

Scientific articles published in 2017 by academic staff.

1. "Architecture in the service of the authorities"

Professor Nino Imnadze, Architect Luka Khvibliani

Annotation

Analysis of the material makes it possible to draw the following conclusions, In history, humanity, In each era the influence of power on architecture had different forms. These types of form are hanging both from the state system, and from the worldview and the religion of the people. Architecture, as it were always in the service of the authorities, and both of these concepts have always been in interrelation with each other. Architecture always represented a powerful weapon in the hands of the authorities and by this it expressed its power. Architecture in the service of the government plays the role of the narrator when it is a hodgepodge of history and time. And here it is also an indispensable tool, Which transmits the essence of power in time and space, Because architecture does not once deceive. If we consider power as the source of violence, Which forces a person, on the basis of private motives to create an architecture, then the question arises Can a person create an architecture on the basis of his own opinion, Which will not have a prefabricated installation in which case it awakens the architecture for the architecture. This gives the basis for the emergence of an additional question, whether there can be an architecture out of power.

"Ganatleba" Scientific Magazine; Examination House "Technical University", Tbilisi Kostava 77

2. "Foreign countries experience in Design and constructing of green open spaces"

Professor T. Makharashvili, Architect G. kheladze

Annotation

the research presents and analyses real life case studios from overseas realities, successful large scale and local projects, Hereby, the strategic importance of sequence of decisions made by developed countries that have enhanced the solution of landscape architectural task, together with accelerating the growth of ecological and economic advancement The experience of foreign countries shows that the comprehensive approach to the problem proves to be more effective, rather than working in one specific direction.

"Construction" Scientific Technical Magazine; Publishing House "Technical University", Tbilisi, Kostava 77

3. Prospects for the development of tourism in settlements with the status of cultural heritage (On the example of the Ushguli community)

Professor Tinatin Chigogidze, Architect Shota Gelashvili

Annotation

This article is about saving of ethnocultural and natural landscape of community of Ushguli of up Svaneti and necessary actions for future developments at tourism. This includes preservation and adaptation of monuments and landmarks and creation of plan of research and regulation for land.

"Construction" Scientific Technical Magazine; Tbilisi 2017, №1(44); Publishing House "Technical University", Tbilisi, Kostava 77

4. „Modern paradigm of formaking“

Professor Surab Kiknadze, Architect Tamar Tabatadze

Annotation

Nowadays, the understanding of basics of fractal structure is deeply intervened in many fields, including formation of external appearance of architectural-construction facilities as well as their internal structure of organization. Together with recognition of the importance of role of unconscious, from empirical theory to general vector – all well maneuvered study programs should serve to help transition from science to practice. The same should have to be a base principle of Fractal Architectural propedeutics.

“Construction” Scientific Technical Magazine; Tbilisi 2017, №2(45); Publishing House "Technical University", Tbilisi, Kostava 77

5. “Some factors acting on the conturbanizm process”

Q. Salukvadze, N. Kopaliani, T. Bidzinashvili

Annotation

The article deals of Urban Development as an irreversible process and the causes of its topicality. Brotherhood represented Calvin Bailey suggested monograph, where it was stated that for the first time in the history of the rural settlement grew faster than the city. Moreover, this increase was due to net in-migration from the city to the village as a result of growth, which is complex and also discusses four interrelated factors; Decentralization of employment, Modernization of rural life, the aging of population, rural preference minicheba.es Urban Development factors is leads first stage. Urban Development the common argument is that the link between development and urbanization are weakening after the country reaches a high level of development. After that, the urban and non-urban areas in terms of the structural aspects of the playing field becomes, which leads to urban concentration can be overcome by telecommunications, the daily movement and other technological and social change, which is a long distance interconnection and operation allows

<http://business-engineering.bpengi.com/>

GTU, Academy of Georgian Konstruction Business – Engineering - Quarterly referenced journal Business Engineering in construction, 1-2 2017, 186-189 pg.

6. "The role of the state in regulation of eco disaster and prevention "

Q. Salukvadze, T. Bidzinashvili

Annotation

Government's one of the main obligation is to prevent Eco and Natural disasters, which are daily increasing. The article shows how government strategies, policies and services related to prevention in Progressive countries are greatest examples to follow. Preparedness and recovery are important in countries like Georgia, where Effective — and cost-effective — disaster reduction must be grounded in a thorough understanding of the physical forces a community faces and their likely impacts on the human, built, and natural environment.

GTU, Academy of Georgian Konstruction Business – Engineering - Quarterly referenced journal Business Engineering in construction, 3, 2017, 38-40pg.

7.The façade architecture in the example of Tbilisi "Architectural synthesis and its meaning“

Q. Saluqvadze, T. Bidzinashvili

Annotation

The article deals with the example of the city of Tbilisi from the 19th century to the change of facade history, its importance in the general sense of the city. Cultural monuments and a part of important

buildings built in the last century that create the city's characteristic architectural synthesis and its significance.

GTU, Academy of Georgian Konstruction Business – Engineering - Quarterly referenced journal Business Engineering in construction, 3; 2017, 41-43 pg.

8. „American rural school, as a social-economic space“

Q. Saluqvadze, T. Bidzinashvili, B. Kopaliani

Annotation

The article deals with the school in the village, as the social-economic area, in recent years in the achievements of the schools ahead of the city schools and the percentage of pupils in the graduating class. In 2004, more than 10 million rural youth to graduate school in the United States. The school is a public service provider organization, which provides education to the rural people. All the villagers have access to the education system. School helps strengthen the pupils, teachers and community members. As the number of pupils and teachers in rural schools are small compared with the city, it would further contribute to a close and enduring relationships.

GTU, Academy of Georgian Konstruction Business – Engineering - Quarterly referenced journal Business Engineering in construction, 1-2, 2017, 109-111pg.

9. "Ecology of Public Consciousness"

Professor Giorgi Salukvade

Resume

Reality indicates, that environmental problems cannot be solved if appropriate moral principles and traditional attitudes towards the nature are not changed, if there is not increased social responsibility of each person for activities affecting the nature, therefore actually raising public consciousness of environmental issues and relevant culture are of great importance.

