# VISUAL FACILITIES OF MEDIEVAL ARCHITECTURE IN AZERBAIJAN

УДК 74:72.033(479.24)

DOI: 10.24412/1998-4839-2021-1-114-122

### F. Badalova

Azerbaijan University of Architecture and Construction, Baku, Azerbaijan

### Abstract

The processes occurring in Azerbaijan and other countries affected the development of economy, urban planning and architecture. The impact of architectural structures on the development of the urban environment contributed to public education and awareness both in Azerbaijan and throughout the world. The range of publications of information materials (books, newspapers, magazines, booklets, daily posters, etc.) had been extended. Visual facilities, placement of signs, figures, brief notes on squares along the streets, at the stations, on the facades of various buildings. Analysis result, it was found that ancient historical settlements can be improved the field of view in the urban model, based on the results of historical and theoretical studies. It should be noted that the development of cities, the constant growth of the role of information in the communication of the population, requires the use of architectural, artistic and aesthetic elements. Therefore, as the need of society for visual information increase and the city is enriched and the main attention should be paid to visual signs on roads, parks, buildings, facades and streets.<sup>1</sup>

**Keywords:** ornamental of accidents, visual communication elements, architecture, visual culture, signs

# ВИЗУАЛЬНЫЕ СРЕДСТВА СРЕДНЕВЕКОВОЙ АРХИТЕКТУРЫ АЗЕРБАЙДЖАНА

#### Ф.Т. Бадалова

Азербайджанский Архитектурно-Строительный Университет, Баку, Азербайджан

#### Аннотация

Процессы, происходящие в Азербайджане и других странах, повлияли на развитие экономики, градостроительства и архитектуры. Влияние архитектурных сооружений на развитие городской среды способствовало просвещению и информированию населения как в Азербайджане, так и во всем мире. Был расширен круг публикаций информационных материалов (книги, газеты, журналы, буклеты, ежедневные плакаты и т.д.). Для этого использовались и визуальные средства – размещение вывесок, рисунков, кратких заметок на площадях вдоль улиц, на вокзалах, на фасадах различных зданий. В результате анализа было установлено, что древние исторические поселения могут улучшить поле зрения в городской среде, основанной на результатах историкотеоретических исследований. Следует отметить, что развитие городов, постоянный рост роли информации в общении населения, требует использования архитектурных, художественно-эстетических элементов. Поэтому по мере того, как потребность общества в визуальным информации возрастает, и город обогащается, основное внимание следует уделять визуальным указателям на дорогах, парках, зданиях, фасадах и улицах.<sup>2</sup>

Ключевые слова: орнамент, происшествия визуальной коммуникации, архитектура, визуальная культура, знаки

DOI: 10.24412/1998-4839-2021-1-114-122

<sup>&</sup>lt;sup>1</sup> For citation: Badalova F. Visual Facilities of Medieval Architecture in Azerbaijan. Architecture and Modern Information Technologies, 2021, no. 1(54), pp. 114–122. Available at: https://www.architecture.com/architecture.com/architecture/architec

https://marhi.ru/AMIT/2021/1kvart21/PDF/07\_badalova.pdf DOI: 10.24412/1998-4839-2021-1-114-122 <sup>2</sup> Для цитирования: Бадалова Ф.Т. Визуальные средства средневековой архитектуры

Азербайджана // Architecture and Modern Information Technologies. – 2021. – №1(54). – С. 114–122. – URL: <u>https://marhi.ru/AMIT/2021/1kvart21/PDF/07\_badalova.pdf</u>

## Introduction

Visual information is one of the oldest form of communication. It took its beginning in facial expressions, gestures, in the signs of people left on surrounding objects, script. And it is still alieved, not only alieved, but also developing. In human communication, much more other factors play a role, most of which are related to the subconscious and non-verbal aspects of communication [1].

