ALEKSANDËR MOISIU" UNIVERSITY DURRËS, ALBANIA

Interdisciplinary Journal

of Research and Development

VOLUMEN 6, Number 2, 2019

ISSN: 2410-3411 ISSN-L:2313-058X

Published by "Aleksandër Moisiu" University, Durrës, Albania

EDITORIAL STAFF OF INTERDISCIPLINARY JOURNAL OF RESEARCH AND DEVELOPMENT

President of Editorial Board

Prof. Dr. Kseanela Sotirofski,

"Alexandër Moisiu" University, Durrës, Albania

EDITORIAL BOARD

Kseanela Sotirofski, "Alexandër Moisiu" University, Durrës, Albania Leke Sokoli, "Alexandër Moisiu" University, Durrës, Albania Lavdosh Ahmetaj, "Alexandër Moisiu" University, Durrës, Albania Mithat Mema, "Alexandër Moisiu" University, Durrës, Albania Andon Kume, "Alexandër Moisiu" University, Durrës, Albania Azeta Tartari, "Alexandër Moisiu" University, Durrës, Albania Lindita Mukli, "Alexandër Moisiu" University, Durrës, Albania Griselda Dangëlli, "Alexandër Moisiu" University, Durrës, Albania Osman Metalla, "Alexandër Moisiu" University, Durrës, Albania Deak Csaba, National Innovation Office, Hungary Ensar Nisanci, "Namik Kemal" University, Tekirdag, Turkey **Ihsan Sovsal,** "Namik Kemal" University, Tekirdag, Turkey Jose Albiac, Saragossa University. Saragossa Spain Szilagyi Roland, University of Miskolc, Hungary Athanasios Natsis, Agricultural University of Athens, Greece Michel Bonneau, University of Angers, France Francesco Scalera, University of Bari, Italy

Editor in chief

Prof. Dr. Mithat Mema, "Aleksandër Moisiu" University, Durrës, Albania

Associate editors

Dr. Daniela Mece, "Aleksandër Moisiu" University, Durrës, Albania

Dr. Majlinda Sana, "Aleksandër Moisiu" University, Durrës, Albania

Dr. Albana Halili, "Aleksandër Moisiu" University, Durrës, Albania

Dr. Luftim Cania, "Aleksandër Moisiu" University, Durrës, Albania

Prof.Ass, Dr. Enver Bytyci, "Aleksandër Moisiu" University, Durrës, Albania

TABLE OF CONTENTS

Genti PROGRI,	
Julian PRISKA,	
Entela PROGRI	
THE DEVELOPMENT OF A SECURITY	
SYSTEM FOR AN AUTHORIZED ENTRANCE	5
MSC. Armanda Xhani	
THE ROLE OF THE INTEGRATION OF	
INFORMATION AND COMMUNICATION	
TECHNOLOGY IN THE CLASS ENVIRONMENT	22
Vehebi SOFIU	
MATHEMATICAL MODELLING OF	
AEROSOLS IN SOLAR PANELS	34
A INCA I M : 1 KIEMO	
Azem HYSA and Marsida KLEMO	
MODELING AND SIMULATION OF PHOTOVIOLTAIC	
CELL WITH MATLAB FOR DIFFERENT TEMPERATURE	
AND DIFFERENT SOLAR RADIATION	44
Dr. Blerina SADIKU	
INTERNATIONAL LAW AND HUMAN RIGHTS	
IMPLEMENTATION: ALBANIA AFTER THE	
FALL OF DICTATORSHIP (1990-2018)	56
` ,	
Arben CARA,	
Mimoza Margjeka	
VACANCY IN THE CONSTITUTIONAL COURT	
AFTER THE VETTING PROCESS AND	
PROBLEMATICS OF ITS MEMBERS' ELECTION	71