Modern problems of Architecture and Town Planning, Scientific and Technical Magazine #7, 2017 (77, Kostava Str.0175, Tbilisi, Georgia)

Scientific articles published in 2016 by academic staff.

1. Transport communications and urban problems of Georgian mountains

Professor T. Makharashvili

summary

Historical development of mountainous regions of Georgia, transport and other communications acquire special significance. In a place with that, these areas because of the complexity of the natural and climatic conditions lag behind in development from the low-lying ones. In conditions of transition to a market economy, it is necessary to use rationally the richest economic potential of Georgia, the development of which will be promoted by hydropower, hydro-mining, agricultural, mineral resources, as well as the potentials of mountain tourism, sports and medical treatment.

Modern problems of Architecture and Town Planning, Scientific and Technical Magazine #6, p. 41-47; 2016 ISSN 2233-3266; (77, Kostava Str.0175, Tbilisi, Georgia)

2. "American Architecture. Genesis"

Professor M. Davitaia

Resume

In the article considered development and formation of American architecture. The American architecture is a quite sophisticated phenomenon. Like American nation, as the multinational population, its architecture is also the mixture of different architectural styles. It is the unrecognizable eclectics, cocktail of different architectural forms.

It is an observation article starting from Amerindians time to colonial period and mixture of imported by immigrants different architectural styles with local traditions: gothics replacing Romanic, Greek, Baroque, modern, neo-classic and so on. From XIX th century they starting construction of skyscrapers and XX th century is the time of functionality. From this time has been started the era of deconstructivism. In the article given review of most famous architects developed this style and played significant role in its establishment.

International Science-Pedagogical Journal „GANATLEBA”, Georgian Technical University, N 1(15), p.240-246, 2016 .

3. THE PHENOMENOLOGICAL ARCHITECTURE STEVEN HOLL

Professor M. Davitaia

Resume

Architect, rhetorician and artist Steven Holl's architecture often called as phenomenological. It's an architecture which considers human movement in space and his swamp into the multilayered experiment, where the space, color, geometry, aroma, sounds, surfaces and materials intercrossing. Phenomenological should follow from the main idea, exactly similar to story of novel. Implementation of idea and its countercheck in architecture's impression is what you feel when you pass the building, how is moving the

body, how it's interacting with other bodies, how the lighting, perspective, lines, sounds teaming-up. In the article reviewed the phenomenological ideas of philosopher M. Merlo Ponti, which was the bases of Steven Holl's architectural concepts. Also presented the conjunction between the architecture and emotions or the phenomenological basis of design, phenomenological principles, which are concentrated in his works.

Modern problems of Architecture and Tawn Planing, Scientific and Technical Magazine #7, p. 74-82; 2016
ISSN 2233-3266; (77, Kostava Str.0175, Tbilisi, Georgia)

4. "Ceramics as a tool for artistic organizing of architectural space"

Associate Professor Maia Davitaia, Doctoral student I.Zaridze

Resume

In the article we talk about two art field-Synthesis of architecture and ceramics, which conditions artistic formality of architectural space and represents their interconnected content. In order to solve the main task closer cooperation with art helps create more complex and many-sided artistic means. This way it is easier for architects and painters to use their artistic capabilities. XXth century European culture ceramics as a decorative and utilitarian art form, even today it is still considered as an important phenomenon and still has not lost its qualitative focus. The production and use of clay materials in Georgia from B.C. IV-III centuries till today.

International Science-Pedagogical Journal „GANATLEBA”, Georgian Technical University, N 17(3), 2016 .

5. Library compatible with of CAD systems the illustrating ornamental plantings and objects of green building (auxiliary textbook)

T. Chigogidze, Z. Kiknadze

Resume

The main goal of the textbook is to create an interdisciplinary, multifunctional, multi-purpose and open, compatible with CAD systems illustrative catalog-classifier that corresponds to the database of the electronic library of decorative plantations and green building objects that correspond to the climatic conditions of Georgia.

The textbook is intended for undergraduate and graduate programs of the faculty of Architecture, Urban Planning and Design.

Georgian Technical University, 2015, ISBN 978-9941-20-596-5, auxiliary textbook, 94 p.

6. PICTOGRAM- THE OLDEST HISTORY AND MODERN SITUATION

Asistent prof. Gia Rokva

resume

The design of an architectural environment, which is part of the information graphic design, that is the universal language of communication and information transmission.

This is advertising, poster, banners, pictograms. The latter is relatively common and the language of the pictogram is understood without any translation for any age and nationality. Informational design in public Spaces –is the combination of means used to create a more comfortable daily space. Initially the pictogram was the first type of writing. It is based on individual thematic drawings of descriptive character, which can provide an extensive section of information. Today the pictogram is used as a sign which shows the main characteristics of the object, subject or event which it expresses most often in order to facilitate visual

perceptions in a schematic form. This article is an excursion in the history of pictograms, one of the kind of visual communication that has become part of everyday life.

SCIENTIFIC_TECNICAL JOURNAL "BUILDING" Georgian Technical University, 77, M.Kostava str, 0175, Tbilisi,

7. Dynamical Calculation of the Rod System on the shock, by the Engineering Method

Professor Nino Khabeishvili, Professor Anzor Khabeishvili

Resume

The Article discusses a dynamical calculation of the rod system on the shock, by the Engineering Method. According to this method, a unknown dynamical load is applied at the point of the shock and, a potential energy is determined by help of the internal elastic force factors. A dynamical force is determined by rigidity of the system in the point of shock.

International Science-Pedagogical Journal „GANATLEBA”, Georgian Technical University, 2(16), 2016. (p.147-151)

8. "Natural-Ecological Frame as the Basis of Territorial Development of the City"

Professor G. Saluqvadze, doctoral student Z. Burchuladze

Resume

As known, in many cases, urban tasks implementation in town has a negative influence on nature and resulted nature lost its integrity and creates the danger of ecological balance of territory. Therefore, in order to maintain the environmental balance this article focuses on such the modern strategy of nature protection such as role of natural and ecological frame, which helps the city to keep the ecological stability.