Beginning from the 11<sup>th</sup>-12<sup>th</sup> centuries, the formation of the architectural environment Azerbaijan and information carriers reflected several styles belonging to Baku, "Shamakhi", "Ganja", "Nakhchivan" and "Aran" cities. The monuments of Aran architecture had the defending character, that's why there were existed for our centuries. These monuments were formed against the background of the social condition of the regions and "led to the emergence of buildings for religious rites [2]. The buildings were surrounded by simple and asymmetric compositions. The information of these compositions were related to the architecture of "Shirvan-Absheron" (Fig. 1).

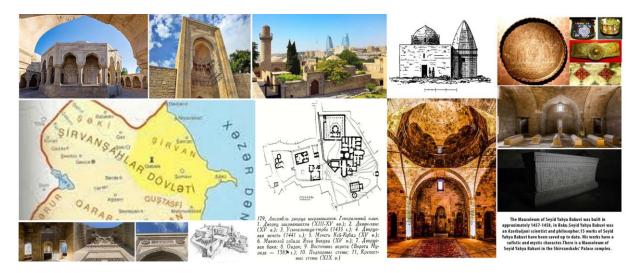


Fig. 1. Palace of the Shirvanshah

"Shirvan-Absheron" architecture, which had its significance in the architecture of Azerbaijan, contributed to the prosperity and development of local architecture with the strengthening of the state of Shirvanshahs (during the Kasranids dynasty).

Before initiating the theoretical review, let's first cast our eyes on ornaments over the architectural history and hold a narrative of ornamentation throughout the history of architecture. Figure 1 together draw the timeline of the evolution of ornaments chronologically.

Ornamentation is an essential part of Islamic architecture. Ornamentation can be categorized into three types: geometric, art of nature elements, which was called "nabatat" and calligraphic patterns. The last one is the most commonly used in religious buildings [3]. The ornamentations of monuments helped to developing the science, which was called "semiotics". Semiotics consisted of symbols, index and signs, which could give us information about culture and had charactered the religions of countries<sup>3</sup>.

Stylistic features of "Shirvan-Absheron" architecture were formed on the basis of the composition created by carved ornaments on stones. Ornaments engraved on the local stones with exquisite drawings increased the artistic value of the monument. Such boards were placed in the more appealing part of the monument.

<sup>&</sup>lt;sup>3</sup> <u>https://gtmarket.ru/concepts/</u> (accsess date: 03.02.2021).

The names of the bricklayer, architects, names of architectural decoration masters that lived and created in those periods remained until present time by mentioning on the stone boards and decorative items. For example, Ibrahim Ibn Osman (Ganja Gate, 1063) (Fig. 2), Muhammed ibn Abu-Bakr (Siniqqala Mosque in Baku, 1078), Bakir Muhammad (Red Tomb Tower in Moraga, 1148), Ajami ibn Abubakr Nakhchivani (Yusif Ibn Kuseyr Mauseloum in Nakhchivan, 1162, Momine Khatun Mausoleum, 1186 etc.), Najaf Ashur Ibrahim (Stone mihrab of Ibrahim mosque in Icherisheher, 1171), Masud ibn Davud (Maiden Tower in Baku, 12<sup>th</sup> century), Mahmud ibn Sad (Castle in Nardaran village near Baku, the minaret of the Bibiheybat Mosque, 1305-13) (Fig. 3).

1.

.6 الله ادام الله توفيقه

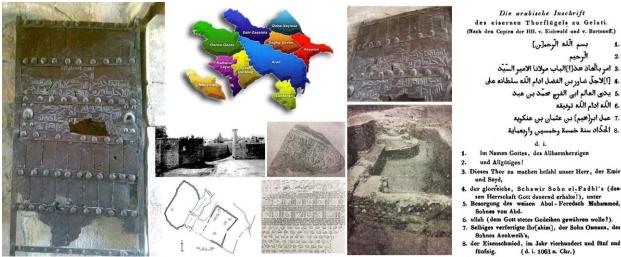


Fig. 2. Ibrahim Ibn Osman (Ganja Gate, 1063)

Fig. 3. Yusif Kuseyroglu Tomb (Nakhchivan)

In Azerbaijan in the 12<sup>th</sup>-15<sup>th</sup> centuries decoration engraving, drawing, carving by cutting method, engraving of silhouettes of human, animal and others led to the development of decorative and applied art. Artistic and decorative ornaments were widely used in the decoration of architectural monuments and tombstones.

