriented educational programs in the areas of architecture and urban planning at the bachelor's and master's levels.

Key words: architectural education, architecture, urban planning, undergraduate, graduate, architectural pedagogy.

Mohammed Hasan Abokharima Alsawafi

**THE EMPLOYMENT OF COLLABORATIVE INFORMATION TECHNOLOGIES IN URBAN PLANNING**

Architectural education is inseparable from the integration of new technologies in the modern world. The use of geoinformation technologies in project education is necessary for the implementation of a pre-project analysis of territories, solving issues of its sustainable development and forecasting the results of development. The problems of climate change, of air, water and soil and poor housing conditions face cities around the world. One of the main goals of urban planning, including in project education, is to protect and promote health through interdisciplinary research in the field of safe and sustainable urban environments. The author proposes the introduction of collaborative information technologies in urban planning and architectural design for the pre-project environmental assessment of territories. The methodology is divided into three main phases that will help describe the current state of the urban area. The first phase is the analysis of changes in land use and the model of urban development, through the employment of remote sensing methods and geo-information systems. The second phase includes measures for assessing and changing the microclimate of urban areas, monitoring their development, and will address the issues of forecasting microclimatic barriers that the city may face in the coming decades. The third phase involves the development of a statistical model and the production of thematic maps with the zoning of the city's territory. Based on the results, a set of recommendations is

formulated for changes in land use and/or reconstruction of those areas whose functioning affects the entire urban ecosystem.

Ключевые слова: Urban planning, GIS, remote sensing, Analytical hierarchy process.

Galina N. Aydarova

#### INFLUENCE OF MODERN THEORY AND PRACTICE ON ARCHITECTURAL EDUCATION: DO WE NEED NEW PARADIGMS?

The article discusses issues related to modern paradigms of architectural theory and practice and their relationship with architectural education on the example of the Kazan architectural school. The lack of elaboration of new models for the development of Russian architecture, the urban environment and the underdevelopment of architectural criticism are noted. Reevaluation of the environmental approach along with underestimation of the cities' historic centers development problems take place in architectural practice. Architectural education is directly related to the state of Russian theory and practice. Without their promotion, the methodology of educational and diploma design, the motivation of graduates deviates away from the long-term objectives of domestic architecture.

Key words: architectural education, architectural practice, architectural theory, environmental approach, creative architecture.

Yuriy V. Alekseyev

#### NECESSARY SYSTEM INTERRELATION OF DIRECTIONS «planning of the settlements and regions», «ARCHITECTURE», «CONSTRUCTION» IN VOCATIONAL EDUCATION

The problem of organizing the educational process in the areas of «planning of the settlements and regions», «Architecture», «Construction», which provides training for bachelors, masters, graduate students, doctoral students to solve humanitarian and technical problems in the planning and design of the living environment of the settlements, is considered. A system is proposed for the interconnection of these areas on the basis of the developed coordination system and organization of participants in urban planning activities and a model for the structural organization of the components of the urban planning entities of the settlements, according to which vocational education should play a fundamental role and provide a unified methodological approach to the educational process. The presented approach to the educational process of preparing future participants in urban planning activities united by a common understanding of the evolution of scientific problems and the practice of planning and designing urban planning entities, will contribute to the progressive formation of a community of professionals for participation in the planning and design system, management, investment of urban development.

Key words: educational process; urban planning activities; coordination and organization system

AndreY G. Vaytens, Pavel V. Skryabin

#### PREPARATION OF MASTERS OF URBAN PLANNING: EXPERIENCE OF SPBGASU

The diversity of goals in urban planning is due to a variety of subjects of urban development (government agencies, private developers, large and small customers, representatives of public organizations). In this situation, it is difficult to define a universal model for training urban planners. Therefore, it is necessary to prepare students-urban planners as responsible subjects of urban development, and not as performers of someone's will and interests. The authors of the article offer their experience in training students at the master's level.

Key words: master's degree, training, urban planning, final qualifying work.

Alexander P. Kudryavtsev

#### IN ARCHITECTURE, THE THEORY FOLLOWS THE PRACTICE

In formation of an architect the basic role is played by the compositional skill. To acquiring it are equally important the education, practice and theory, that follows the creative activity, searches it, determines the regularities and tendencies, even makes the prognoses. It has an inherent function of determination the artistic discoveries stimulating the creative practice. At the same time the laws of composition in architecture, a toolkit of compositional skills, unlike the theory of music, are not inherent to the today's architect, having been rested only the part of theory. It's underlined the particular basic role of the creative personalities-masters discovering new ways.

Key words: architecture, architectural education, theory and history of architecture, architectural schools, MARKHI, VKHUTEMAS, tradition, mastership, heritage

António J. Morais, Alexandrino D. Basto, Svetlana Morais, IRINA V. TARASOVA

#### CONSTRUCTIVE PHENOMENOLOGY. FORGOTTEN DIMENSION OF ARCHITECTURE

The specifics of teaching the discipline «Architectural design» in the Architecture study program at the University of Lisbon at the faculty of Architecture is discussed in the paper.

Key words: architectural education, architectural design, architectural construction.

Ravil M. Muksinov, Olga V. Volichenko

#### ARCHITECTURAL EDUCATION IN KYRGYZSTAN (stages of development and problems)

The article discusses the stages of formation and development of architectural education in Kyrgyzstan. The success of the Kyrgyz architectural school and the challenges it currently faces are noted. Lack of common research programs in Kyrgyzstan with former research centers of Russia and other CIS countries; occasional face-to-face participation in international scientific symposia and conferences in connection with funding difficulties; the cessation of the supply of scientific literature and architectural magazines. Against the background of these problems, architects of the interstate Kyrgyz-Russian Slavic University are in a less difficult situation; however, there remain problems of two-level architectural education, training of scientific personnel in the absence of agreements on the recognition of diplomas of scientific degrees and titles between the two countries.

Key words: architectural education, interstate university, architectural school, Kyrgyz architecture, undergraduate problems

Sergey B. Pomorov

#### PROFESSION AND EDUCATION. ARCHITECTURAL PROFESSIONAL STANDARD AND EDUCATIONAL PROGRAMS

The architectural profession and architectural education are closely related, indissoluble as hypostases. Now their relationships are again relevant as in the profession, as in education. In a polemical form, one of the key principles that defines the substantial features of the profession and its reproduction is considered – it is universality, which manifests itself either in the periods of pre-industrial and industrial civilizations, or at the present stage of post-industrial civilization formation process.

Key words: profession of an architect, three-paradigm cycle of architecture development, transformation of a profession, principle of universality, education as a way of reproduction.

Sun Yimin

#### EXPLORATION AND PRACTICE OF «NEW ENGINEERING» EDUCATION ON ARCHITECTURE

Reviewing the experience that School of Architecture, South China University of Technology participated in the International Solar Decathlon Competition; the paper analyzes the significance of educational approaches with actual architectures as basis. Additionally,

combining the educational traditions of the school, it analyzes the innovative fruits of teaching practices and educational concepts in recent years. The purpose of the paper is to clear the contexts and clarify the directions of innovation, based on the exploration of «New Engineering» Education concepts, in order to improve the theories of and approaches to the innovative education on architecture.

Key words: architecture; innovation; new engineering education

IRINA V. TARASOVA, EKATERINA A. KOLESNIKOVA  
CAPABILITY OF THE REFLECTIVE LEARNING IN ARCHITECTURAL PEDAGOGY

The need to study the specifics of the reflective learning in architectural pedagogy is one of the important research tasks. It will allow considering the specifics of the interdisciplinary links between architectural education and higher school pedagogy. It will become the basis for the development of relevant teaching methods in architectural design in the future.

Key words: architectural education, architectural design, architectural pedagogy, reflective learning.