Modern problems of Architecture and Town Planning, Scientific and Technical Magazine #6, 2016 ISSN 2233-3266; (77, Kostava Str.0175, Tbilisi, Georgia)

9. Contemporary architecture in Poland – trends and directions (In example of Warsaw)

Nino Imnadze

Resume

The purpose of this article is retrospective discussion and analysis of current processes in the architecture of Tbilisi, because the problem of transformation of the city is actual for Tbilisi. From the urgent problems of Warsaw modern architecture identified several, which are analogous to actual for Tbilisi: restoration – rehabilitation and reconstruction of the old part of town, the new architecture in the historical environment, transformation of the industrial zone, high – rise buildings, new projects, which are revealed to search for a new paradigm in architecture, organization of the open and enclosed public spaces, forming a barrier – free environment. During the analysis, assertion that in the development architecture, modern architecture in Warsaw is in the vanguard is increases. We cannot say that there is a conflict or struggle for creative superiority opposite. Here in opposite is a great confrontation and coexistence. Being modern in the context of time. Although the analysis is more subjective.

International Science-Pedagogical Journal „GANATLEBA”, Georgian Technical University, N 1(15), p.246-251, 2016 .

10.The forth dimension: realization of the futuristic fantasies

N. Kochladze

Rezume

The article discusses examples of kinetic architecture, also kinetic sculptures and facades beginning from the forties of the 20-the century to the present day. There is described how the influence of mechanics, electronics and robotics transforms the static, solid architectural objects into adaptable, changeable objects and therefore the forth dimension –time - is added to the architecture. Through the described examples we define the direction in which the kinetic architecture might develop.

Scientific-technical journal “Building” 2(41), Tbilisi 2016, p.30-34

Scientific articles published in 2015 by academic staff.

1. Tsabadze street rehabilitation and reconstruction project

Maia Davitaia, Tamar Valishvili

Resume

The reason of street rehabilitation was to receive whole rehabilitated look, which was disordered with late construction interference. At the buildings was added mansards, balconys - with irrelevant expression. The purpose of rehabilitation was to make everything added to the original look old style. Population had been increased by 30 % and it was impossible to preserve first architectural views, because new constructions was registrated with them. Also our consideration was to separate old architecture and new constructions, because in the other way it would destroy the harmony between each other. New concept of rehabilitation implicated to renew late constructions with new methods. it meant, that everything added later on the buildings, had to be made with new materials and with new forms. It helped separate different styles and eras and in parallel, to receive harmonious confluence. Every building was researched, owners were questioned, laboratory expertise of façade colors was conducted, buildings were reinforced and after all this, rehabilitation was planned.

As a result of the rehabilitation, we received street and buildings created in one concept, which is the good example of how can the past and present co-exist, how difficult, but achievable is to create contrasting eclectic project and, if it is based on knowledge and compromises how good product.

GTU, magazine "Ganatleba" N 1(12), p.246-251, Tbilisi.2015.

2. Eric Owen Moss Gnostic Architecture

Professor Maia Davitaia, student Tedo Harchilava

Resume

Presented report is about works of an architect - Eric Owen Moss. He calls himself Gnostic Architect and in this work his theoretical considerations are concerned with Gnosticism. The work begins with a short biography of Eric Owen Moss. In the preamble of the work Moss is introduced as a deconstructivist architect, as the critics call his linguistic code. The report discusses the essence of Gnosticism, what constitutes its religious point of view and what is the essence of his philosophy. The paper discusses the common signs, which we have found between Moss and Gnosticism. The last section presents practical examples of Moss architecture, to better determine the ways to bring his theoretical thinking in practice.

GTU, magazine "Ganatleba" N2(13), p.197-202, Tbilisi.2015.

3. The influence of Ivan Leonidov's Ideas on Some of Rem Koolhaas's Creation Aspect

Professor Maia Davitaia, student Tea Chubinidze

Resume

The research presents the ways of solving architectural problems brought up in the history of architecture of the 20-th century, in which Russian constructivism plays an important role. Ivan Leonidov's contributing factors to eradicate stylistic norms is great, whose innovative approach solved new problems of the 80-s of the 20-th century. Struggling against the regulations of the of the 60-th brought up Archigram a "Team 10", "Japanese Metabolism, which means neglecting of the existing architecture and the beginning the process of new ways. Research deals with the opposition of a Dutch group and Rem Koolhaas's role in

the Dutch and World architecture. The influence of constructivism on Koolhaas's early projects and realizing Leonidov's ideas on modern buildings.

GTU, magazine "Ganatlba" N 3(14), p.177-182, Tbilisi.2015.

4. Questions of photorealistic visualization of green plantings

T. Chigogidze, Z. Kiknadze, G. Khosruashvili

Annotation

To date, virtually all project documents and presentations prepared using CAD (design using a computer) systems, as this requirement is declared at the level of development, and at the stage of coordination and approval. In CAD systems, visualization of green space still problematic. This is due to the complex structure of the objects in this category. True 3D image would cause unnecessary waste of computer resources. In general and specific packages are mainly limited to the generalized images of plants or symbols, is attempt to create a general impression. The question of recognition (by type, age, season) for CAD systems in general yet problematic. With regard to the development of software design documentation of landscape architecture and objects of green space, such as Landscaping and Desk Designer, Total 3D Landscape Deluxe and other raster packages, they usually are not compatible with CAD systems. As for the basic software Autodesk (AutoCAD, AutoCAD Architecture, Land Desktop, 3ds Max, and others.), they do not contain "realistic", recognizable and dendrology nuanced parameters and libraries. This article discusses ways to address these issues and prospects.

"Business-engineering ", Georgian Technical University, Tbilisi, 2015 (2), pp. 131-133

5. Issue of revitalization of the post industrial objects.

M. Milashvili V. Mchedlishvili.

Annotation: The article discusses basic methods and directions for updating small and medium-sized post industrial objects in Tbilisi.

Technical University of Georgia. Georgian Engineering Academy. business engineering. Quarterly Reproducible and Reviewed Scientific Journal # 1. Tbilisi. 2015 year, P.195-199;

6. Psychological aspects of interior design.

M. Milashvili, V. Mchedlishvili.

Annotation: The article discusses the impact of psychological aspects during the organization of interiors of various functions, the importance of considering this aspects during design process.