# Materials and methods

The Islamic patterns used in the ornamentation classification into various categories are the scope of this work. This research applied descriptive approaches, for which goals were set to

# AMIT 1(54) 2021

collect data on surviving patterns with the aid of extensive photography. The patterns "nabatat" were classified based on geometry figures. Other methods included referring to published documents and conducting informal interviews with local elderly persons who was connected to the mosque in any capacity. In accordance with the ornamental details of the mosque, this work was divided into two sections, namely, geometry and "nabatat".

### Motives for visual communication

Already in the 19<sup>th</sup>–20<sup>th</sup> centuries, architecture of Azerbaijan developed in two directions: based on building structures and European architectural traditions in the planning of residential areas. The processes occurring in Azerbaijan and other countries affected the development of economy, urban planning and architecture. The impact of architectural structures on the development of the urban environment contributed to public education and awareness [4]. Various discoveries were made in Azerbaijan, including in the world, and technological achievements were applied in these times. The range of publications of information materials (books, newspapers, magazines, booklets, daily posters, etc.) had been extended [5]. The role of small architectural forms and visual signage tools used for this increased. Visual means, placement of signs, figures, brief notes on squares along the streets, at the stations, on the facades of various buildings also contributed to distribution of news [6].

It should be noted that the information material was not limited to the means displayed visually. People indirectly saw the information in the images of other "material constructions", could receive news resources from various short films, from posters posted as daily news on "tunba" kiosques appeared in the street-side. The physical and psychological impact of this case on people was great" [7].

At this stage in the interiors of architectural structures (in the foyers of hotels, cinemas, plants and factories, etc.) the role of means having an informative value was not small. The roots of such experience can be seen in the main commercial streets of "Icherisheher", a fortress city, in the count yard of caravanserais, in the small visual aids shown in the madrasah. This includes description of the caravan flock carved on the outer walls of caravanserais and the patterns of various types of crafts hanging from craft neighborhoods [8]. An example of this is the short data engraved on the stones, on the wall of the Maiden Tower or on the wall of the "Juma Mosque" memorial religious buildings (name of the master, history of the building, etc.). The existence of silhouettes along with deep patterns and inscriptions carved on the stones of the "Sabail Castle" testify to its construction and at the same time its political and military events. [9] The venerable archaeologist I.Jafarzadeh, who researched these stones for many years, proved that silhouettes of people and animals among the great patterns have profound meaning. Along with realistic images among others on the "Bayil stones", legendary mythical figures draw attention to the fact that they are griffon (the body of lion and the head of eagle), "Vaq-Vaq" (with tree trunk, depicting human heads in branches), and sphinx (the head of a woman, the body of a lion, a winged creature, etc.) [10]. These research show that in saga and legends of ancient Turkish people's heroes were represented in syncretic images. These analyses prove that visual images in medieval architecture of Azerbaijan can be considered a product of people's thinking and world's view [11].

Starting from the 15<sup>th</sup> century, compositions made of a combination of leaves, plants, trees to flowers and blossoms taken from the botanical world have dominated [12]. These types of monuments can be found in the decoration of the embroidery of "Bulbula village", mosque and the "Shirvanshahs' Palace".

The development of the architecture of Azerbaijan began to manifest itself in all areas. As early as in the 19<sup>th</sup> century, the burgeoning economic development of industry related with oil production was widely observed in architectural spheres. As the population of the city was growing, the number of visitors, merchants, scientists, architects, craftsmen was increasing, there was observed a big turn in the society. The growth of cultural, residential, commercial, business and other new types of buildings attached importance to a wide range of information

means in its form [13]. Besides of the means promoting architecture, there had been development in the field of public education, which led to an increase in the number of publications [14].