Lyudmila P. Kholodova

MASTER'S DEGREE IN ARCHITECTURE: «WE ARE WAITING FOR CHANGES»

The article shows that the first stage of implementation can be considered complete based on twenty years of experience in master's training of architects. Undergraduates-theorists are most successfully prepared, as they get new knowledge. Undergraduates-designers repeat the same training projects as bachelors in the course of training.

It is proposed to qualitatively change the training methodology based on the requests of employers

Key words: Master's degree, teaching methods.

Mikhail V. Shubenkov

ARCHITECTURAL EDUCATION: AT THE TURN OF CHANGE

the article deals with actual problems of modern architectural education. Modern trends of professional training are analyzed. The article discusses trends in the development of Informatization and digitalization in professional architectural education. The author draws attention to the importance of self-organization processes in professional education, compares traditional approaches and innovative approaches in the context of educational reform.

Key words: architectural education, competence model, interdisciplinarity, centenials digitalization and informatization of education

MARIA V. Lazareva

CURRENT TRENDS IN COMBINING ARCHITECTURE AND LANDSCAPE

the article is devoted to three projects (a roof garden, a park with the illusion of a natural landscape and a water park on the site of a rice field) built over the past 5 years. In them, the architects managed to combine architectural objects and landscape.

Key words: landscape, architecture, public spaces

Mai F. Mayya, Svetlana V. Ilvitskaya, Vyacheslav P. Etenko, Tatyana V. Lobkova

CONCEPTUAL MODEL OF THE RECONSTRUCTION OF LATAKIA IN SYRIA

The city of Latakia has a special functional value due to its location and natural characteristics. However, the urban development situation requires the engineering of a unified methodology for the reconstruction of the city. As a result of the study of economic and social factors, as well as the world experience in urban planning, an analytical approach to the restoration of the city was formulated and proposed, in which the main object is the urban areas, considered as an integral urban system. The proposed theoretical model for

the reconstruction of the appearance of Latakia will allow the formation of a favorable urban environment that meets modern requirements for the organization of the city's life.

Key words: city architecture, reconstruction methodology, rational urban planning scheme, optimization of planning structure, traditions.

Yuri N. Smirnov, Adilzan R. Kobdabayev

#### ON THE HISTORY AND PROSPECTS TERRITORIAL DEVELOPMENT OF AKTYUBINSK CITY

Aktobe (Aktyubinsk) is the regional center of Aktobe region at the intersection of international transport corridors, and its favorable geopolitical location in the border areas of Kazakhstan gives impetus to the intensive development of city-forming mining, manufacturing, engineering and agricultural industries. Vast sparsely populated areas of the region are dictated by the formation and development of promising Aktobe agglomeration around the main its core with several small cities and the city of Aktobe itself — as the main city of the Kazakhstan's Western region.

Key words: planning, urban population, building, residential streets, territory, settlement, reconstruction, transport hub, industry.

Dmitry E. Fesenko

#### TO REGIONAL ARCHITECTURAL SCHOOLS. FROM THE RUSSIAN EXPERIENCE 1990-2010s.

The article discusses the development of Russian architectural schools during the post-Soviet decades. In the 1970-1980s. Region schools was added to the Moscow and St. Petersburg schools, which originated on the post-modern wave – from the Urals and Siberia to the South of Russia, the Volga and the North regions. The author traces the close relationship between the independence and originality of educational programs and specializations, on the one hand, and the quality level of architectural practice in the regions, on the other. He cites the South Russian experience as an example. Finally, a conclusion is made about the observed positive shifts - Nizhny Novgorod, Kazan, Yekaterinburg, Novosibirsk and Samara.

Key words: Moscow, St. Petersburg and Nizhny Novgorod architectural schools, postmodern wave, architectural education, architectural practice, leadership, regional architectural schools

Georgiy N. Cherkasov, Darya D. Popova

#### HERZLIYA, DEVELOPMENT, ARCHITECTURE

The article discusses the modern architecture of Herzliya (Israel), the formation of an innovative environment in the city, analyzes the features of urban development, the allocation of a separate functional zone of the industrial park, the prospects for architectural and urban development of this high-tech region and the city as a whole. It is argued that in the future, the development of Herzliya will involve close interaction between work zones, high-tech centers and a residential, recreational environment.

Key words: Herzliya, industrial park, innovative environment, urban development, urban integration.

Ilya A. Polyakov

#### WIND POWER BUILDINGS

The use of new energy sources is one of the most important tasks of modern architecture. Alternative energy devices became available for the integrating in structure of buildings. Especially it takes to wind power plant that have a long history from windmills to modern wind turbines in sustainable architecture.

Key words: Alternative sources of energy, wind power plant (WPP), windmills, wind power, sustainable architecture, energy-efficient buildings.

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Nikolay F. Metlenkov, Ekaterina V. Koneva

### **ABOUT THE POST-INDUSTRIAL MODEL ARCHITECTURAL EDUCATION**

The model of Post-industrial architectural education could be built on the various grounds – social, spatial, economic, aesthetic, etc. This paper presents a variant of the conceptual designation of the educative model concerning two aspects of its socio-cultural foundation: status and structure.

Keywords: Post-industrial architectural education, social culture, production method, co-evolution, civilization paradigm, advanced model of education

Margarita V. Perkova, Yuriy V. Alekseyev, Elena A. Akhmedova, Nikolay F. Metlenkov, Mikhail V. Shubenkov

### **ARCHITECTURAL EDUCATION AND MODERN CHALLENGES**

The topic of the round table «Modern Architectural Education» is continuing in the second issue. The first part of the article provides an overview of the reports presented in three areas: general problems of architectural education and modern trends in vocational training; comparison of models of architectural education, the use of advanced techniques and methods of training architects and urban planners in Russia and abroad; regional specifics of practice-oriented educational programs in the areas of urban planning, architecture, design of the architectural environment. The second part is a video conference with experts, members of the editorial board of the journal «Architecture and Construction of Russia» on acute issues of the implementation of distance learning activities in a pandemic. Doctors of architecture Alekseev Y.V., Akhmedova E.A., Metlenkov N.F. and Shubenkov M.V. discussed the problems and prospects of distance learning methods for architects and urban planners.

Keywords: architectural education, distance learning, architecture, urban planning, teaching methods, architectural design

Al-Jaberi Ahmed Abdulsalam Hanash

### **APPLICATION OF A SPATIAL MULTI-CRITERIA ASSESSMENT OF TRANSIT-ORIENTED DEVELOPMENT OF TERRITORIES IN THE PREPARATION OF URBAN PLANNERS IN NAJAF PROVINCE, IRAQ**

This article will study the features for architects and urban planners training in Najaf Province-Iraq. The use of the spatial multi-criteria assessment developed by the author of the transit-oriented development for territories in the preparation of urban planners is proposed. Transit-oriented development is one of the trends of new urbanism. This article addresses the spatial multi-criteria assessment algorithm to measure the effectiveness of land development by determining the quality of the urban environment by building an index based on criteria and indicators. This approach is necessary to determine the effectiveness of the transit nodes under consideration in order to formulate the recommendations necessary for the stakeholders who are responsible for the directions of development within cities or regions.

Keywords: Architectural and Urban planning education, Transit-oriented development, spatial multi-criteria assessment, new urbanism, Transport node.

Gulnara S. Abdrassilova, Ainagul K. Tuyakayeva

#### REGIONAL CONTEXT OF EDUCATIONAL PROGRAMS AS A CONDITION OF PECULIARITY AND COMPETITIVENESS OF ARCHITECTURAL SCHOOL

The article highlights the scientific and methodological experience of KLAACE in the conditions of academic freedom, which allows universities to respond quickly to the needs of the market of architectural and construction services and introduce authored disciplines in the educational process. Along with innovative engineering, sustainable urban planning, and design practice, knowledge of regional design is important for a modern specialist. An increase in the share of regional disciplines in the educational process is a condition for the originality of local architectural schools and their competitiveness.

Keywords: architecture of Kazakhstan, regional component, educational programs, architectural design, academic freedom.

