

2022

C4 | WORKSHOP

Output type: Best practice guidelines / report

Start date /// 2022-10-06

End Date /// 2022-11-10

SYLLABUS

resilience and future heritage

Central Market Area
Thessaloniki

HERSUS AUTH TEAM

Konstantinos Sakantamis

Alkmini Paka

Maria Dousi

Kleo Axarli

Angeliki Chatzidimitriou

Sofoklis Kotsopoulos

Natalia Chrysikou

Dimosthenis Sakos

Stavros Apotsos

Iordanis Sinamidis

PARTNERS

UB-FA | The University of Belgrade - Faculty of Architecture // Serbia

Iuav | Università Iuav di Venezia // Italy

UCY | The University of Cyprus // Cyprus

AUTH | The Aristotle University of Thessaloniki // Greece

USE-CREhAR | The University of Seville // Spain

Enhancing of Heritage Awareness and Sustainability of
Built Environment in Architectural and Urban Design
Higher Education



CONTRIBUTORS:

HERSUS CONSORTIUM MEMBERS

UB-FA

Vladan Djokić
Ana Radivojević
Ana Nikezić
Jelena Živković
Nataša Čuković Ignjatović
Milica Milojević
Jelena Ristić Trajković
Aleksandra Milovanović
Aleksandra Đorđević
Mladen Pešić
Bojana Zeković
Tamara Popović Nevena
Lukić

Iuav Emanuela
Sorbo Enrico
Anguillari Sofia
Tonello Giulia
Rossi

UCY

Maria Philokyprou
Aimilios Michael
Panayiota Pyla
Odysseas Kontovourkis
Maria Nodarakis
Theodora Hadjipetrou
Stavroula Thravalou
Andreas Savvides

AUTH

Konstantinos Sakantamis
Alkmini Paka
Kleoniki Axarli
Maria Dousi
Angeliki Chatzidimitriou
Sofoklis Kotsopoulos

USE

Mar Loren-Méndez
José Peral López
Julia Rey-Pérez
Marta García-Casasola
María Carrascal-Pérez
Enrique Larive-López
Daniel Pinzón-Ayala
Roberto Alonso-Jiménez
Marta Freniche-Velázquez

EDITORIAL BOARD:

Vladan Djokić, Maria Philokyprou,
Ana Nikezić, Emanuela Sorbo, Konstantinos
Sakantamis, Mar Loren-Méndez / HERSUS Scientific
Coordinators

TITLE

SYLLABUS: resilience and future heritage

DESIGN LAYOUT

Iuav - Marco Tosato, Sofia Tonello

EXTERNAL COLLABORATORS:



Co-funded by the
Erasmus+ Programme
of the European Union

SYLLABUS: resilience and future heritage

C4 activities lead:
Konstantinos Sakantamis, AUTh

HERSUS Project leader:
Vladan Djokić, UB-FA



This result has been produced as a tool for the Student Workshop **3 - resilience and future heritage** within HERSUS project within Erasmus + Strategic Partnerships for higher education. The creation of these resources has been co-funded under grant no. 2020-1-RS01-KA203-065407 (funding period 2020-2023; total grant 246.922,00 €).

This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Location and Context

The City of Thessaloniki

Location and Context:

The city of Thessaloniki

The centre of Thessaloniki, the second largest city of Greece, is home to the 3rd International Hersus Workshop, themed: **Resilience and Future Heritage**. The Mediterranean coastal city is located at the north of Greece, built amphitheatrically, around the gulf of Thermaikos and has a rich history that attracts the interest of historians, archaeologists and ethnologists.

Founded during the Hellenistic era, (estimated around 315 B.C.) the city became one of the capitals of the Roman Empire during the Tetrarchy period, constituting an important trade centre connecting Europe with Asia through Via Egnatia. The importance of the city as the major commercial and trade centre of the Balkans was further enforced during the Byzantine era (becoming the second most important city after Constantinople) and the subsequent Ottoman era. The contemporary cityscape bears testament to the multi-layered nature of the city, presenting itself as a trans-historic patchwork of Hellenistic/Roman archaeological sites, Byzantine churches, Ottoman mosques/baths, and contemporary architectural heritage that make up its unique character. Thessaloniki boasts no fewer than fifteen UNESCO World Heritage Sites.