"Akinchi" newspaper, published by the prominent educator of Azerbaijan, "Molla Nasreddin" magazine, interesting paintings by Azim Azimzadeh provided a powerful impetus to the daily awareness of the population, the development of thinking and the rise of cognition. In addition, during these periods the following magazines were published: Education and Culture (Maarif ve medeniyyet), Eastern women (Sherq qadini), Golden Pen (Qizil qelem), Scorpio (Aqrab) and other social and literary magazines [15].

The staging of the opera "Leyli and Majnun" in 1908, a major breakthrough in the cultural life of the population since the introduction of the architecture of Azerbaijan to the new stage, displaying its first poster in the lobby of the H. Z. Taghiyev theater, in "Napol" and "Grand Hotels". The visual information displayed in pictures and news images can be considered as one of the types involved in solving aesthetic problems [16].

At the beginning of the 20<sup>th</sup> century, sculptural compositions of prominent figures of Azerbaijan (in separate squares, in the architectural view of the Nizami Museum, etc.) were created in the environment of Baku. The visual method, representing the culture of our country, increased the aesthetic essence of the city. This provided a connection with residential and other elements of the urban environment. The connection that exists between the elements affects their characteristics, the volume of individual connections and to the methods of organization of the entire city. Visual means through forms, materials, artistic and aesthetic design in general tried to meet the requirements of the information of our society [8]. However, despite the very limited and low level of broadcasting and design, due to them the society had proved itself in the field of political and cultural work, urbanization and social development. In this short period of time, the use of a telegraph with access to news had been expanded and become indispensable. With the advent of telegraph in many foreign countries by the end of the 1790, it was possible to observe how economic and social development were changing [6]. The role of telegraph in Azerbaijan at the end of the 19<sup>th</sup> and beginning of the 20<sup>th</sup> centuries should be specially noted. At that time, Baku was considered almost the most valuable part of the southern province of Russia, and the role of the telegraph was important in the delivery of events taking place in this country to the center in a short time. In general, the impact of news media as an information relay and carrier in the development of all the countries of the world has spread to almost many areas. Thus, in 1790, "Abbat Shap" invented the telegraph system, the graphic design of which consisted of a three-level dictionary [14]. This innovation was the design of a code system developed by "Shap" rather than the management of telegraph. In other words, at the expense of a number of sloping mirrors, it was possible to get 196-signal at the same time. The dictionary, compiled in 1794, could transmit 92 pages and 92 words per page. Here the first signal indicated the required page in the dictionary. The second indicated the number of the row on the page corresponding to the news word. Thus, the two signals were able to express the word up to 8464 in a short time [10].

Previously, this encrypted news code and the key to the password were broadcast only in Paris and Rome. Then France improved this process even more. It should be noted that since telegraph needed mostly by the navy, it was required to transmit news via code. The role of "Morse code" in developing this area was very important.

In 1810 it was possible to transmit the news at 400 km on the basis of this code. These were implemented by dots. In addition, one of the warning tools in the Navy were signals transmitted by manual movement at a distance that could be seen from the close and far distance by the means of the flag. It should be noted that the flag was not the only signal, it was also the symbol. If we go back a little to the previous historical stages, we can see that symbolic flags and emblems of individual countries are one of the attributes that demonstrate their informative power.