Alexandre Y. Yenin, Peter V. Kapustin, Tatiana I. Zadvoryanskaya

#### ARCHITECTURAL EDUCATION: CONTENTS AND FORM

Actual tasks of updating architectural education are considered on the example of the experience of the Voronezh School of Architecture. Achieving a consistent interaction between the necessary initiatives to improve the content of education «from the inside» and the introduction of new forms of organization and standardization of the educational process is considered as a key problem in the current stage of development of domestic architectural education. Some of the ongoing and promising directions of the school's development, aimed at the humanization of architecture and the tasks of the development of the region, are indicated. Among these areas: the formation of conceptual project thinking in the educational process, the intellectualization of education, the search for new resources to enhance the responsible and creative self-determination of graduates, including new, broader propaedeutic; research and preservation of the valuable heritage of the region, its monuments and landscape; development of territories - the regional center, small cities, recreational-tourist system, etc.

Keywords: architectural education, content and form of education, Voronezh, Central Black Earth region, concept, territorial development.

Svetlana V. Ilvitskaya, Ekaterina J. Koneva

#### ADAPTIVE INTEGRATION NEW FEATURES IN CULTURAL HERITAGE SITES IN THE CONTEXT OF ARCHITECTURAL EDUCATION

The article considers the problem of adaptive integration of a new function into cultural heritage objects in the context of architectural education. The issues of teaching the course "Restoration and Protection of Monuments" of the master's program in Architecture in the State University for Land Management are discussed. The importance of an interdisciplinary approach to the conservation of cultural heritage sites is emphasized.

Keywords: cultural heritage, conservation, restoration, adaptation, ecology, reasonable resource consumption

Marina R. Kolpakova

#### ARCHITECTURAL EDUCATION. THE PROBLEMS AND CHALLENGES OF THE 21ST CENTURY

The article discusses the current problems of modern architectural education in Russia, as well as proposals to solve them from the author's point of view.

Keywords: architecture, teachers, quality of education, bachelor's degree, master's degree, standard of education.

Elina E. Krasilnikova, Ekaterina A. Dikareva

#### REGIONAL SPECIFICITY OF PRACTICE-ORIENTED EDUCATIONAL PROGRAMS OF ARCHITECTURE AND URBAN PLANNING

The relevance of the introduction of practice-oriented educational programs is associated with the real needs of the regions and large cities of the country for highly qualified architects, designers, landscape architects and urban planners who are well aware of their historical, socio-cultural, natural-ecological, urban, geopolitical and economic features. The article discusses the impact of the regional component in architectural education on the neutralization of globalization processes in architectural and urban planning activities. The influence of regionalism on the formation of uniqueness, the individual characteristics of regional architectural schools, is studied. Examples of introducing a regional component into the educational programs of the Department of Architecture of Thessaly University in Greece and the Department of Architecture and Urban Planning of Sevastopol State University are given.

Keywords: practice-oriented education, regional specifics, regional context, regional identity, landscape urbanism, globalization, sustainable development

Evgeniia P. Petrashen

#### TRAINING OF ENVIRONMENTAL DESIGNERS AT SPbU ON THE BASIS OF PERSONALITY-ORIENTED MODEL

The design of the environment is considered as one of the areas of higher professional education in the training system for «architectural affair»[1]. It is proposed to consider the educational model developed on the Environmental Design program at St. Petersburg State University, taking into account the understanding of the special opportunities and development prospects of this profile, in the context of the variety of existing interpretations of the area in different universities.

Key words: architectural education, design education, architectural business, environmental design, educational model.

Ildar. N. Sabitov, Svetlana H. Baymuratova, Rozaliya. M. Akhmadullina

#### MODELS OF ARCHITECTURAL EDUCATION IN RUSSIA AND ABROAD

The article is devoted to the issues of world architectural education, namely the peculiarities of the organization of architectural education in Russia, Western Europe and the United States. Comparing the systems of different countries, it is necessary to determine the strengths and weaknesses of Russian and foreign education. Identify possible reasons for the lack of communication between domestic and international education.

Keywords: Educational space, architectural education, model, student, system, university.

Sergey V. Sementsov

#### THE PROBLEMS OF MODERN PREPARATION OF ARCHITECTS-RESTORATORS

The article discusses the modern problems of training architects and restorers in connection with the ongoing large-scale practice of expanding such training at various universities in the context of its crystallization as a special line of training for professionals specializing in the protection of cultural and natural heritage, restoration of cultural heritage sites and reconstruction of historical environment.

Keywords: Protection of cultural and natural heritage, restoration of cultural heritage objects, reconstruction of the historical environment.

Nikolay O. Smelkov

#### ARCHITECTURAL SCHOOL OF ST. PETERSBURG ACADEMY OF ARTS (INSTITUTE I.E. REPINA) TODAY. ISSUES OF THE ORGANIZATION OF HIGHER EDUCATION

The article deals with changes in higher education that are associated with the introduction of new educational standards and how these changes affected the architectural school of the St. Petersburg Academy of arts (Repin Institute). The article compares the features of the educational system for the formation of an architect-artist in the Imperial Academy of arts with the innovations that are currently taking place. The author focuses on the concept of «culture» in the broadest sense of the word and its role in educating the younger generation of architects. The role of self-education of the architect-artist is evaluated and the methods used to achieve the maximum result are analyzed.

Keywords: Architectural education, architectural school, Academy of arts, culture, architect-artist, self-education, competence approach, competence.

Aleksandra A. Tolstova

#### PROGNOSTICS AND PROBLEMATIZATION AS FUNDAMENTAL METHODS OF ENVIRONMENTAL DESIGN

Sustainable development as the dominant requirement of the modern society makes it necessary to move from reproductive to productive education. Accordingly, problematization and forecasting of the development of the object under examination are becoming core training methods in architecture and design, as they help to develop students' skills in obtaining unique and adequate design concepts. These methods both develop analytical thinking and use heuristic technologies. By the example of the educational program in the field of training 54.04.01 Environmental Design at St. Petersburg State University, the method aimed at developing students' skills and competencies in this area is demonstrated on the example of the work with historical cottages of the Karelian Isthmus on the northern coast of the Gulf of Finland.

Keywords: environmental design, problematization in design, process forecasting, training methodology, historical cottages in St. Petersburg.

Ivan P. Chechel, Margarita V. Perikova, Irina N. Chechel

#### METHOD OF NORMATIVE-ORIENTED ARCHITECTURAL DESIGN

In current conditions, architectural education faces new challenges that require the training of a specialist who can work in terms of the investment process in the presence of a competitive factor. Shifting the emphasis in preparing a course project towards working under restrictions, such as the requirements of the rules and regulations, will create more complex conditions for the creative process. The authors propose a standard-oriented method of architectural educational design. It will make it possible to introduce elements of the architectural practice of working design into the process of educational architectural design, make the most effective use of the regulatory framework of the Russian Federation and find tools that allow working in the conditions of world architectural trends.

Keywords: the regulatory framework, methodology, architectural design, method, secondary school

Zhang Chunyang, Lisaia Daria, Yang Linshu

#### TEACHING THE DISCIPLINE OF HEALTHCARE ARCHITECTURE AND DESIGN IN THE SCHOOL OF ARCHITECTURE, SOUTH CHINA UNIVERSITY OF TECHNOLOGY

The article reviews the history of healthcare architecture and design education in the South China University of Technology, and the comprehensive healthcare architecture education approach for bachelor's, master's, and doctoral students, which was developed by School of Architecture after China's reform and opening-up policies were introduced (1978). The article provides analyses of academic exchange programs and «production, education, and research» education model, systematically summarizes the experience of healthcare architecture education.