Jani SOTA, Prof.Assoc.Ph.D.	
Novruz AHMETI, Msc.	
THE EDUCATION HISTORY IN THE WESTERN	
EUROPEAN COUNTRIES DURING THE FIRST	
HALF OF THE XX CENTURY	86
Dr. Drakuli LUMI	
ALGORITHMIC METHOD FOR THE TRAFFIC	
LIGHTS REGULATION PROJECT IN THE	
CITY OF SHKODRA	128
Dr.Violeta ZANAJ,	
Klementina VOGLI ,	
CONGENITAL DISEASES AND HEALTH CARE	
FOR PATIENTS WITH CONGENITAL DISEASES	139
Dr. Dorina PAPA	
Dr. Daniela KAVAJA	
CONSERVATION OF SOVIET ARCHITECTURE	
HERITAGE IN ALBANIA. THE SURVEY	
OF KASHAR RADIO STATION.	146

PhD. Dorina Papa, PhD. Daniela Kavaja

Conservation of Soviet Architecture heritage in Albania. The survey of Kashar Radio Station.

Given the large number of buildings that belong to the communist architecture under the Soviet influence in Tirana and other cities in Albania, this research intends to understand the state of preservation of these buildings in view of today uses, starting from the most well-preserved buildings such as "Kinostudio", and focusing on highly degraded buildings which risk the demolition.

Hence, we decided to focus on the case study of Kashar Radio Station, which present a typical case of Soviet architecture. Moreover, it is a rare example of modest scale architecture of Russian influence which today is in a state of abandonment and very poor conditions of degradation.

The increased demolishing attitudes toward the historical architecture in Albania can bring to risk also this category of buildings. According to Cantacuzino (1975), as a reaction to their increased demolishing in favor of new construction, a growing interest has emerged in the conservation of buildings of the 20th century.

Therefore, the aim of the research is to document the building project, to redraw and understand the existing state of preservation, to study the different phases of transformation and to produce ideas and scenarios of reuse of the existing structure without compromising the traditional character of the building. In addition, the favorite and visible site of the building close to the highway Durrës - Tiranë, can trigger the new idea of reuse that can revitalize the close-by neighborhoods and create a reference point for commercial and industrial activities in the area around. The theoretical background is based on the idea of conservation of the building as cultural, historical and architectonic heritage by using the strategy of "adaptive reuse" (Brooker, Stone, 2004). Architects today consider challenging to work with historic buildings. The research will finally bring some examples of possible adaptive reuse designed together with students of Architecture.

Keywords: soviet architectural heritage/ public buildings/ adaptive reuse / existing and new

1. Soviet Architecture heritage in Albania. Conservation and transformations.

Soviet architecture, during the communist period in Albania, is largely present in Tirana and in Albania with imposing buildings especially considering the public ones. These buildings present a variety of styles from the classic architecture to modern elements. The classic architecture style used in ancient Greece and afterward in Roman Empire has always been appreciated by certain regimes to show their power and eternity through a series of characteristics such as the use of columns, symmetry in plan and facade, the rich decoration, sculptures, and large proportions. In the classification of the various phases of socialist architecture in Albania, Max Velo (2013) defined this period as "soviet-ism of palace-colonnade" ¹.

Objects built in Albania in a Soviet-style sometimes were imported from the Soviet Union as ready-made projects and in other cases were designed by Russian architects and executed by local architects of the National Institute of Construction, which were educated in the Soviet Union.

Most of the public buildings of Soviet influence which are still in use are well preserved. Others who have constantly changed their function or have been abandoned are in a state of degradation. Some of the well-preserved cases in Tirana are: "Kinostudio", "Fakulteti Filiologjik", "Fakulteti i Shkencave te natyres", while other buildings such as "Kombinat" main building or Radios Station of Kashar have been highly transformed or are in an abandoned and degraded state.