The khanates of the early 18<sup>th</sup>–19<sup>th</sup> centuries in Azerbaijan had their own flags and emblems. They were engraved on various objects. These attributes combined both signs and symbols. But, if we recall the later stage of development of telegraph, which was a short news tool we will see its shortcomings. Because its transmission capacity generally depended on weather conditions. The effect of rain and bright sun rays reduced its effectiveness. Unlike this, the English scientist Francis Ronald's invented telegraph, working on electricity. Invented in 1873, Samuel Morse Kuk and Whitson demonstrated the use of power tools (through lead) for long distances. The principle of this method was to send signs with the help of electricity. The apparatus was different from the ones presented by French and US specialists. In their invention, magnetic arrows were used in the operation of the system to send the letter codes with the pointer called "indicator". In the American system, rhythmic signal codes were sent via electricity. The code invented by Morse was very simple, consisting of those two elements "dot" and "dashes" which were written on paper [15]. They could be read without specialists. Such gear vehicles have long been durable. Their role in the revolution in Russia in 1917, was great. Today it is possible to transmit news via space probes, which are very advanced news transmitters. They reach the earth as electrical signals, then encoded and converted into symbols. Thus, every discovery revealed in a result of research since the middle of the XIX century and the beginning of the 20<sup>th</sup> century is secular in the development of society proves its existence within the space if required.

#### Results

Undoubtedly, the traditional ornaments have contributed to the beauty of the buildings and have conceived and embodied the culture and history of the city. They are still a destination for tourists, and sources of inspiration for artists, art historians, scholars, and writers. Despite those considerable aesthetic, cultural, and historical roles, they are not classified as a function of architecture.

The impact of architectural structures on the development of the urban environment contributed to public education and awareness. In Azerbaijan, including in the world technological achievements were applied. The range of publications of information materials (books, newspapers, magazines, booklets, daily posters, etc.) had been extended. The role of small architectural forms and visual signage tools used for this increased. Visual means, placement of signs, figures, brief notes on squares along the streets, at the stations, on the facades of various buildings also contributed to distribution of news. It should be noted that the information material was not limited to the means displayed visually.

# Conclusion

The formation of the architectural environment Azerbaijan and information carriers reflected several styles belonging to many cities with different monuments. These monuments were formed against the background of the social condition of the regions and cities in which they located and "led to the emergence of buildings for religious rites. With time, these buildings "played a decisive role" in the city area.

The buildings were surrounded by means of information consisting of simple and asymmetric compositions. Means of Information were more common in buildings related to the architecture of Shirvan-Absheron.

This magnificent architecture contributed to the prosperity and development of local architecture with the strengthening of the state of Shirvanshahs.

Shirvan-Absheron architecture composition created by carved ornaments on stone. Ornaments engraved on the local stones with exquisite drawings increased the artistic value of the monument. Such boards were placed in the more appealing part of the monument.

Starting from the 15<sup>th</sup> century, compositions made of a combination of leaves, plants, trees, flowers and blossoms taken from the botanical world have dominated. These types of monuments can be found in the decoration of the embroidery of "Bulbula" village mosque and the "Shirvanshahs' Palace". The development of the architecture of Azerbaijan began to manifest itself in all areas.

## Sources of illustrations

Fig. 1. <u>https://az.wikipedia.org/wiki/Ana\_S%C9%99hif%C9%99</u> (access date 03.02.2021). Fig. 2. <u>http://wikimapia.org/9377825/az/Yusif-ibn-K%C3%BCseyir-t%C3%BCrb%C9%99si</u> (access date 03.02.2021). Fig. 3. https://az.wikipedia.org/wiki/G%C9%99nc%C9%99\_gap%C4%B1lar%C4%B1 (access

date 03.02.2021).

## Источники иллюстраций

Рис. 1. <u>https://az.wikipedia.org/wiki/Ana\_S%C9%99hif%C9%99</u> (дата обращения: 03.02.2021). Рис. 2. <u>http://wikimapia.org/9377825/az/Yusif-ibn-K%C3%BCseyir-t%C3%BCrb%C9%99si</u> (дата обращения: 03.02.2021). Рис. 3. https://az.wikipedia.org/wiki/G%C9%99pc%C9%99\_gap%C4%B1/ar%C4%B1 (дата

Рис. 3. <u>https://az.wikipedia.org/wiki/G%C9%99nc%C9%99\_qap%C4%B1lar%C4%B1</u> (дата обращения: 03.02.2021).