Keywords: healthcare architecture education; architectural design education model; School of Architecture, South China University of Technology

Irina O. Bembel

#### ON AESTHETIC CRITERIA IN THE CONTEXT OF TWO SUPER STYLES ANTAGONISM

The traditional and modern architectural trends are compared in the article, taking place within the crisis and the search for adequate art criticism methods. It is proposed to apply the traditional aesthetic criteria to the most important streams of modern architecture as a universal method specific for the art criticism. In the course of such an analysis it's getting apparent the antagonism of two super styles (according to S.O. Khan-Magomedov), reflecting two world outlook paradigms: tradition and modernity.

Keywords: tradition, modernity, modern, postmodern, modernism, postmodernism, superstyles, aesthetic criteria, art criticism method.

Natalia G. Blagovidova

#### FROM AGE TO AGE. IN HONOR OF 100TH ANNIVERSARY OF ARCHITECT AND EDUCATOR YA.V. KOSITSKYI

The publication is dedicated to the 100th anniversary from the day of birth of the eldest educator of the Moscow Architectural Institute. The particular importance is placed on the path of Ya.V. Kositskyi in the career of educator and rare facts of his biography are stated.

Keywords: Ya.V. Kositskyi, Moscow Architectural Institute, the Urban Planning Department.

Arina V. Leyzerova

#### CULTURAL AND HISTORICAL ISLAND AS A CONDITION FOR THE CONTINUOUS DEVELOPMENT OF THE CITY

The article highlights the urgent problem of preserving cultural heritage in a modern architectural and urban planning context using the example of the historical center of the city of Irkutsk. In the era of globalization and depersonalization of cities, the formation of cultural and historical islands is seen as an attempt to preserve their identity and integrity with the possibility of new construction, which is especially important for wooden vernacular buildings. An option is proposed to preserve and develop the territory, taking into account the supporting historical development, which forms the dominant style of the future cultural and historical island. The structural techniques of the elements of the cultural-historical island described in the article can be used in practice as methods of analyzing urban fabric.

Keywords: cultural and historical island, identity, integrity, historical ordinary buildings, historical wooden buildings, the dominant style of the island, formal and compositional sustainable, sociocultural sustainable.

Anna A. Lenz

#### SMART CITY – A UNIQUE WAY OF DOMESTIC DEVELOPMENT IN THE DIGITAL REVOLUTION ERA

In digital technology era, two main ways of world and Russian urban planning improvement are indicated on base of demographic analysis. The article reveals the difference between the concepts of «smart city» and «smart design» which are fundamentally different approaches to data collection and the time of data usage. The short description of the big data analysis system “architecture” is represented as well as four steps of the system: the level of data collection, the level of interaction, the level of analysis and the level of reporting.

Keywords: urban data, big data, digital technologies in urban planning, smart city, smart planning, internet of things, world development forecast.

Georgi Stanishev

#### GAMES IN CENTRE AND PERIPHERY TOWARDS AN INNOVATIVE HYBRIDIZATION

The study examines a model of the functioning of centers and peripheries in architectural culture. The types of their interactions, the features of their structure and the production of various types of innovation in architectural creativity are determined in the text on the basis of various historic examples. Based on analyses of three episodes from the development of Balkan architecture, the research unveils different roles of peripheral culture. It may work as: a generator of variations at the stage of searching for an architectural type, an intermediary, a mechanism for transforming architectural narratives issued by centers and their interference in the dialogue, and finally, a mixer and a correlator of architectural codes in the process of reception the canons and influences issued by the center. In the studio finale chapter, few conclusions are drawn about the typology of the hero of the periphery culture and its special characteristics. Examples of the reversibility of the transition of peripheral phenomena to universal, or central, and vice versa, are been demonstrated. The actuality of the peripheral culture modus in the modern world are presented at the end of the article.

Keywords: Centre, periphery, architectural culture, hybridization, recodification, canon, mutation, modification, variation, architectural language, expressive system

Dy Sopheak

#### SPACES FOR MEDITATION OF A CULTURAL AND EDUCATIONAL CENTER KAMBODIA

the article reveals the features of architectural design of a cultural and educational center with a space for meditation. The author considers the characteristics of the project and the creative approach of architects working in this direction are considered and the use of structural and natural bamboo material in the exterior and interior of the building.

Keywords: cultural and educational center, spaces for meditation, spiritual life, harmony, bamboo, interior, exterior.

Svetlana V. Ilvitskaya, Gleb V. Morozov, Stanislav B. Taranov, Evdokia V. Morozova

#### PRESERVATION OF SMALL HISTORICAL SETTLEMENTS

Ensuring the preservation of small historical settlements as custodians of the historical and architectural environment of past years is one of the key aspects in the field of cultural heritage protection. The development of historical settlements requires an integrated approach aimed at preserving the cultural, historical and environmental heritage, taking into account the socio-economic situation.

Keywords: preservation, historical settlements, heritage protection, tourism, an integrated approach.

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Nikolay F. Metlenkov, Ekaterina V. Koneva

#### VKHUTEMAS – 100

The essay discusses the content of six major vectors of information concerning VKHUTEMAS – the world well-known Russian Architectural school acting in the 1920s of the 20th century: preconditions of generation, organizing structure, social conditions of its functioning, personalities of pedagogy, ideas and influences on the contemporary architecture. The content of these areas is considered within the framework of the International Scientific Television Roundtable dedicated to the 100th anniversary of VKHUTEMAS. See: <https://youtu.be/IUko1JR6WGo> – [1].

Keywords: civilizational paradigm, preconditions of generation VKHUTEMAS, organizing structure, social conditions of functioning, personalities of pedagogs, ideas, influences of VKHUTEMAS on the contemporary architecture

Oleg I. Adamov

#### INCREMENT IN THE WORK OF VKHUTEMAS

The problems of the living heritage of the Avant-Garde school and affordances for its work continuation were at the center of the discussion during the virtual round table «VKHUTEMAS-100». Areas of researchers' interest formed the 4 thematic sections: «Phenomenon of VKHUTEMAS: Socio-Cultural Significance»; «Masters of Avant-Garde»; «Propaedeutics and Training System of VKHUTEMAS»; «Implementation of VKHUTEMAS Ideas: International and Regional Dimension». The examination was focused on: the theoretical comprehension of the phenomenon in culture, art and architecture; the analysis of the world outlook positions and theoretical attitudes guided the creativity of Avant-Garde masters and their transfer into the principles of spatial constructions and form creation they developed into the curricula of the school's workshops. The ideas of VKHUTEMAS entered the architectural and design practice, Avant-Garde thinking spread far beyond the school within the graduates' departure to the USSR regions, where the new cities and huge industrial plants were designed. Today the material heritage – generated by VKHUTEMAS – is in danger. The “waves” of the school influence, the internationalization of its approaches, the existed international ties and interactions between schools, individual Russian and Western masters are also noted. The cultivation of VKHUTEMAS principles in the contemporary educational practice of domestic and world architectural schools is traced. The creation of up-to-date educational methods based on it, the perception, interpretation and development of these ideas in the works of the leading masters of Contemporary Architecture are also marked. It had place a widespread popularization of Avant-Garde images and approaches in the communities. Images, ideas and associations, the very way of designing characteristic for VKHUTEMAS today largely determine things, everyday life and urban space and form a kind of special visual field in which modern person lives and they constitute one of the foundations of his world perception and comprehension of the reality.

Keywords: Russian Avant-Garde, VKHUTEMAS, masters of architecture and arts, propaedeutics, spatial constructions, cultural meanings, constructivism, rationalism, contemporary architecture, housing and industrial development, heritage

Elina V. Danilova

#### VKHUTEMAS AS A FORM OF AVANT-GARDE

The value of VKHUTEMAS as an outstanding school of art, design and architecture is recognized all over the world. Nevertheless, today it can be argued that VKHUTEMAS was not just an innovative educational institution, but a form of the avant-garde itself. The article examines two important aspects - the phenomenon of novelty and the will to life organization, which are inherent in the avant-garde and are found in the theory and practice of VKHUTEMAS. It also analyzes such characteristics of avant-garde as egalitarianism and opposition to totalitarianism, which influenced the greatest rise of VKHUTEMAS and its tragic finale. This approach makes it possible to clarify the avant-garde value of VKHUTEMAS in modern architecture.