Kinostudio building

Kinostudio building, originally the film production center, is one of the best preserved cases of Soviet influence. Designed by the architect Georgij Lavrov, the building is conceived with a symmetric cross plan, distributed in two levels and covered with a roof. The main facade is dominated by the central impressive entrance with a portico with Corinthian columns, in which is concentrated most of the decoration. The rest of the facade, a part of the two symmetric small-scale porticos with a reminiscence of Baroque

¹ M. Velo classifies the communist period in four decades:

^{1945-&#}x27;55, the golden age of palace-colonade

^{1955-&#}x27;65, the age of hrushovian sovietism with hybrid architecture.

^{1965-&#}x27;75, the age of the amalgam of European – Soviet and national architecture.

^{1975-&#}x27;85, the age of "block- architecture"

style, is simple. In this sense, Kinostudio's architecture is an interplay of architectural styles, including features of ancient Greece, roman arches, baroque repertory of decoration and modern purity. In addition, this building, as Gezim Qendro (2016) points out in his research on architectural and decorative characteristics, presents many symbolic elements inside and outside, related to the Cristian religion, in a period in which religion was prohibited in Albania.

One of the main characteristics of this building was the incoherence between the architecture language and the function hold inside. Recently, it has been revitalized hosting the Ministry of Culture another important institution and the Institute of Cultural Monuments. Due to this reuse, only small architectonic interventions were carried out to the inside space and in the facade of the building. As result, the total image of the building preserves its authenticity.

The Faculty of History and Philology in Tirana

Another similar case is the Faculty of History and Philology in Tirana. In this building as well, the monumentality is expressed especially in the main entrance, which volume comes out of the facade. This volume is highlighted also by six giant order ionic columns that are extended in the second and third level and are overlapped by a fronton. The entire building is composed by a long basement as high as the first floor, dominated by arch windows and characterized by a masonry in false ashlar with bands. The other two levels have rectangular windows and simply plastered. As commonly seen in Soviet style, this building presents a pronounced monumentality. This building has not undergone significant functional changes over time, which has also led to a good architectonical maintenance.

2. The survey of Kashar Radio station

In this research on historic buildings seen in view of reuse and revitalization, we decided to take as case study the Radio Station of Kashar for several reasons. First, because it is a rare example of modest scale architecture of Russian influence. Second, because since several years it's in a state of abandonment and in very poor conditions of degradation. In addition, because of its favorite and visible location close to the highway Durrës - Tiranë, which have turned it in a strong reference point along the way, despite its state of external degradation. Lastly, this favorable location can trigger a new idea of reuse that can revitalize the close-by neighborhoods and create new relations with commercial and industrial activities. For the

purpose of this research, the architectonical and aesthetical aspect of the building is fundamental. Therefore, the research is limited, not focusing on economic and engineering aspects.

The Radio Station of Kashar was designed in 1951 by architect Vorobjov, influenced by Soviet architecture style, although it is signed also by architect Skender Luarasi as the head of the project. It was probably because an Albanian architect was requested to execute the project. Kashar Radio Station was built in the periphery of Tirana close to the road Durrës-Tiranë and served as support for the distribution of radio waves in a broader zone. In fact, in the back part of the building were installed two important broadcast antennas, which signs are still visible today.

The project found in the National Archival of Construction shows that in 1951 a project of adaptation was designed in an existing building, with particular interest on decoration and eclectic elements application.

It's still difficult to understand if we have to do with a new building or with an adaptation of an existing one. In fact, the plan of the project doesn't explain functions and distribution of space, but only details of adding's. The original project described in the drawings presents a lot of interesting elements which are typical in the Soviet style architecture.

This building has certain monumentality given by the symmetry and the gradual increase in high and mass of the volumes from the sides to the center. The main facade starting from the sides, present a row of three columns which limit an open space continuing in the side facade. Then, it presents a slightly higher full volume, which contours are highlighted in vertical by a couple of pilasters ending up with sculpture and in horizontal, by a large cornice. This volume is marked by a big rectangular opening. The central volume is higher and presents an open front entrance which constitutes a big central void. It's is emphasized by a rectangular base column on both sides which run up to the architrave. Moreover, its emphasized by the big rectangular central opening which enlightens the main hall.