GTU. Modern problems of architecture and urban construction. Scientific-Technical Journal # 5. Tbilisi .2015 year, P. 44-53;

7. Perspectives of Development of Architectural Propaedeutic

Vanda Mujiri, Doctor of Architecture

Resume

It is expected that the content of architectural propaedeutic and methodology of architectural teaching, will change together with the rapid development of scientific achievements and technologies. The scientific component surely will be intensified, but in part that relates to art and artistic techniques of creativity, science is limited and can never replace the intuition of the creator and artist.

GTU, magazine "Ganatileba" N 3(14), p.198–201, Tbilisi.2015.

8.Importance of Architectural Propaedeutics and Problems of Teaching of Architectural Composition at Vanda Mujiri, Doctor of Architecture

Resume

Architectural propaedeutic is a basic element of professional training, as well as a significant step for a smooth transition to more advanced stages of architectural education. During many years teaching methodology of volume-space composition at Faculty of Architect, Urbanistic and Design of Georgian Technical University was in concordance with world practice and according to student's opinion, learning of this subject is important, useful and necessary for them and teaching principles acceptable. Although in the last 3 years the problem is the fact that teaching of architectural composition was downsized from 4-semester to 2 semesters, that is fundamentally contrary to the opinion of students and established practice of the leading schools of architecture; it does not contribute to high-quality preparation of students for the transition to more advanced stages of the architectural design. Distribution of subjects at the initial stage of learning also requires logical changes.

Georgian Technical University, p. 72-79; 2015 (77, Kostava Str.0175, Tbilisi, Georgia)

9.Modern School of Architectural Composition as an Innovative Phenomenon in the System of Architectural Education.

Vanda Mujiri, Doctor of Architecture

Resume

Modern school of architectural composition can be characterized as an innovative phenomenon in the system of architectural education, which was the result of social and cultural progress and the evolution of art. It is recognized and approved scientific-pedagogical concept that effectively addresses the underlying question of perception of basic professional experience.

GTU, "Ganatileba # 3 (14) 2015, p. 195-198;

10.This historic city problems in the identification context of landscape zone

Medea Melkadze, associate professor,

Resume

Our article (report) is a projection of each phrase and the concept of the title.

What do we mean? Follow the subject turns to each concept. 1. Problems of the historic town – it is the world's problems in any country which is becoming increasingly important in the modern architecture on the new technologies background. 2. Landscape-zone in the city urban areas the natural environment identification. 3. Identification-the substantive emphasis and underline it.

What is our topic for discussion? The historic part of the city which at the landscape zone, harmonically co-exists and creates the phenomenon of the "Old Tbilisi".

It is known that historic districts of our city have serious problems.

The questions is – what is the problem? Answer is – variety: 1. Seismic, 2. Natural climate, 3. cityplanning, 4. Technological, 5. Social-economic and etc.

Architecture stands in the epicenter of the all above problems and in a modern technical-construction-boom era is quite a significant potential threat to the old districts of our city.

The danger which we have to consider, is a combination of an architectural volume as a system – post-structure of semantic system and the natural environment, as a structure – incompatibility, antagonism and repetition on the background.

Above the issue is the dialogue and communication the architecture and the natural environment. Is this problem international or is it only the specifies to our country? The short answer is: It is international and in the context of Western examples, systematic analysis and comparison to the reality of Georgia is the space of our report. And in this context we discuss about one of the US modern architecture vector – organic architecture. So we observe the experience of organic architecture in the context of Georgian reality.

Georgian Technical University Ganatleba N2 (13) Tbilisi, 2015

11.The “new” folk architecture in the higher mountainous regions

Prof. Nino Imnadze, Graduate student Tamar Aduashvili

Summary

Preservation of folk culture is one of the most urgent problems for Georgia, because it is a part of the Georgian architectural language. Folk architecture – Regionalism is original response to the globalization aimed at the identity and individuality. Analysis of the material, show different ways to interpretation of the folk architecture: 1. Stylization; 2. direct citation of folk art.; 3. Creative rethinking of folk art; 4. Application of the national materials; 5. Use the national alphabet; 6. Ornament.

Creation of regional architecture is very difficult. It is one of the directions of the modern architecture. It is has a great potential for form making. Proper understanding of national architecture will allow saving identity. National culture study: “Present can exist at the crossroad of ancient and modern.

Magezin “Ganatleba” GTU, Tbilisi, 2015, № 1(12) p. 257-262

12.Role of lighting and innovations in the architecture

Nino Imnadze, prof. Mariam Gvazava, undergraduate 3rd year student

Resume

One of the actual problems of architecture is a search for innovative ideas. One of the ways to identify innovations is student projects, the organization of creative competitions and workshops, because it contributes to birth of the creative ideas. In this space student thinking freely and respectively the architectural form is free too. There are no prohibitions; this space is for creative thinking. Therefore, by students with support of professionals have organized Architectural Forum and the workshop. The theme of the workshop is “Light in Architecture”. Amazing art gallery was created by of the student works. With the help of synthesis of light, shadows and abstract shapes transmitted a concrete idea. Numerous innovative ideas was identified during the marathon. Each of them is based in a concrete philosophy. To identify with light the metaphysical and emotional connection between the man and space, students entered in the interdisciplinary field: fractal, kinetics, optics. The students began to perceive differently the environment and space.

13. Contemporary architecture in the context of the historic center. (Rike an attempt to architectural and spatial analysis)

Prof. Nino Imnadze, Graduate student Erekle Vardosanidze

Resume

One of the significant questions for historical city is the context of new architecture. Creating a new form, at the same time correct to the historic city is especially important for modern Tbilisi. The question arises is it whether possible to form an ensemble between the modern space and historical environment. Despite the many published articles in this article we analysis of the newly formed architectural space Rike in conjunction with the environment. Analysis of the reality does not allow to talk about existing space-planning concept. Authors of the concert hall building were unable to identify character of the historical places, it would give them opportunity to create a new building in the context of the morphology existed historical place, thereby enhancing the environment and the architectural appearance of the building. Existing the historically valuable environment for new, was only the beautiful decoration. It could not create the harmoni, emotional environment where coexist the new and old buildings. An emotional architectural environment is the result of intuition, which is achieved by the concepts, where in the unity exist the environment, person and nature.