After a fire destroying almost three quarters of the city's centre in 1917, Ernest Hebrard was commissioned to plan the new city centre. His plan utilised the most important monuments of the city, interconnecting them through major thoroughfares. The urban centre was marked by the development of the major axis of Aristotelous – now a pedestrianized street linking the seafront to the biggest public space of the city, the Law Courts Square. To this day, the Aristotelous axis along with Egnatia Str. and the highly commercial Tsimiski Street, delineate the major commercial area of the city.

Hebrard's plan was instrumental for the westernisation of the city but was nevertheless informed by tradition; the bazaars (meaning market but also negotiation) of the city were maintained in their prominent location, off the main Aristotelous axis. The open Market of Vlali, also known, to this day, by the name used for the bazaars during the Ottoman era, "Kapani" (Turkish UnKapani – meaning flour market) accommodates small-scale two-storey buildings where small food traders are situated, referring directly to the oriental origins of the city. Hebrard's planning for the market area also allowed the construction of covered markets, an important architectural specimen of which is the "Modiano Market" (the central food lodge). Modiano Market opened in 1925, constructed in accordance with European standards, marking the gradual transition from the bazaars of the East to the modern shopping centres of the West.



Figure 01 | The Market Area of Thessaloniki
Graphical elaboration from Thessaloniki GIS by Natalia Chrysikou



Theme

Resilience and future heritage

Theme:

Resilience and future heritage

The central market area constitutes an exemplary continuation of use in the diachrony of the city. Hebrard's plan, envisioned the future built heritage that the workshop will deal with. Shaped by the pressures of private and public economic agendas, the original plan has evolved, after gradual transformations of the area, in the shape of two superblocs - off the main Aristotelous Axis, delineated on their periphery by large building blocks while maintaining an internal reference to a human scale, whereby the perceived foreground is dominated by listed single or two-storey volumes and narrow pedestrianized passageways. The reality of occupancy in the greater area, shaped by economic, political and societal stress during the last 20 years, is gradually evolving into a mixed use paradigm whereby restaurants and tavernas coexist with creative spaces, butchers, grocers, retail and craftsmen. Most building stock is in need of restoration but has nonetheless been in constant use. The area has a rich and colourful soundscape dominated by anthropogenic sounds and a smellscape that is varied between fresh produce, raw and cured meat, food odours, the smell of garbage or the smell of others, constituting a harsh contrast to the usual urban soundscape of traffic noise and the smellscape of artificial odours and exhaust fumes.

The workshop views the area as a useful resource in achieving social, economic, cultural and environmental sustainability and resilience for the city of Thessaloniki (part of the Resilient Cities Network). The case study employs sustainability and resilience indicators to build upon /evaluate the most recent major urban design interventions in the area, which took place in the context of Thessaloniki's role as the Cultural Capital of Europe (1997), but also on bottom-up approaches that have emerged recently, which aim to regenerate the area through cultural events and actions (Kapani project).

Issues of occupancy and land use, the environmental performance of the urban fabric surrounding the markets, the future restoration and upgrade of the market building stock and the redesign of public open areas within the two superblocs will challenge attendees and focus the international team's proposals.

Tracks / Approaches

Agora
Urban Inter-Actions
Skyline

Tracks / Approaches:

Agora // Urban Inter-Actions // Skyline

The issues raised by the focus on Thessaloniki's historic central markets closely link the notions of *Cultural Identity*, *Resilience*, and *Future Heritage*. These entail an elaboration on the evolution of *Urban Heritage* in the establishment of a multifaceted *Heritage Site*, where *Modern Heritage* is striving for attention within an area densely occupied by *Historic Monuments*, whereby *Tangible and Intangible Heritage* are equally important for the preservation of cultural identity.