Similarly, to other buildings of the same period influenced by Russian style, this building presents also elegant decorations such as the iron bars of in the main openings, the Doric pilasters single in the central volume and in a couple in the lateral one, the brick columns, statues, emblems, and bas-reliefs. Nevertheless, compared to these buildings, having a horizontal extension and a contained high, its proportions are more on a human scale, losing power and imposition and merging better with the surrounding

agricultural landscape. In fact, contrary to other buildings, which were thought for urban contexts, this building is interesting because of the lack of monumentality and the gradual escalation in the main facade which dissolves the building into the agricultural landscape in the peripheral area

of Tirana. (Fig. 1)

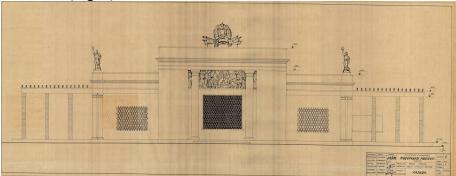


Fig. 1 The main facade of the building. (source: National Construction Archive)

In the plan, after the central ax of the entrance, there is the main hall, which is the highest part of the building. The access to this hall is not direct. First, you enter in the sides and that you can explore the main hall. On both sides, the building is composed of small space used for offices and services. On the bottom there are additional spaces which entrance is on the back as a connection with the front is blocked. (Fig. 2)

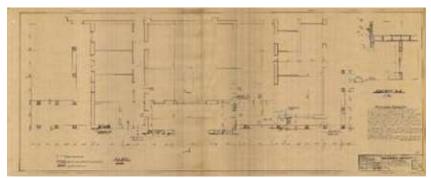


Fig. 2 Partial plan of the building. (source: National Construction Archive)

Since the building was in relation to the antennas of transition, it is not known the real use of the space inside. Today, the building is in a total state of abandonment and is seen as an island together with the surrounding plat in a commercial and industrial area.

Survey of the existing situation

The radio station building that we surveyed is slightly different from the project found in the archives. In plant and in facade it is almost the same (fig.3). Only inside doors position are changed in some cases. The structure is made of retaining walls made of bricks and only some of the thin internal walls which are not structural are changed. In the main facade, details and decorations including statues, bas-reliefs and openings iron bars are missing. Apart from the central emblem, the rest was never accomplished as there is no sign in the building. The decorated fence as well, that surrounded the plot was pulled down.

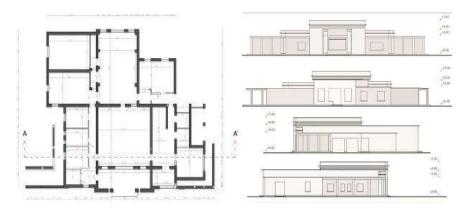


Fig. 3. Plan and facades of the existing state of the building. (source: author's)

Regarding the existing state, the building is highly degraded as it has been abandoned for decades. In the interior, the pavement is removed and all the rooms are with muck. As a consequence, moisture is glued above from the foundations to the walls. Some of the internal walls are partially demolished. Nevertheless, the structure of the building is in acceptable conditions as the demolished walls are not structural. Windows and doors are missing and we don't have a detailed project to understand their original state. Technical installations are also highly damaged and need to be renovated. (fig. 4,5)

As for the facade, there are five main types of degradation:

- 1. Plaster fall. Parts of the facade reveal the bricks due to the lack of plaster. The rest of the facade is plaster with rose and yellow color.
- 2. Humidity and growing vegetation. Actually the building, most of the year is surrounded by pools of water. In fact, it results in a

lower level compared to the Tirana-Durres Highway and lacking appropriate sowing system, the rainwater over-through this area.

- 3. Structural cracks
- 4. Changes in the openings (enlarge of windows and doors, change in the proportions of the opening, etc.)
- 5. Environment pollution. The environment is highly polluted. There is moisture, mold, insects, trees and shrubs, and various types of wastes inside the building (fig. 4,5).