Keywords: Novelty, avant-garde, Ladovsky, Leonidov, Krutikov, life order, egalitarianism

Peter V. Kapustin

#### VKHUTEMAS: QUESTIONS FOR NEW RETHINKING

The author of the article is passionate about the avant-garde, i.e. feels «love-hate» towards him - the only, it seems, appropriate feeling in today's professional, cultural and social situation. This feeling cannot be called simple.

The author strictly distinguishes between avant-garde - negativistic and radical energy, and modernism - stable functioning on the pragmatic field cleared with the help of the avant-garde tsunami. VKHUTEMAS (like the Bauhaus) undoubtedly belong to the latter. Therefore, the avant-garde content in the practice of these schools is nothing more than a trademark, with the help of which not the principles, but the decor of the avant-garde was promoted for decades. But there is little that is more contrary to the spirit of the avant-garde than the decorum trade. The article, in fact, only poses questions for a new cycle of comprehension of the avant-garde and everything that followed, but does not give ready-made answers. For the work of rethinking our centenary history is just beginning.

Keywords: avant-garde, modernism, VKHUTEMAS, Bauhaus, negation and pragmatism in architectural designing, history of architectural designing, design education.

Elena B. Ovsyannikova

#### RATIONALISM OF NIKOLAI LADOVSKY AND HIS ARCHITECTURAL PRACTICE

The legendary Nikolai Ladovsky was the author of the concept of «rationalism», which he interpreted as a universal designing morphological methodology. The architect's own architectural practice was the actual continuation of his theoretical views. We are talking about the residential complex of the Krestyanskaya Gazeta cooperative, the ground entrance hall of the Krasnye Vorota metro station and the lost architectural solution of the underground lobby of the Dzerzhinskaya metro station. They were distinguished by vivid author's solutions and at the same time fit the general European trends in architectural practice.

Keywords: Nikolai Ladovsky, Rationalism, Expressionism, Art-deco, residential complex of the Krestyanskaya Gazeta cooperative, Krasnye Vorota, Dzerzhinskaya metro station

Oleg.I. Yawein, Yuliya.S. Yankovskaya

#### ARCHITECTURE AS A SEARCH FOR THE ORIGINS OF SPATIALITY(for the 100th anniversary of VKhUTEMAS)

On the eve of the upcoming 100th anniversary of VKHUTEMAS — the avant-garde school that defined the development of architecture and spatial arts in the XX—XXI centuries, we would like to focus on such topics as the search for the origins of project thought and the formation of a universal language of spatial relations. The appeal to the creative project and literary heritage of VKhUTEMAS representatives opens up an exciting picture of the formation of the field of concepts, new perspectives to understanding the process of the origin of the project idea. In this article, we offer our own perspective on the problem of the «living heritage of VKhUTEMAS» and the continuation of its work in modern architecture.

Keywords: architecture, space, VKHUTEMAS, heritage, concepts.

Evgeniya V. Konysheva

#### FROM "MUNDANEUM" TO THE CHTZ CLUB COMPLEX: ANDREI BUROV IN DIALOGUE WITH LE CORBUSIER

The article offers a new look at the milestone stage in the work of A. Burov. The author argues that in Burov's projects of 1930–1931 the compositional principles and language of architectural forms of Le Corbusier are interpreted. In addition, it is alleged that A. Burov's turn to the classical tradition at this stage occurred through the prism of these interpretations.

As the main object of the analysis, the project of the ChTZ club complex is chosen, which until now remained outside the scope of architectural studies.

Keywords: A. Burov, Le Corbusier, interpretation, the ChTZ club complex

Alexander N. Lavrentiev

#### THE FIRST PROJECT OF THE SYSTEM OF INDUSTRIAL ART EDUCATION, 1920

The article is the first to consider the scheme of art-industrial education, drawn up by the commission of the Fine Arts Department of the People's Commissariat for Education (based on the materials of the State Archive of the Russian Federation). The author and date are established - A.P. Baryshnikov, September 1920. The elements and levels of education presented in the diagram are analyzed in the context of the evolution of the concepts of «industrial art», «industrial art», «art and technical workshops» in connection with the formation of VKHUTEMAS.

Keywords: A.P. Baryshnikov, Department of Fine Arts of the People's Commissariat for Education, VKHUTEMAS, art-industrial education, industrial art of the 1920s.

Larisa I. Ivanova-Veen

#### SCHEME «VKHUTEMAS» - A NEW DOCUMENT FOR THE 100TH ANNIVERSARY

The article discusses the work of the first researchers of VKHUTEMAS, materials of anniversary events and schemes of the educational institution, compiled by L.A. Zhadova, S.O. Khan-Magomedov and others. For the first time, a scheme of the VKHUTEMAS from RGALI of 1922 is published and analyzed.

Keywords: VKHUTEMAS, architecture and art education, Main department, faculties

Yuliya V. Rasuleva, Svetlana V. Timerbaeva, Anton A. Grishin

#### THE COMPOSITIONAL TRAINING APPARATUS FOR TASTING THE ARCHITECTURAL PERCEPTION IN TRADITION OF PSYCHO-TECHNICAL METHOD OF NIKOLAY LADOVSKY

The article is devoted to the topic of architectural space perception and experiments conducted within the framework of examination of psycho-analytical method of Nikolay Ladovsky. It is described a process of development the tools capable to improve the architect's ability to influence people's emotions and impressions in their contact with a city space.

Keywords: Nikolay Ladovsky, architectural perception, psycho-analytical method, propaedeutics, discipline «Space», parallelepiped, compositional training apparatus, implosion

Victor E. Tikhonov, Yulia V. Yanushkina

#### PROPAEDEUTIC CONCEPTS OF VKHUTEMAS IN THE ARCHITECTURE OF STALINGRAD IN THE 1930S. THE EXPERIENCE OF A LABORATORY OF MODERNITY PROVEN BY TIME

The article analyzes the housing of workers' settlements at the turn of the 1920–30s, created in the context of the propaedeutic concepts of VKHUTEMAS, and its subsequent reconstruction in the second half of the 1930s. The innovative ideas of VKHUTEMAS were aimed in search of a perfect architectural form and implementation of the new ways of living space organization by means of architectural rationalism. The principles of architectural rationalism developed at VKHUTEMAS were used in the design of the working settlements of the Stalingrad Tractor Plant (STZ).

Keywords: VKHUTEMAS, propaedeutics, rationalist architects, architectural form, psychoanalytic method in architecture, workers' settlements, Stalingrad architecture

Nikolai Y. Vassiliev

#### TYPICAL AND UNIQUE IN LADOVSKY STUDENTS' AND FOLLOWERS' BUILDINGS

In the 1920s, building practice, in particular of mass housing, significantly differs from well-known visionary projects made by leaders of Avant-Garde. The buildings of former Ladovsky students are of a special interest, because they had shown the advantages of new architecture formal principles despite the entire construction industry restrictions. Nowadays demolition or altering reconstruction menacing the mass housing development and this heritage is getting at risk. Even without a proper heritage protection status the 'workers settlements', such as Khavsk-Shabolovsky or Budenovsky, require an accurate and respectful approach, taking into consideration their original architectural and planning concepts.

Keywords: Rationalism, Soviet architecture, Avant-Garde, heritage preservation, mass housing, students' projects

Leonid N. Smirnov

#### THE ARCHITECTURAL AND URBAN PLANNING HERITAGE OF VKHUTEMAS/VKHUTEIN'S GRADUATES AND FACULTY IN THE TOWNS AND CITIES OF THE MIDDLE URALS

The article reviews the creative heritage left by architecture graduates of Vkhutein-Vkhutemas in the cities and towns of the Middle Urals in the late 1920s-early 1930s. Winning architectural competitions, these architects implemented their avant-garde architectural projects, materializing new stylistics and typologies of public and residential buildings and experimenting with novel urban planning modalities in keeping with the objectives of the Socialist society. An analysis of individual unrealized competition projects of these graduates is carried out to apprehend their creative potential in the development of specific objects.