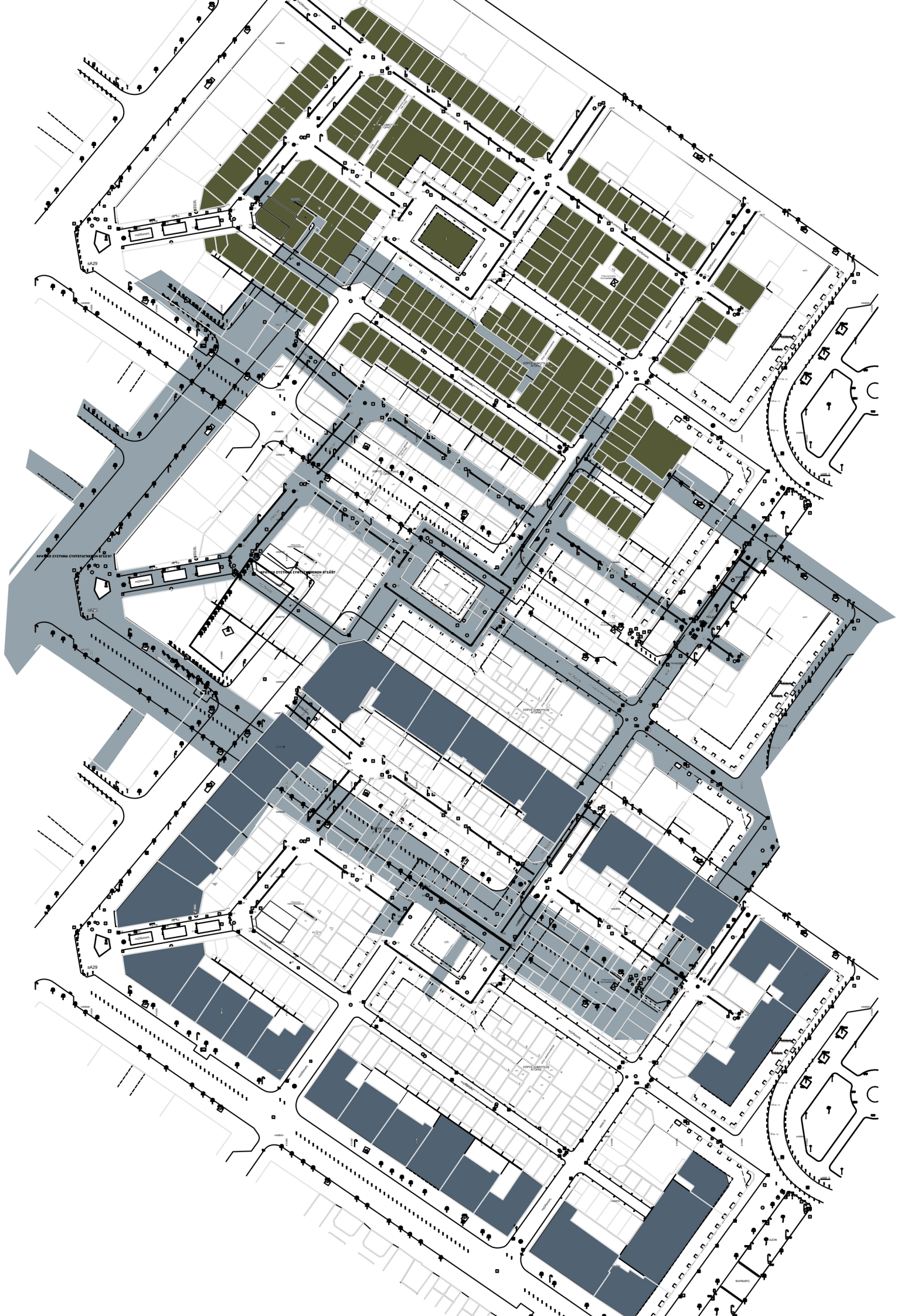
In order to contemplate on the aforementioned notions and heritage types, student participants will form three international teams, each of which will focus on a specific track/approach. These will be complementary, in an effort to compose future sustainable and resilient scenarios for the area. From a strategic point of view, the teams will need to focus on *Restoration* but also on *Regeneration*, on ensuring the *Continuation of Uses* but also on *Adaptive Reuse* and ultimately on the possibility of ensuring an environmentally sustainable and resilient central market area that can benefit from the application of *Nature based Solutions* for *Microclimate improvement*. The three tracks/approaches stem from the main components of the superblock: the *Agora*, the *Skyline*, and the *Urban Inter-Actions* that take place within routes/paths that link the study area with its surroundings.