Fig. 4 Photo of the state of degradation of the interior, 2018 (source: author's)

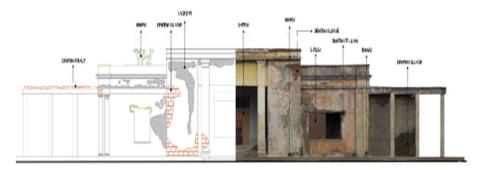


Fig. 5 The state of degradation on the main facade (source: author's)

3. Theoretical background. Conservation of historic buildings by using the strategy of "adaptive reuse"

The conservation of the historic buildings, as we intend in this research, means to "save them from abandon or demolition" (Stanley 2006), preserving the old structure, and in the same time adding new contemporary functions and spaces.

This strategy of adopting a building for a new use while retaining its historic features that serves to keep the building alive, active and updated to

contemporary needs, is generally defined under the concept of "adaptive reuse". 'Adaptive' (Robert 1989) underlines the ability of the building to be flexible, open to change and capable of an active role. Reused buildings merge the values of the historical part and add new ones of the added parts. The challenge is having the capacity to add a new layer of sense to the historical significance and to achieve the quality of the new intervention. This is a key issue in architecture design today, as it produces new ideas reimagining of the relationship between the existing building and the added interventions. This approach of "adaptive reuse" has often been associated with important architectural projects. In particular Herzog & de Meuron's, in the Tate Modern Museum (1995-2000), Caixa Museum in Madrid (2008) or Elbphilharmonie in Hamburg (2017) are considered as cornerstones in this field. They developed an idea of "adaptive reuse" not related to the preservation of the historic building to resist change or adaptation but open up a new perspective of design strategies in which traditional and modern elements co-exist.

In 'Architecture as Palimpsest' Machado (1976) considers a series of metaphors to suggest poetic ideas to remodel the buildings. In 1989 Robert who recalled Machado's the metaphor of the palimpsest to explain interventions on existing buildings and classified them according to the way interventions approach the existing part: building within, building over, building around, building alongside, recycling materials or vestiges, adapting to a new function and building in the style of.

Later, various author's (Brooker and stone 2004, Jäger 2010 and Cramer & Breitling 2007) (fig.6) defined other design strategies related to the adaptive reuse of existing buildings. This constitutes the theoretical framework for interventions in historic buildings.

	Architectonic Expressions			
Robert 1989	Brooker & Stone 2004	Jäger 2010	Cramer & Breitling 2007	
Building within	Insertion	Transformation	Modernisation	Correspondence
Building over		Addition		
Building around				Unification
Building alongside	Intervention		Adaptation	Unification
Adapting to a new function		Conversion		
	Installation			Junction and delineation
Building in the style of			Replacement	
Recycling materials of vestiges			Corrective maintenance	

Fig. 6 Different design strategies of "adaptive reuse" from 1989 to 2010 from various author's (Robert 1989, Brooker and stone 2004, Jäger 2010 and Cramer & Breitling 2007)

4. "Adaptive reuse" design strategies in the case of Kashar Radio Station.

The design strategies developed in the case of Kashar Radio Station followed four main design approaches:

- Conservation of the external shell and building structure
- Conservation of the building, and vertical addition
- Conservation of the building, and horizontal addition
- Conservation of the building into a new transparent container added

Proposal 1: Conservation of the external shell and building structure This proposal intends to preserve the object with the original outside form and color, reorganizing the space inside to respond to the new function. Considering the location, a commercial areal along the highway lacking restoration points, and also the surrounding land which has been previously totally agriculture the idea is to transform and reuse the building as winery. The land can be used as for grape vineyards while the services for preparing vine such as fermentation rooms, labs, and cellars, the facilities for visitors are though inside the existing building.

The main hall can be transformed in the degustation room, then we can proceed to the restaurant which opens the view to the bottom vineyards. The

building offers also on the right-wing a small museum of wine history and a wine souvenir shop. The left part is for staff with offices and laboratories.