Magazin: "Ganatleba" GTU, Tbilisi 2015, № 1(12) p. 263-267

14. Industrial architecture and turizm

Prof. Nino Imnadze, Student Giorgi Vardosanidze

Summary

The purpose of this article, analysis of the existing wineries and cellars in Georgia, which are based on a modern architecture and technology in wine production. We will consider them in terms of tourism. Wine tourism is one of the actual directions in the world. In many countries, the wine changes their image. During the analysis, revealed that the architecture of the existing wineries in Georgia are oriented on identifying the features of the national folk architecture, on the one hand, this is kitsch, but it is not annoying, attracted since care found folklor components and create a unique atmosphere and mood. Each winery is a theatrical installation, where main characters are people and ethnographic tools, are focused on the fact that tourists have taken a part in the different wine festivals, to test national dishes, in opposition to them Chateau Mukhran is comfortable and modern. In these winery architects have created an interesting synthesis between history and modernity and at the same time created a completely new topic in Georgian modern architecture " wine – architecture – tourism".

Magazin: "Ganatleba" GTU, Tbilisi 2015, № 2(13) p. 209-213

15. The concept of the universal design by the example of Poland and Georgia

Professor Nino Imnadze

Rezume

The aim of this article is to understand the concept of Universal design which is currently relevant and new for Georgia. In urban culture universal design is a new way of thinking. Its purpose is to create equal conditions for all. The analysis shows that in the XXI century, for full functioning of a modern society is impossible without the implementation of the concept of a barrier-free environment, which gives an opportunity to all categories of the people to realize the physical and don't virtual

accessibility to facilities. The analysis is revealed it is desirable adapt to existing experience of Poland on the desirable based on the specifics of Georgia, on the base of the researches reposed recommendations.

GTU. Modern problems of architecture and urban construction. Scientific-Technical Journal №6. Tbilisi .2016, P. 27-40;

16.Responsive architecture of XXI century in the U.S.A.

N. Kochladze

Rezume

Responsive architecture takes over a notable position in the field of architectural research.

The term "responsive architecture" was given to us by Nicholas Negroponte (Greek American architect), who first conceived of it during the late nineteen sixties when spatial design problems were being explored by applying cybernetics to architecture.

The common definition of responsive architecture is a class of architecture or building that demonstrates an ability to alter its form, to continually reflect the environmental conditions that surround it.

Some 21 century examples of responsive architecture in USA are North house prototype, Burke brise soleil - Quadracci Pavilion (Milwaukee Art Museum), Prairie house in Illinois, Echoviren pavilion, "Floating" house for Brad Pitt's Make It Right New Orleans foundation, proto-type called eSkin.

As far as we see in the case of responsive architecture it is not merely the aspect of AI (artificial intelligence) that draws attention, but the experience of space through technology. It is shown that there is a change of focus towards space envelopes, which give up their solely meaning as boundary between the dualistic positions of inside and outside. The emerging new technologies stipulate creation of a new architectural space.

Scientific-technical journal "Ganatileba" N2(13), Tbilisi, GTU, 2015, p.214-219

17.Modern bridges Architecture

B . Tinikashvili , M . Javakhishvili

SUMMARY

The aim of the article is to systematize and research of existing bridges. It has been discovered, that a bridge, as an engineering construction is an internal part of the environment and that is why it is discussed in its context. City territories with vital areas closed to bridges require absolutely specific approach in forming architectural environment. In corresponding cases the bridges are necessary to be set up as a result of architectural analysis being interconnected system structure. Based on the above said artistic structure of a bridge represents esthetic category and does not require retaliation at the decorative level. Modern innovations engineering technology should not interfere with natural environment priorities and a bridge as a city planning structure must be in harmony with existing landscape.

GTU. "Ganatileba" 2015 N 1 (12)

Scientific articles published in 2014 by academic staff.

1. Problems landscape gardening expansion of Tbilisi in the economic conditions

Doctoral student A. Lagidze, professor T. Makharashvili

Resume

In this paper is considered the role and significance of green plantations in improving the ecological state of an urbanized environment. The peculiarities and sanitary and hygienic properties of the green plantation are considered and recommendations are given for improving the legislative base and organization of green spaces in order to improve the environmental performance of Tbilisi City.

Tecnikal and Natural sciences "Intellectual" №26, 2014; p.231-235;

2. Migration problems of mountainous regions and urban development on the example of Georgia upland.

Doctoral student N. Lagidze, professor T. Makharashvili

Resume

Discussing different aspects of human settlements development in the east-central highland region of Georgia, migration trends, which have a negative impact on the development of environmental and social problems in the region.

Tecnikal and Natural sciences "Intellectual" №26, 2014; p.225-230;

3. New buildings nearby Tbilisi "Rose Revolution" square

Professor M. Davitaia, doctoral student S. Gabadadze

Resume

New buildings on city's main street is connected to problem of preserving of historical and cultural legacy. Recent Construction works on near Tbilisi "Rose Revolution" square will change street's scale and shape.

Scientific Tech Journal "Construction" N1(32), 2014 №.

4. Expert System of an assessment of competitive projects.

T. Chigogidze, V. Vardosanidze, Z. Kiknadze

Resume

Today there is no unambiguously certain and standard procedure of an assessment of competitive materials. Thus, there is a basic possibility of creation of system of an assessment of design decisions on the basis of the saved up experience and methodological researches, as well as statistical processing of opinions of experts which would become a basis of an objective solution. The main objective of the work is to create a procedure for an objective assessment of design solutions on the basis of modern technological and methodological means of information processing. The importance of work is predetermined by both modern requirements, and growth of scales construction in the long term. The social and economic effect gained from use of the best project directly is connected with the procedure of an objective assessment of projects. Considering examinations, compiled in questionnaire forms, as well as a rating of experts, level of separate and complex indicators is defined and ranging of competitive projects is carried out.

On the basis of intermediate results the rating of experts is specified, the final assessment of design decisions is corrected, the best project comes to light.