Keywords: VKHUTEMAS-VKHUTEIN, constructivism, new types of public buildings, industrial city zoning principles, Middle Urals, architectural heritage

Alexander A. Shadrin

#### THE IDEAS AROUND VKHUTEMAS IN THE ARCHITECTURE OF THE XX-XXI CENTURIES

VKHUTEMAS is interesting not only for its ideas in form creation, but rather because of the uniqueness of the very situation of changes in art, heated by the Revolution in Russia, when at the same time the architectural images were created consonant with the almost all achievements in modern architecture up to the present day

Keywords: Avant-Garde, architectonic form, composition, construction, sign, symbol

Barbara Kreis

#### INSPIRATION AND ACTUALITY OF VKHUTEMAS

The essay is focused on different architectural positions at VKHUTEMAS, which were discussed in the optimistic mood of renewal the society. Instead of only one, different interpretations of modernism were offered, which sensitized the young people's creative potential. This inspired me, based on various text collages, to write a play, in which the buildings argue about the true socialist architecture. My report should be conducted at eye level with the students and not by the "Chair", that is why they themselves had to create these buildings. From the content-related debates to their appropriate realization and finally to the public presentation, they were encouraged to defend their own positions, worked practically, experienced the need and power of teamwork, and also developed their critical thinking about architecture, environment and design in general.

Keywords: VKHUTEMAS, Bauhaus, Modernism, Russian Avant-Guard, social renewal, socialist activity, architectural theatre, architectural design, student's creative potential

Oleg G. Maksimov

#### IVAN LEONIDOV... IS IT?

Joining the discussion of a group of colleagues discussing little-known sketches for the project attributed to the architect I. Leonidov, the author expresses his opinion on the significance and belonging of this project, not positioning himself as a researcher of the work of the famous master of architecture, but simply from the student years of the avant-garde of the 20s and 1930s.

Keywords: Architectural avant-garde, constructivism, project, architectural graphics, composition, constructive decision, image.

Olga I. Barkova

#### THE IDEAS OF MARK GRIGORIEVICH MEEROVICH IN THE CONTEXT OF THE IMPROVEMENT OF THE HOUSING AND URBAN LEGISLATION OF THE RUSSIAN FEDERATION

Mark Grigorievich Meerovich was a specialist in history and architecture. However, his contribution to the development of the theory of housing laws and urban planning ones deserves no less attention.

Mark Grigorievich specialized in the period of 1917-1941. The housing policy of that time was considered by him in the context of industrialization and collectivization as a history of state monopolization of housing fund and the stagnation of the institutions of public and private householdship and house construction happening against the background of that monopolization.

Mark Grigorievich also showed the "reverse side of the medal" of that city-planning policy which took the form of unauthorized settlements, squatter development, unauthorized constructions of «shanties» on the outskirts of cities. The works of Mark Meerovich are distinguished by the pass-through concept that global changes are based on the actions of the forces interested in these changes and the counteraction of the forces resisting these changes.

Today our country has returned mixed property in the housing sector, but we are faced with new problems

on the organization of its management. The problems of legal support have particularly intensified in the case of the prolonging of full-quality life for neighbourhood units of the Soviet period. The modern legislation of the Russian Federation has not found a feasible answer to the question of how and at whose expense the capital fund will be kept after its depreciation & amortization. What will the improvement and development of the housing industry consist in?

Keywords: New housing policy; housing cooperation; commune; labor - household collectives

Victoria O. Dolgova

#### RESERVES AND NATIONAL PARKS: PROBLEMS OF CONSERVATION OF NATURE AND HISTORICAL AND CULTURAL HERITAGE, TOURISM DEVELOPMENT

The article is devoted to the problem of conservation of nature and historical and cultural heritage, tourism development, in particular, legislation on specially protected natural territories and objects of historical and cultural heritage located on them. In the structure of national parks there are territories of objects of historical and cultural heritage. Prohibition or regulatory measures are more suitable for natural sites or nature reserves. For the development of cultural tourism, the popularization of cultural heritage sites.

Keywords: nature reserves, national parks, cultural landscapes, cultural heritage sites, tourism, legislation.

Vera A. Pavlova

#### RIVER INSIDE THE CITY. REVITALIZATION OF WATERFRONT AREAS

The river in the city must be accessible to residents throughout its entire length. This understanding is now changing the attitude to riverine urban areas everywhere. A review of research and project proposals was conducted, as a result, the design principles were formulated: functional transformation, urban connectivity, environmental safety. The article deals with modern problems of architectural and landscape revitalization of riverine territories on the example of the Kuryanov floodplain in Moscow.

Keywords: river in the city, waterfront areas, revitalization, waterfront redevelopment, urban connectivity, environmental safety.

W.E.M.M. EL Servi, Leonid A. Pusny

#### PLEIN AIR PRACTICE IN THE TRAINING OF ARCHITECTS

Plain-air practice has always been a necessary component of art majors curriculum. Holding open-air practices plays a significant role in the creative activity of students – architects. The article reveals the experience of holding annual international sculptural and pictorial plain-air in preparation of student architects where various techniques, exchange of experiences between various schools and development and popularization of plastic arts are studied.

Keywords: Still life, sculpture, painting, architectural education.

Petrova L.V., Rambhatla A.V.

#### NATURAL HOLLOW – FOUNDATION PIT

The article is devoted to the use of disturbed territories in modern urban planning taking into account the development of underground urbanization. The relationship between the scale of mine workings and the choice of possible direction in construction is investigated.

Keywords: buried buildings, underground architecture, complex relief, disturbed territories, landscape, adaptation, quarry, mining.

Salekh M.S.

#### TOPOLOGICAL OPTIMIZATION IN ARCHITECTURAL SHAPING

The article is devoted to the study of architectural shaping in the framework of topological optimizations. New possibilities of introducing computer technologies into the process of architectural design and material saving are examined in detail. The article gives examples of objects that have been optimized in terms of removing excess material, while maintaining their strength characteristics.

Keywords: Architecture, generative design, optimization, computer design, bionics, structures, shaping

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Nikolay F. Metlenkov, Ekaterina V. Koneva

#### THE MAIN LESSON OF VKHUTEMAS

The conditions for the emergence and existence of the world-famous Russian avant-garde architectural school – VKHUTEMAS, as a model of a possible architectural and pedagogical future: the formation of sustainable «avant-garde» as a concept of creativity and as a movement in the entire Russian architecture.

It seems that the quintessence of this movement is, first of all, the «freedom» of the subjects of the educational sphere in their self-determination and self-development. It is she who, in professional and pedagogical practice, is being transformed into the need for large-scale «experiments»: at the level of goals and means of the global continuous creative process, creative movement, manifested by diversity and innovation in everything.

Keywords: Avantgardism, VKHUTEMAS, freedom, self-determination, self-development architectural experiments.