Fig. 7,8 Proposal 1. General plan and ground level plan (source: project courtesy of A. Basha, A. Peristeri, R. Braho)



Fig. 9 Proposal 1. External renovation of the building (source: project courtesy of A. Basha, A. Peristeri, R. Braho)

Proposal 2: Conservation of the building, and vertical addition

This proposal is based on the work of Herzog & de Meuron, in particular, the project of Caixa Museum in Madrid. Similar to the concept adapted on this museum, the Kashar building is preserved proposing a new, structurally independent, addition on the top. The main idea is based on the coexisting between the existing building and the new volumes, both different in material and form. The new parts are conceived with a dynamic silhouette to balance through contrast the monumentality of the historic building. In addition, the use of steel in the facade which contrast the historic building, allows to appreciate both facades, new and historical one.

The Kashar Radio Station in this proposal becomes a contemporary art center. The existing part is mostly adapted for foyer, administrative parts,

offices, auditorium, receptive activities, conserving the existing structure, while the upper space proposed is conceived as a more open, flexible space, dedicated to the contemporary art exhibition.

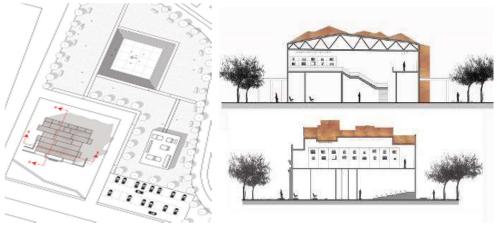


Fig. 10,11,12 Proposal 3. General plan and sections (source: project courtesy J. Mali, S. Pasho, I. Cota)



Fig. 13,14,15,16 Ground floor plan, 1st level plan and facades (source: project courtesy J. Mali, S. Pasho, I. Cota)



Fig.17 View of the proposed project (source: project courtesy of J. Mali, S. Pasho, I. Cota)

Proposal 3: Conservation of the building, and horizontal additions
The proposed intervention consists in respecting the old building, adding new transparent volumes and facilities in horizontality.

Considering the location of the building close to the highway, in a commercial and industrial area, the idea was to propose a multi-functional center, where the primary function is museum of the radio history in Albania. The exhibition itinerary starts in the main existing central space, which is enriched with a skylight above, adapting to the Mediterranean character of the site. Around the exposition area which occupies the central space additional functions are proposed such as a library, coffee shop, administration offices and other services. These added volumes are treated with a transparent facade, maintaining a constant rhythm, which allows the continuity between inside and outside space and do not disturb the image of the existing historical building.

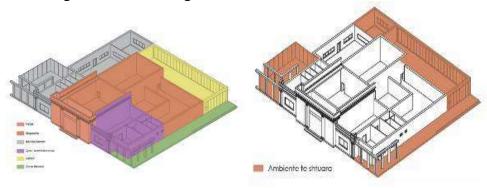


Fig.18 Axonometric view of the additions and proposed functions (sources: project courtesy of E. Sali, M. Spiropali, M. Shehu)

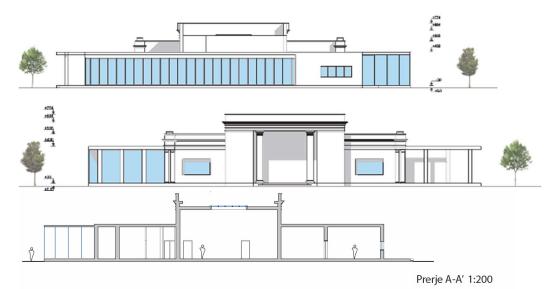


Fig.19 Proposed facades and sections (sources: project courtesy of E. Sali, M. Spiropali, M. Shehu)

Proposal 4: Conservation of the building within a new transparent container

The last proposal is conceived as a more complex intervention, with a clear intent of intermingling the past with the technological revolution of today's times. To draw attention to today's generations, closely related to technology, we must insert elements of the future in historic contexts. So, in this proposal, the historic building is evaluated by proposing a contemporary intervention, protecting it as an artwork, within an innovative transparent container, adding new spaces, which permeate to the historical ones. Exactly as it happens in the *Ara Pacis* case, stored in a new container, originally made by V. Morpurgo (1938), and later by R. Meier (2005)², where people can visit the archaeologic monument into an contemporary museum. In the same way is conceived the new center of "Bone vet".