GTU, Scientific conference Architecture, Urban Planning and Design Faculty: Modern Problems of Architecture and Town Planning; Scientific and Technical Magazine #4, 2014, Tbilisi, M. Kostava 77, pp. 87-96

5.THE BASIC VARIETIES OF DESIGN

G.Rokva, T.Kutateladze, G.Bagrati-Davitashvili

Resume:

Design was developed in the beginning of XX century and had brought corrections in artificial “artificial” environmental organization. There were some problems, especially in its attitude to architecture. Now design exists in various forms: industrial, operating systems, urban planning Architectural, social and others. Great importance have traditional, folk forms in architecture and art, which today is called ethno-design. These forms answer the basic principles and requirements of design (functionality, constructivity, manufacturability and form). The main problem is deepening of Specialists in theoretical grounds of design.

Department of design and history of architecture, Georgian Technical University, 68a, M.Kostava str, Tbilisi 0175, Georgia

6.Homogeneous and Aggressive Visual Fields in an Urban Environment

Nino Khabeishvili, Zurab Kiknadze, Mariam khabeishvili

Resume

When speaking about ecological problems usually is meant only of polluted air and water, extremely high noise and radiation level. But the visual face of urban environment and its condition are one of the major factors of environmental security. Visual environment of many cities and towns became worse year after year. In modern cities and towns bare walls of buildings, large glass surfaces, many-storied houses with numerous windows etc. creates homogeneous and aggressive visual fields, where the eyes are not able to identify the object and localize in space. this unfavourable visual environment violates the psyche and provokes a person to aggressive actions and violence.

International Science-Pedagogical Journal „GANATLEBA”, Georgian Technical University, 2(11), 2014. (p.155-158).

7.Emotional, social, load of street art and its place in the urban environment in the context of visual perception

Nino Khabeishvili, Zurab Kiknadze, Mariam khabeishvili

Resume

Street art is a complex social issue. For decades, its presence has fueled intense debate among residents of modern cities. The main idea of this art is fighting against rules and injustice. Street art absorbs all tendencies and difficulties of everyday life and for their interpretation uses all means. Here every trifle - shadow, colour, line, detail is important. The artist creates his own stylized logotype - "unique sign" and transform streets into the areas of avant-garde art and the platform of selfexpression.

International Science-Pedagogical Journal „GANATLEBA”, Georgian Technical University, 2(11), 2014. (p.158-161).

8. Definition of Speech Intelligibility in Theaters Using Articulatory Tables (on the example of the theaters in Tbilisi)

N. Khabeishvili, N. Khvedeliani

Resume

With the purpose of analyzing the acoustic properties of the dramatic theaters in Tbilisi, in the work we see conducted experiments with the help of articulatory tests in the theaters Tumanishvili and Rustaveli. On the basis of which a real estimate is given and the quality of speech intelligibility is determined. A remedy for correcting the identified shortcomings is planned.

Scientific-Technical Journal „Building“, Georgian Technical University, N 1(32), 2014. (p. 148-152).

9. Acoustics of Open Theaters

N. Khabeishvili, N. Khvedeliani

Resume

The article deals with the statements of ancient architects and scientists interested in questions of acoustics. A treatise of Vitruvius is given, where the mystery of the unique acoustics of the antiqs open theatres. The discovery of American scientists about the ideal of the acoustics of one of the greatest ancient theaters in the world of the theater of the Epidaurus has been considered. As a summary, the corresponding conclusion is drawn.

Scientific-Technical Journal „Building“, Georgian Technical University, N 1(32), 2014. (p. 152-156).

10. Use geometric acoustic method in a small hall of Rustaveli Theater

N. Khabeishvili, N. Khvedeliani

Resume

The method of geometrical acoustics is considered in the article, which makes it possible to reveal the acoustic properties of the auditorium. A study is conducted to analyze the acoustic properties of a small hall in the Rustaveli Theater using this method. Based on the results of the analysis, an estimation of the real, the acoustic condition, the sound of the sensations, the acoustic flaws are revealed:

sound masking, focusing of the sound energy, acoustic "shadow" and means lead to an improvement in the general condition of acoustics and speech intelligibility.
International Scientific Journal "INTELLECTUAL". 26, 2014. (p. 213-217).

11.The issues of revitalization of the post industrial objects.

M.Milashvili.V.Medlishvili.

Annotation: The article discusses the basic Methods and Directions for Renewing post-Industrial Objects in Tbilisi.

GTU. Modern problems of architecture and urban construction. Scientific-Technical Journal # 4. 2014 year, P. 122-130;

12.Modern Tendencies in Museum Architecture

Vanda Mujiri, Doctor of Architecture

Rezume

The museum construction has reached a globally massive scale. The necessity for generating new knowledge, ideas and spiritual values has become apparent. The role of museums, in interpretation of cultural legacy and person's identification within the modern world, has also grown. The definition of a "museum" is encompassing new functions, which bring about evolution and change of museum architecture. Currently the museum, aside from simply following through with traditional functions, also appreciates novelty and originality of the building's architectural execution alongside with open-air and indoor expositions and exhibition. In planning the construction of a museum a new emphasis is being made on creating a space capable of attracting visitors and increasing the establishment's income. A museum, nowadays, presents itself not only as a public undertaking but also as an author's project .Due to vibrant execution, the addition an architectural gem transforms a city into a generator of tourism.

International Science-Pedagogical Journal Ganatleba 2014 №1(10) p.193 – 198

13.Green roof, ecologies revitalization and social programs

Medea Melkadze

Rezume

It is common knowledge that ecology not only represents a problem in only one field, but overlaps almost all spheres of human life. The architecture, as a major factor determining the space-anthropogenic system for organizing living and healthy environment of a human being, represents one of the most critical elements in the entire environmental policy.Given the above, the topic of roofs is one of the most top priority aspects in the US, as well as other countries worldwide. One needs to mention that the policy of "green roves" is particularly outstanding in New York. It is known that the aggregate size of green roves in New York is four times larger than the central park of the mega police with 341 hectares. The recent amendment into Law on Urban Planning in Germany stipulated that both developers as well as municipalities are obligated to ensure the revitalization of existing and/or new roofs – reorganize roofs – into small green areas.

14. Issues related to urban agglomerations and urobencology

G.Saluqvadze

Resume

There are considerable scientific bases of city agglomeration, as one of the most productive fields in the science of city construction ecology. It is said that if we consider agglomeration, as destructive and uncontrollable, force that it increases entropy of urban structures; however, on the other hand, we can consider agglomeration, as an emerging source of high social-cultural and development potential.