# References

- Amanzade R. Istorija arhitektury Azerbajdzhana. Arhitektura Azerbajdzhana v XV–XIX vekah [History of architecture of Azerbaijan. Architecture of Azerbaijan in the 15<sup>th</sup>-19<sup>th</sup> centuries]. Baku, East-West, 2013, 224 p.
- 2. Mammadova G.H., Mammadova Z.G. *Istorija arhitektury Azerbajdzhana*. Arhitektura srednih vekov (VIII-XIV veka) [History of the architecture of Azerbaijan. Middle Ages architecture (VIII-XIV centuries)]. Vol. 2, Baku, East-West, 2013, 316 p.
- Period konstruktivizma. Bakinskaja arhitektura 1920-1930-h godov 20 veka [The period of constructivism. Baku architecture 1920-1930s of the 20<sup>th</sup> century]. Baku, East-West, 2013, 268 p.
- 4. Rays E., Traut D. Marketingovye vojny [Marketing Wars]. St. Petersburg, 2014, 304 p.
- Fatullayev-Figarov Sh.S. Gradostroitel'stvo i arhitektura Azerbajdzhana XIX nachala XX veka [Urban planning and architecture of Azerbaijan in the 19<sup>th</sup> - early 20<sup>th</sup> centuries]. Baku, East-West, 2013, 480 p.
- Ahmad M., Rashid K., Naz N. Study of the Ornamentation of Bhong Mosque for the Survival of Decorative Patterns in Islamic Architecture. Frontiers of Architectural Research, 2018, no. 7(2), pp. 122–34.
- 7. Aliyev F., Aliyev F. Microclimate of construction complex. Baku, International Ecoenergy Academy, 2017, 240 p.
- 8. Bartulovic H., Zizic D. Public Buildings in the Formation of the Contemporary Urban Fabric of Split. Prostor, 2015, no. 1, pp.71–81.
- 9. Elgohary A. New Ornaments' Influence on the Character of Modern Cities. Cities' Identity through Architecture and Arts, 2018, pp. 421–30.
- 10. Elsayed I. Mitigation of the Urban Heat Island of the City of Kuala Lumpur, Malaysia.

Middle-East Journal of Scientific Research, 2012, no. 11(11), pp. 1602–1613. DOI:10.5829/idosi.mejsr.2012.11.11.1590.

- Ferreras-Cid E., Rosero-Anazco V. Compact City, Sprawled City. Language and Manipulation in Commercial Architectural Graphic Communication. Estoa-Revista De La Facultad De Arquitectura Y Urbanismo De La Universidad De Cuenca, 2019, no. 8(16), pp. 21–30.
- Farzandi M., Rezai Parjand H., Seyyid Nejad Golhatmi N. Determination of annual heat exchange point with gray system dependence analysis for Mashhad thermal islands. Journal of Environmental dangers, 2014, no. 3(4), pp. 49–59. DOI:10.22111/JNEH.2014.2468
- 13. Ganbari A. Investigation of the connection between energy consumption and urban development in Iran using the "ARDL" method. Quarterly Journal of Energy Economics Studies, 2012, no. 9(35), pp. 101–119.
- Gottdiener M., Budd L. Key Concepts in Urban Studies. SAGE Publications Ltd; 2005. Online Publication Date: 2013 December 20. Print ISBN: 9780761940982, Online ISBN: 9781446279120. Available at: <u>http://dx.doi.org/10.4135/9781446279120</u>
- 15. Houpin S. Urban mobility and sustainable development in the Mediterranean: Regional diagnostic Outlook. France, Plan Bleu, 2010, 108 p.
- 16. Musevi Baigi M., Ashraf B., Farid H., Miyad Abadi Ameni, AR. Investigation of thermal islands of Mashhad with satellite images and Fractal theory. Journal of Environmental Dangers, 2013, no. 1(1), pp. 35–49. COI: JR\_GEH-1-1\_003.
- 17. Suarez L.A.D. Towards Experiential Representation in Architecture. Journal of Architecture and Urbanism, 2016, no. 40(1), pp. 47–58.