It is actually an alternative very successful learning center, which already exist in Kosovo, where children can explore in many different fields through their creativity.

This new re-creative center should be a combination between history, technology and nature, through this new "adaptive reuse"

-

² Filippo Coarelli, (2008) Roma, Laterza & Figli Spa, Roma-Bari



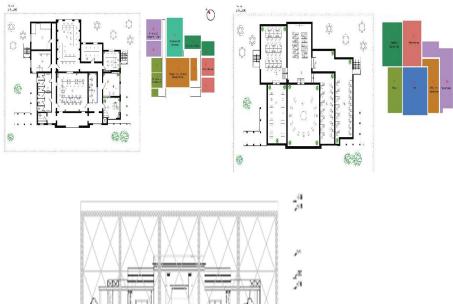


Fig.21 Ground level and 1st floor plan and function distribution proposed facade (sources: project courtesy of B. Grainca, D. Pemaj, M. Kabashi)





Fig.22 Exterior and interior views of project (sources: project courtesy of B. Grainca, D. Pemaj, M. Kabashi)

Conclusions

Soviet architectural heritage in Albania is very important, as it constitutes a significant layer that contribute in the image of our cities. In particular, it is given by imposing public building, which have become part of the collective memory of the city.

The issue of conservation of soviet architecture should pass through the adaptation to new functions by proposing a re-modeling interior space and in some cases new contemporary additions. Historical buildings, recognized as monument or not, assumes a meaning only when they are activated, acknowledging their historical and aesthetical value.

This mean that strategies of "adaptive reuse" whether they include only interior space remodeling or horizontal or/and vertical insertions, subtractions or additions into a hosting structure should respect the external image of the historical building and guarantee the harmony of the whole. Liliane Wong (2017) in *Adaptive Reuse* compared this hierarchic and harmonic relationship to the play of the second violin with the host building.

Interdisciplinary Journal of Research and Development, Vol.6, no 2, 2019 161

Bibliography

Brooker, G. and Stone, S. (2004) *Re-readings. Interior architecture and the design principles of remodeling existing buildings* (London: RIBA Enterprises).

Cantacuzino, S. (1975) New uses for old buildings, Architectural Press, Michigan

Coarelli F., (2008) Roma, Laterza & Figli Spa, Roma-Bari

Robert, P., (1989). Adaptations. New Uses for Old Buildings. Paris

Qendro, G., (2016) Kinostudioja "Shqiperia e vjeter" (ose Aventura seminale e gjurmes), Onufri, Tirane

Machado, R. (1976) Old buildings as palimpsest. Towards a theory of remodeling. Progressive Architecture.

Velo, M., (2013) Betonizimi i Demokracise, UET PRESS, Tirane

Stanley Kathleen (2006, August) "Miracle Comebacks: Three Projects Show that Adaptive Reuse make Good Sense, in Cities and beyond". Builder. pp. 1.

Wong, I. (2017) *Adaptive Reuse: Extending the Lives of Buildings*, Birkhauser Verlag GmbH, Basel









Certificate of Attendance



Presented to

DORINA PAPA

For attending the

2-nd INTERNATIONAL SCIENTIFIC CONFERENCE ON PROFESSIONAL SCIENCES

Organized by Faculty of Professional Studies on April 04 - 05, 2019

at "Aleksander Moisiu University of Durres"

Prof. Asoc. Osman Metalla President of Conference