GTU. Modern problems of architecture and urban construction. Scientific-Technical Journal # 4. 2014

15. Tbilisi – tolerant space – symphony

PhD, prof. Medea Melqadze, PhD, prof. Nino Innadze

The purpose of this article analyzes the urban environment Tbilisi since the early nineteenth century to the present day. Today, all the innovations in the architectural context, that takes place in our city - ultramodern stylistic flair - it should be viewed and analyzed in this vein - the historic part of the city - urban planning grid - cultural heritage - Tbilisi quarterly - System - Tbilisi courtyard - house and harmonic system - city - quarterly - home - people - tolerant environment - architectural space - national tolerance - denominational social. Full of the symphony.

International Science-Pedagogical Journal Ganatleba 2014 №1(10) p.180 – 186

16. The principles of sustainability in the 21 century furniture design

N. Kochladze

Resume

The role of furniture, as a key element of interior, is very important in the creation of the interior design. Designing sustainable furniture means to use materials with the purpose of minimizing negative impacts on the environment and occupants and maximizing positive impacts on environmental, economic and social systems over the life cycle of furniture. Many contemporary designers are working in the field of sustainable furniture design; they seek innovative ways of creation and at the same time establish new aesthetics.

International scientific journal “Intellectual” N25, Tbilisi, 2014, p.102-107

17. Future architecture – adaptable architecture

N. Kochladze

Resume

Contemporary world can be defined as globalized, personalized, era of electronics. Architects are trying to create conceptual, high technological projects, which can meet consumers' demands. This contemporary trend in architecture is named adaptable architecture. According to the literature, adaptable architecture is classified in several ways. The newest subcategory is the smart architecture. The smart system is completely integrated in the life and behavior of the users and environment. The system is self-learning. To create smart adaptability new techniques need to evolve.

Ministry of education and science of Georgia, GTU, Water management institute, Collected papers N69 , Tbilisi, 2014, p.278-281

18. Soil Architecture

B . Tinikashvili , M . Javakhishvili

Resume

The main purpose of projecting any “soil” building is to maintain energy and to reduce harmful impact on humans. Ecological Architecture – is the course which is committed to maintain balance between biosphere and anthropogenic environment during the designing process. The article examines the ancient and contemporary examples of “soil” architecture.

Science-technical Journal “Mshenebloba” 2014 №2(33)

Scientific articles published in 2013 by academic staff.

1. Formation of the accessories of a project in CAD systems

Tinatini Chigogidze, doctor of architecture, Zurab Kiknadze, doctor of architecture

Resume

Vector modeling of the main structural components of the project is unambiguously defined in CAD systems as priority. Formation of additional resources of registration of the project, the annotated symbols and objects are more or less problematic, and we realize them by various methods. Conditionally, we call above objects accessories and in this article we consider those often used, such as: 1. The annotated symbols and objects; 2. Background; 3. Image; 4. Decal; 5. Landscape; 6. Content is a term, which contains subjects of wide range, including furniture, even parts of the building, etc. In most cases, they are not subject of the main technological algorithm of a software package, and serve for increasing labor productivity, minimizing file sizes and optimizing images.

GTU, Scientific conference Architecture, Urban Planning and Design Faculty: Modern Problems of Architecture and Town Planning; Scientific and Technical Magazine #3, 2013, Tbilisi, M. Kostava 77, pp. 76-81

2.The Beauty Created by Women

Tinatini Chigogidze, doctor of architecture, Nino Khabeishvili, doctor of architecture

Resume

Today, gender equality is an integral part of human rights. There are gender stereotypes, which show that men are talented, creative, able to see the problem as a whole, rather than focus on the details, but women are not able to successfully manage and lead a great job, they are just good performers petty, everyday work, not the creators, their intellectual capacity less than men. Despite these stereotypes in the world have always been women who have violated these stereotypes. An obvious example - the appearance in the arena of design talented Ladies.

International Scientific Conference "World and Gender". Georgian Technical University, Tbilisi, 2013.

3.Traditions in creative works of modern Japanese architects

Maia Davitaia, Sofio Gabadadze

Resume

Nowadays, in the process of globalization, correlation of a tradition and modernity, not only in architecture, but also in other fields, is considered to be one of the main problems. The approach towards the issues of a tradition and modernity varies in different countries, epochs, and it is solved by different authors of different countries. The ways of solving these problems on the examples of practical and theoretical works of Japanese architects are discussed and cited in the given article: Kengo Kuma, Kichō Kurokawa, Terinobu Fudjimori, Chigerou Ban, Tadao Ando.

International Science-Pedagogical Journal Ganatleba 2013 №2(8) p.220– 226

4.The Modern Japanese Architects About the Architecture

Maia Davitaia

Resume

The Modernism establishment in architecture of different countries actualized the necessity of preservation of special features and pursuit of new routes. This problem affected the countries where architecture was stand on traditional basis. Among those countries was Japan as well, which architecture was not developing isolated but always had an influence by best achievements of another cultures, processed and adjusted it to own climatic, historical and cultural features. In this article step wise considered the processes within the Japanese architecture starting from the early stage and up to modern tendencies and presented today's famous Japanese architects experience based on their original ideas.

October, Elektronik magazine "Art-express", N1, p.11-18

5.The Peculiarity of Architecture of Svanetia

Maia Davitaia, Gaga Kvesadze

Resume

In the article presented the peculiarity of Georgian high mountainous region of Svanetia. The main trends of traditional architecture – dwelling houses, tower blocks, architectural compositions and as an example the settlements; Ushguli and Chajashi. Described and considered the restoration and rehabilitation works accomplished in Mestia during the last couple of years. The positive and negative aspects of works completed.

International Science-Pedagogical Journal Ganatleba N 3, p.200-204, Tb. 2013

6.World'sPostindustrial Cities.

M.Milashvili, V. Mchedlishvili;

Annotation: The article discusses the key factors of formation of world-famous post-industrial cities, their current situation and future perspectives.

GTU. Education. # 1 (7), Tb. 2013 year, P.218-222;

7.Tendencies of Formation of Architectural Propaedeutic at Foreign Architectural Schools in the second part of XX Century

Vanda Mujiri, Doctor of Architecture

Resume

We aimed at analysis of different teaching methodologies of architectural propaedeutic, used by various architect schools.