Oleg I. Adamov

#### VKHUTEMAS: TRADITION — TO INITIATE CONSTRUCTING THE WORLD FROM «ZERO» POINT

The discussion around the origins, problems and destinies of heritage of the Avant-Garde school is continued while the virtual round table «VKHUTEMAS-100». The spheres of researchers' attention created the 4 thematic realms: «Phenomenon of VKHUTEMAS: Socio-Cultural Significance»; «Propaedeutics and Training System of VKHUTEMAS»; «Masters of Avant-Garde»; «Implementation of VKHUTEMAS Ideas: International and Regional Dimension». The researchers' attention is focused on restructuring of the higher architectural educational institutions, their transfer to the rails of Avant-Garde world vision and forming the special educative programs. It is traced the becoming of the School in close interaction with Bauhaus, the dissemination of ideas and educative principles at the Penza KHUTEMAS and the Architectural Department of Bauman Moscow State Technical University. The manifestations of tendencies and architectural schools in Moldova, where the objects of Constructivism and its «mutations» are interconnected with local styles and traditions, are revealed. The emergence of the language of spatial relations, semantic units and structures in the work of Avant-Garde creators is also noted. The observations were carried out to identify the ancient and archetypal images in the spatial constructions of constructivist Ivan Leonidov. It is traced a process of gradual memory revival and rehabilitation of VKHUTEMAS methods at Moscow Institute of Architecture, going in parallel with Bauhaus, starting from the 60s.

Keywords: VKHUTEMAS, Bauhaus, regional Avant-Garde schools, masters of architecture, propaedeutics, spatial constructions, cultural meanings, Constructivism, heritage

Alexander P. Kudryavtsev

#### THE HARD ROAD OF RENAISSANCE

The great innovative schools of the XX century – VKHUTEMAS and Bauhaus – had common simultaneous birth, flourishing and doom. Returning of VKHUTEMAS' heritage into Soviet culture needed long time beginning from 1950es up to 1990es, years of perestroika. In this complicated process the special place belongs the jubilee plenary session of MARKHI and Moscow session of UA USSR and the exhibition of 1981 year as well.

Keywords: VKHUTEMAS, Bauhaus, heritage, returning, history of Soviet architecture, jubilee, exhibition.

Ekaterina A. Bukharova

#### LANDSCAPED STAIRCASE OF NKTP SANATORIUM IN KISLOVODSK: THE MODERNIST IMAGE OF THE TEMPLE IN ARCHITECTURE BY IVAN LEONIDOV

In the situation of anti-religious Soviet politics the «image of the Temple» is dissolved in art, but it does not disappear. Moreover, it is updated in the works of talented avant-garde architects and takes on unusual forms due to the language of modernist art. The article analyzes the history of existence of the concave-convex amphitheater as a key form of the landscaped staircase by I. Leonidov and as a form of the presence of the «image of the Temple».

Keywords: Soviet architecture, Avant-Garde, Ivan Leonidov, Modernism, Image of the Temple.

Svetlana V. Ilvitskaya, Anna V. Poyan

#### DIVERGENT DEVELOPMENT OF CONSTRUCTIVIST ARCHITECTURE TO MOLDOVA: TWO COASTS ON THE SAME RIVER

The article discusses the stylistic features of the architecture of constructivism in Moldova during the interwar period. The author analyzes two historically formed regional architectural and construction zones on opposite banks of the Dniester river, which differ in volume and spatial composition, proportional structure, and stylistic methods of artistic expression.

Keywords: Constructivist architecture, voluminous-spatial composition, regional architectural school, post-constructivism, neo-Romanian architecture.

Elena G. Lapshina

#### PENZA HUTEMAS. FEATURES OF FORMATION: JANUARY-JULY 1921

The article considers the reform of architectural and art education in the early twentieth century. The main task of the reform was to form a new type of higher architecture and art school. VHUTEMAS became such a school. However, the process of forming the Art and Technical Workshops (HUTEMAS) in the regions and problems closely connected to it are not completely investigated. This research shows the features of the formation of HUTEMAS in Penza and the key figures promoting the education reform associated with the Penza Art School. Such the figures were famous artists: Efim Ravdel, Peter Sokolov, Vladimir Tatlin. The research is based on the materials of the State Archive of the Penza Region GAPO and it was conducted as part of the RFBR Research Project No. 19-012-00193A

Keywords: VHUTEMAS, architecture, education reform, higher school

Ekaterina Y. Lopatkina

#### CLASSICAL TRADITION AND INTERPRETATION OF ARCHITECTURAL FORM OF PORTAL IN IVAN LEONIDOV'S CREATIVE WORK

Classical forms of portal and arch with their symbolic meanings help us to understand the logics of morphogenesis and mechanisms of the architectural objects perception. Portal in the Leonidov's works is a penetrative membrane on the edge of two realms, place of a special transformation and immediate perception of form as wholeness. Classical forms and tradition get a new interpretation in Russian genius works.

Keywords: Architectural morphogenesis, membrane, arch, transformation, form perception, vocabulary of forms, cultural tradition, symbolic meaning.

Georgiy N. Cherkasov

#### ARCHITECTURAL LIFE OF MOSCOW: ARCHITECTURE FACULTY OF VHUTEMAS AND ARCHITECTURAL DEPARTMENT OF MOSCOW HIGHER TECHNICAL SCHOOL (MHTS)

The article examines the state of architecture in Moscow after 1917. The history of the leading centers of development of architectural education of that time - the architecture faculty of VHUTEMAS and the architectural department of the Moscow Higher Technical School (MHTS) – is presented in the domestic and international context. Outstanding buildings are named and figures that played a significant role in the development of architecture of that time are highlighted. Attention is paid to the development of industrial architecture, which formed the basis for the construction of the period of the first five-year plan and is associated with the names of prominent Russian architects and engineers.

Keywords: Architectural education; VHUTEMAS; MHTS; MAI; Vesnin brothers; A.V. Kuznetsov.

Oleg I. Adamov

## THE SEMANTIC UNITS IN SPATIAL CONSTRUCTIONS BY VELIMIR KHLEBNIKOV, VLADIMIR TATLIN AND ILYA GOLOSOV

At the initial stages of creative process, the Avant-Garde artists resort to abstract representation, formalization and make the «disunion of wholeness» – the previous cultural material. In such operations, creators derive the semantic units that have a spatial nature, express spatial microsituations. Based on the identified primary elements of perception and analysis, authors' grammars are elaborated and analytical languages of spatial constructions are created, using which it is supposed to re-create entire world. The masters' initial actions are introduced into the VKHUTEMAS educational programs and become necessary for their own comprehension and explanation to students of their design discourse, the course of creative process and spatial constructions. The degree of «disunion», scale and properties of units differ among Avant-Garde artists.

Velimir Khlebnikov's units comprise phonemes, morphemes, color, spatial situations, moments of movement, time and wave energies. The artists' souls can be implanted into units and move into different contexts, travel through space and time. Being «animated», the units can engage soul affordances associated with the work of the senses and awareness.

Vladimir Tatlin – «Zangezi» first director – gets his «material» units by «explosion of consciousness» and then collects the pieces of the world in the rethought formations, where space is seen through and time exists, and he gives them names. He inserts a soul into «organic» constructions («Letatlin») using the properties of flexibility and elasticity, sound, color, outline, tactile sensation, testing the possibilities of movement and adding the artist's energy. Tatlin lays down a life building program in «energized» things – the ability to «infect» with action and promote collective creativity.

Ilya Golosov develops the author's «Grammar of the Universal Forms» based on a set of lapidary architectural volumes forming the hierarchies and making up the combinations. The very volumes are selected from the history of architecture as his «favorite examples» to be simplified and reduced up to the simple geometric bodies. But they preserve entire «array» of memory of their former architectural being, and they are governed by the compositional patterns, tectonic relations, layered and «echeloned» constructions, etc.

The semantic units (images, ideas, associations, words, spatial situations) the masters operate with seem to be «pouring» into bigger units and make up the semantic wholeness of created «architectural organism». The article examines the meanings «accumulation» and «magnetization» in spatial-temporal units by Russian Futurists (V. Khlebnikov, V. Tatlin) and preservation and revival of the traditional meanings in combinatorial system by innovative architect I. Golosov.