#### Литература

- 1. Аманзаде Р. История архитектуры Азербайджана. Архитектура Азербайджана в XV– XIX веках. – Баку: Восток-Запад, 2013. – С. 224.
- Мамедова Г.Х. История архитектуры Азербайджана. Архитектура средних веков (VIII– XIV века). 2 тома / Г.Х. Мамедова, З.Г. Мамедова. – Баку: Восток-Запад. 2013. – С. 316.
- 3. Период конструктивизма. Бакинская архитектура 1920–1930-х годов 20 века. Баку: Восток-Запад. 2013. С. 268.
- Райс Э. Маркетинговые войны / Э. Райс, Д. Траут. Санкт-Петербург: Питер, 2014. С. 304.
- 5. Фатуллаев-Фигаров Ш.С. Градостроительство и архитектура Азербайджана XIX начала XX века. Баку: Восток-Запад, 2013. 480 с.
- Ahmad M., Rashid K., Naz N. Study of the Ornamentation of Bhong Mosque for the Survival of Decorative Patterns in Islamic Architecture // Frontiers of Architectural Research. – 2018. – №7(2). – C. 122–34.
- Aliyev F., Aliyev F. Microclimate of construction complex. Baku: International Ecoenergy Academy, 2017. – 240 c.

- 8. Bartulovic H., Zizic D. Public Buildings in the Formation of the Contemporary Urban Fabric of Split // Prostor. 2015. №1. C. 71–81.
- 9. Elgohary A. New Ornaments' Influence on the Character of Modern Cities // Cities' Identity through Architecture and Arts. 2018. C. 421–30.
- 10. Elsayed I. Mitigation of the Urban Heat Island of the City of Kuala Lumpur, Malaysia // Middle-East Journal of Scientific Research. – 2012. – №11(11). – C. 1602–1613. DOI:10.5829/idosi.mejsr.2012.11.11.1590.
- Ferreras-Cid E., Rosero-Anazco V. Compact City, Sprawled City. Language and Manipulation in Commercial Architectural Graphic Communication // Estoa-Revista De La Facultad De Arquitectura Y Urbanismo De La Universidad De Cuenca. – 2019. – №8(16). – P. 21–30.
- Farzandi M., Rezai Parjand H., Seyyid Nejad Golhatmi N. Determination of annual heat exchange point with gray system dependence analysis for Mashhad thermal islands // Journal of Environmental dangers. – 2014. – №3(4). – P. 49–59. DOI:10.22111/JNEH.2014.2468
- 13. Ganbari A. Investigation of the connection between energy consumption and urban development in Iran using the "ARDL" method // Quarterly Journal of Energy Economics Studies. 2012. №9(35). P. 101–119.
- Gottdiener M., Budd L. Key Concepts in Urban Studies. SAGE Publications Ltd; 2005. Online Publication Date: 2013 December 20. Print ISBN: 9780761940982, Online ISBN: 9781446279120. http://dx.doi.org/10.4135/9781446279120
- 15. Houpin S. Urban mobility and sustainable development in the Mediterranean: Regional diagnostic Outlook. France: Plan Bleu, 2010. 108 p.
- 16. Musevi Baigi M., Ashraf B., Farid H., Miyad Abadi Ameni, AR. Investigation of thermal islands of Mashhad with satellite images and Fractal theory // Journal of Environmental Dangers, 2013. №1(1). P. 35–49. COI: JR\_GEH-1-1\_003.
- 17. Suarez L.A.D. Towards Experiential Representation in Architecture // Journal of Architecture and Urbanism. 2016. №40(1). P. 47–58.

#### ABOUT THE AUTHOR

#### Badalova Firuza

Lecturer of the Department of «Design», Azerbaijan University of Architecture and Construction, Baku, Azerbaijan e-mail: f.badalova.84@mail.ru

#### ОБ АВТОРЕ

#### Бадалова Фируза Тофиг кызы

Преподаватель кафедры «Дизайн», Азербайджанский Архитектурно-Строительный Университет, Баку, Азербайджан e-mail: f.badalova.84@mail.ru