During several years impressive volume of successful methodological findings have been build up, tied with names of elaborators of these methodologies. Modern school of architectural composition is acknowledged and approved scientific-pedagogical concept that effectively solves the aim of providing basic professional experience.

International Science-Pedagogical Journal Ganatleba №2(8) 2013 p. 256 -261

8.Evaluation of Existing Teaching Methodology of Architectural Composition on the Basis of Students Interviewing

Vanda Mujiri, Doctor of Architecture

Resume

We aimed at practical evaluation of existing teaching methodology of volume-space composition and reveal of student's demands and requirements through interviewing of students and magistrants, for further improvement of mentioned program.

Using specially elaborated questionnaire, the survey has been conducted at the faculty of Architect, Urbanistic and Design of Georgian Technical University. 137 students and magistrants have been interviewed. On the basis of analysis of survey results, it was determined that existing teaching methodology of volume-space composition is in concordance with world practice and according to

student's opinion, learning of this subject is important, useful and necessary for them and teaching principles acceptable.

International Science-Pedagogical Journal Ganatleba #2(8) 2013 p. 251 - 256

9.Psycho-pedagogical basis of Architectural Propaedeutic

Vanda Mujiri, Doctor of Architecture

Rezume

The psycho-pedagogical basis of architectural propaedeutic is reviewed in the given article. It has been detected that during the process of teaching, it's necessary to take into account the basics of pedagogy and psychology, as they are influencing the passing of cultures, formation of psychological features of person, patterns of relations between students and professors. At that also has been proved that volume-space composition can be reviewed as an main instrument in formation of professional characteristics of person and his culture.

International Science-Pedagogical Journal Ganatleba #1(7) 2013, p. 208 – 213

10.Interrelation of Volume-Space Composition with Architectural Projecting, as a Methodological Problem

Vanda Mujiri, Doctor of Architecture

Resume

The interrelation of volume-space composition with architectural projecting, as a main methodological problem is reviewed in the given article. During the analysis the effectiveness of parallel teaching of these two subject has been revealed.

International Science-Pedagogical Journal Ganatleba #1 (7) 2013, 213 -218

11.Ornament, As a means of identification

Archil Kurdiani PHD of architecture, Medea Melkadze PHD of architecture

Rezume

Systemization of the issue of our discussion – ornament, as one of the aspects of applied arts, together with brief overview of the worldwide examples shall serve as a precondition to establish a generalized understanding of this most complex aspect. This, in itself, shall be used as a basis for further elaboration of the matter in the context of other countries, like: Egypt, Assyria-Babylon, Greece, Rome, Byzantine.

Georgian Technical University International Science-Pedagogical Journal Ganatleba N1 (7) Tbilisi

12.Architecture area – Ideal and reality

Medea Melkadze PHD of architecture, Maia Chkhaidze master of architecture

Rezume

Our article is about an ideal architecture of it is a real architecture at same time. If it is in a reality – where and when. Analyze these both ideas in the time and space could show the vector of development of architecture thought.

Georgian Technical University International Science-Pedagogical Journal Ganatleba N1 (7) Tbilisi

13.Problem of modern stadium

Archil Kurdiani PHD of architecture, Medea Melkadze PHD of architecture

Rezume

The article speaks about two problems pertinent to all stadiums. That is: 1) angle of visibility and 2) aggression of admires. In case of the first problem, there is original solution found by local architects, with needs to be framed as normative document. As to the latter – aggression of admires – this falls within the scopes of psychology and we believe that owing to our efforts this will also acquire the status of architectural – static engineering norms.

Georgian Technical University International Science-Pedagogical Journal Ganatleba N2 (8) Tbilisi

14.The role of “Set and Attitudes” in architecture

Archil Kurdiani PHD of architecture, Medea Melkadze PHD of architecture

Rezume

A human and environment, human as a being and individual with wishes and perceptions, and how does it imbed within the sphere of art known as architecture? Architecture is known as art to organize space. But what is the phenomenon of relationship between the architect as an artisan, begin the inspirer and source for organizer architecture on one hand and the contractor, a non-artisan on the other hand? Do we know absolutely, what are the conditions for motivating actions of various groups of humans?

Finding answers to the above questions is the aim of our article. The “Theory of Set and Attitude” by greatest Georgian scientist/researcher Dimitri Uznadze, which serves as an international framework for psychological analysis, in our opinion, can be used as a method for analyzing the system of axis for architecture’s creative-humane charge.

Georgian Technical University International Science-Pedagogical Journal Ganatleba N3 (9) Tbilisi

15.„Architectural context”

Orifessor Nino Imnadze, Doctoral Student Diana Rechviashvili

The article considers the positive aspects of the architectural context in based on analysis of professional views of the relationship between of the architectural object and environment.

Georgian Technical University 2013, International Science-Pedagogical Journal Ganatleba 2013 N1 (7)
Tbilisi p.194-198.

16.The observation of the modern trends in the interior greenery

N. Kochladze

Rezume

Modern people are out of touch with nature, that's why we try to fill this shortage through the creation of oases in our residential and public areas. The modern trends in the phytodesign are the florariums, paludariums and green walls. The main features of these innovations are the maximum decorative effect and minimal maintenance work. The green walls are particularly interesting. There is only one example of the green wall in Georgia, it is a vertical garden in Tbilisi near metro station "Avlabari". This innovation plays an important role in the interior design as a functional element of the design, as a visually effective part of the design and also as an important element that maintains ecological safety. The plants for the green walls can be selected purposely considering their features, so that the green wall maintains the ecological purity of the inner space.

Scientific-technical journal "Building" 1(28), Tbilisi 2013, p.147-149

17.Bioclimate principles of modern architecture - foreign experience

B.Tinikashvili, M. Javachishvili

Rezume

The planning methodology defines bioclimatic approach as a basic criterion for house design. The place, environment and orientation determines how to provide better protection and better use of natural conditions (sun energy, wind and heat sources). To confirm the foregoing this article presents examples of foreign architecture - modern bioclimatic houses which use high technologies and are based on the ecological principles.

Scientific-technical journal "Building" N4(31) 2013