Keywords: Velimir Khlebnikov, Vladimir Tatlin, Ilya Golosov, Russian Avant-Garde, Futurism, VKHUTEMAS, semantic units, grammar of universal forms, creative process, spatial constructions, composition, tectonics tradition

Larisa I. Ivanova-Veen

## DISCIPLINE «SPACE» N.A. LADOVSKY AT EXHIBITIONS 1923-2020

Considered are viewing and reporting exhibitions in VKHUTEMAS-VKHUTEIN, which exhibited student works on the discipline «Space». Their place is determined: address, audience. Provides information where the works of the propaedeutic course were exhibited at anniversary exhibitions since 1980 to 2020.

Keywords: VKHUTEMAS-VKHUTEIN, discipline «Space», N. Ladovsky.

Irina V. Chepkunova

#### VKHUTEMAS 1920-1930. COLLECTIONS AND EXHIBITIONS OF THE SHCHUSEV MUSEUM OF ARCHITECTURE

The author talks about the history of the collection of student works of the discipline «Space» of the Main Department of the Faculty of Architecture of VKHUTEMAS in the Museum of Architecture named after A.V. Shchusev (GNIMA). Lists the exhibitions created by GNIMA, which showcased the materials of the collection.

Keywords: VKHUTEMAS, discipline «Space», Main Department of the faculty of Architecture, A.V. Shchusev Museum of architecture, collection of student works, the exhibition «VKhUTEMAS Thought is material».

Aleksander P. Ermolaev, Aleksander A. Ermolaev

#### EXHIBITION «VKHUTEMAS IN MARKHI»

In 2020, the entire art world celebrates the 100-th anniversary of the first Russian design school VKHUTEMAS, the advanced discoveries of which still influence the teaching and design activities of Russian and foreign professionals. In November 2020, within the walls of the Moscow Architectural Institute, the direct heir of VKHUTEMAS, together with the Department of Cultural Heritage of Moscow, the exhibition «VKHUTEMAS in MARKHI» was opened.

Keywords: VKHUTEMAS, SGHM, space, discipline, exhibition, exposition, methodology, propaedeutics, Russian Avant-garde, project.

Alexandra N. Selivanova

#### VKHUTEMAS 100. SCHOOL OF THE AVANT-GARDE

The Museum of Moscow prepared a large-scale exhibition “Vkhutemas 100. School of Avant-Garde”, which features this institute as the protagonist of modern art, design, architecture, textiles, and graphics. This is the first exhibition of its kind to show production and fine art faculties reflecting the artistic experimentation of the avant-garde era on such a scale. Among the exhibits are paintings, drawings, sculptures, architectural projects, model reconstructions, industrial and graphic designs, porcelain, textiles, and furniture created by Vkhutemas students. Following the spirit of collectivism at VKHUTEMAS, this exhibition was created by a large team of curators. Separate curators prepared collections for each faculty and discipline. They formulated the main ideas and principles of the presented set of exhibits, that are presented in the interviews for the article.

Keywords: VKHUTEMAS, VKHUTEIN, school of avant-garde, exhibition in the Museum of Moscow

Maxim N. Poleshchuk

#### VKHUTEMAS AS A TOOL FOR DEVELOPMENT OF RUSSIAN AVANT-GUARD

The article is focused on the fact that in the year of the centenary it is necessary to raise and consider a problem of absence of the VKHUTEMAS Museum. Bauhaus has got three museums, VKHUTEMAS – none, which predetermined a necessity for conducting a special competition. VKHUTEMAS has created a unique creative environment for promoting the ideas of the Russian Avant-garde and in such a quality it can be considered today as a «development institution» to be a symbol of modern innovative movements in urban planning, architecture and design.

Keywords: VKHUTEMAS Museum, Bauhaus Museum, creative, educative, ideal and worldview, organizational and active environment, institutionalization of innovative development, urban planning, architecture, design, development institutions, startup.

Alexander A. Dembich, Nataliia G. Orlova, Dmitry A. Ulyanov

#### FEATURES OF THE FORMATION OF A POLYCENTRIC URBAN PLANNING SYSTEM IN THE CITY OF NABEREZHNYE CHELNY

The city of Naberezhnye Chelny is one of the last major urban development experiments of the Soviet period. However, approved in 1972, the city's Master plan was not fully implemented, and in the post-Soviet years it underwent deviations from the approved urban planning documentation. At present, the research and design division «Interra» of KSUAE, after winning the all-Russian tender, began design work on the preparation of a new master plan and formed its preliminary urban planning concept. As part of the concept, one of the main areas of development is the formation and development of a polycentric system of public spaces in the city. In the concept, it is proposed to form a «Central zone of the city» consisting of three rather separate fragments of the citywide center, clearly articulated and significantly differing in functional, spatial, compositional and aesthetic characteristics.

Keywords: Functional and spatial organization of the city's General plan, the formation of the city centre system, pre-urban analysis, urban development concept, municipal management, urban planning doctrine, transit hubs, community centre planning district, the Central area of the city, the level of comfort of the urban environment.

Iouri M. Moisseev

#### URBAN ANALYSIS: COMPREHENDING CHALLENGES OF SPATIAL LEARNING

The challenging tasks of ensuring sustainable and harmonious development of cities and regions, although they have been on the agenda for a long time, still do not lose their relevance. Moreover, in the face of increasing severity and tension in the environmental, economic and social spheres, questions involuntarily arise about the real capacity of urban planning and management systems to quickly and effectively solve these problems. The ongoing reforms, aimed at harmonizing the spatial arrangement of society through the decentralization of management systems and the privatization of real estate and production assets, have multidirectional effects on the condition of cities and regions. The noted changes in urban development policy are increasingly associated with the transition from a purely managerial approach to entrepreneurial. The planning system should be adequately prepared for such a transition.

Keywords: Urban planning analysis, planning theory, spatial planning problems, urban planning problems, urban conflicts, planning improvement

Alexander A. Pleshivtsev

#### CONCEPT FOR THE NON-TRADITIONAL AND INNOVATIVE DESIGN METHODS TO ENSURE THE FUNCTIONAL QUALITY ARCHITECTURAL OBJECTS

The article discusses the possibilities of modern and promising techniques for designing architectural objects. The characteristic features of the use of artificial intelligence for designing the functional quality of architectural objects are given. The possibilities of forming the functional quality of architectural objects using traditional and non-traditional (innovative) techniques of architectural creativity are revealed. The analysis of the features of applying information modeling technology to solving problem situations on the example of a low-rise residential building is carried out. The concept of an integral indicator of the quality of the information model of an architectural object is proposed.

Keywords: Architectural activity, traditional design techniques, functional quality, concept of non-traditional techniques, design solutions, information modeling, virtual reality, integration of knowledge areas, artificial intelligence.

Georgiy N. Cherkasov, Darya D. Popova

#### CITY – INDUSTRIAL ZONES – PUBLIC SPACES

The present article examines the tendency of development of public spaces on the basis of territories and objects of industrial heritage. The evolution of the renovation process in Moscow is analyzed, and the main stages of this process are named: liberty, project, concept, and set. Prospects for the socialization of industrial areas of a large city are outlined. Areas that are potential for development and that are unique for the city are named (Znamya Truda plant). Concepts for the development of such territories, which have no analogues in domestic architectural practice, are proposed.

Keywords: Industrial heritage, public spaces, set of public spaces, renovation, conversion of industrial zones.

Konstantin V. Kiyanencko

#### «ENVIRONMENTIZATION» OF ARCHITECTURE: ORIGINS IN THE DESIGN AND METHODOLOGICAL MOVEMENT

The first of a series of papers examines the origins of the modern environmental paradigm of architectural knowledge in the design and methodological movement. The research rests upon a comparative cross-cultural analysis of English-language and Russian-language literature describing the emergence of environmentally oriented architectural theory and practice in the critical era of the 1960s-1970s. The authors, texts, and events associated with the activities of the Design Methods Group (DMG) in the West and the Moscow Methodological Society (MMK) in the former USSR and Russia are shown to have had a significant impact on the development of the environmental paradigm in architecture.

Keywords: Environmental paradigm, history, architectural theory, design and methodological movement, cross-cultural analysis