Agora

Market Fabric & Interior

Keywords: Urban Patterns, Cultural and Collective Memory, Modern Heritage, Community Building and Representation, Restoration, Continued Use, Public Advocacy for Social Participation

The first track focuses on the interior of the superblock and particularly on the listed single or two-storey volumes that make a strong reference to the human scale and an equally stark contrast to urban surroundings. This conglomeration of buildings is characterised by common typologies but is not morphologically homogenous; each unit's façade/volume bearing testament to its use (or abuse), remaining open to reinterpretation and adaptation. Students are invited to contemplate on the restoration of the Agora, on the possible adaptations of buildings to ensure continued usage or adaptive reuse and on the possibilities offered by the building fabric for upgrading its environmental performance. Moreover, these buildings offer a yet unexplored setting of rooftops and terraces that can transform the interior of the superblock and renegotiate the lack of public space in the centre of the city.



Urban Inter-Actions

Routes, paths & pedestrian ways

Keywords: Urban Narratives, Cultural and Collective Memory, Tangible and Intangible Heritage, Recycling / Upcycling, Design for all, Regeneration, Temporary Planning and meanwhile Spaces, Public Advocacy for Social Participation, Cultural Routes and Itineraries

The topic focuses on the routes, paths, pedestrian ways and open spaces within and around the central market superblocks, as well as those extending from the area towards diverse market spots throughout the historic city centre, aiming to facilitate the key notions of continuity of use and social participation. The environmental approach considers the microclimate development in the open spaces of the study area as a critical parameter in defining pedestrian comfort and outdoor uses. Microclimate, insolation, airflow and comfort are significantly affected by urban morphology, building heights, street width, structural extrusions and cavities, canopies, galleries, barriers, vegetation elements etc. Urban patterns and typologies in the study area evolved through the years, differentiating the urban microclimate and the respective outdoor comfort conditions, the perception of which determines pedestrian activity and communication in public open spaces. The enhancement of cultural and collective memory preserving the intangible identity of the place - strongly associated with traditional food markets, gastronomy and social interaction - can boost social resilience and urban regeneration through the adaptation of public space concentrated on cultural events, environmental awareness and social inclusion to link past, current and future urban narratives.

Skyline

Boundary Conditions

Keywords: Urban Patterns, Emergent Heritage, Passive / Active Sustainable Design, Renewable Energy Integration, Redevelopment, Regeneration

The aim is to rethink the building blocks defining the boundaries of the "superblock" of the central market as external receptors which can contain a variety of current or alternative uses and functions. The urban blocks in the perimeter of the market area include historic listed buildings, modern heritage buildings or contemporary structures, and are morphologically differentiated from the market buildings' urban patterns, shaping the boundary conditions of the study area, forming visual and acoustic barriers and the fluid limits of the local urban microclimate conditions. These buildings, beyond the front facades, form the urban skyline around the central market superblock and can be encountered in three dimensions as adaptable functional urban receptors, roof terrace observatories, and filtering layers within the historic centre urban tissue. The redevelopment of these building blocks in relation to the central market area bear the potential for passive and active sustainable design strategies renewable energy integration, green and blue infrastructures, and can develop to emerging heritage settings that enhance urban resilience and local cultural identity.



I phase

Oct. 6th, 2022 (online) • 10:00 – 14:00

Workshop introduction

Oct 7th, 2022 (online) • 10:00 – 18:00

Lectures on resilience and future heritage

II phase

Oct. 17th, 2022 (Thessaloniki) • 10:00 – 17:00

Site visit

Oct. 18th-20th, 2022 (Thessaloniki) • 9:00 – 19:00

Students' workshop activities at AUTh

Oct. 21st, 2022 (Thessaloniki) • 9:00 – 16:00

Students' workshop activities &
Students' Presentations at AUTh

III phase

Oct. 27th, 2022 (Online)

Critics with professors and tutors

Nov 3rd, 2022 (Online)

Critics with professors and tutors

Nov. 10th, 2022 (Online)

Final exhibition of the works

C4 - HERSUS Students Workshop program

PHASE I

Oct. 6th, 2022 (online)

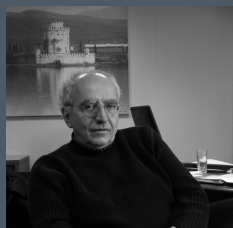
10.00 - 10.30	Institutional greeting and introduction to the workshop <i>Konstantinos Sakantamis,</i> HERSUS AUTH Scientific Coordinator
10.30 - 12.00	Introduction to the site: <i>"Boulevard De La Société Des Nations; a.k.a. The Aristotle Axis in Thessaloniki"</i> <i>Nikos Kalogirou,</i> Em. Professor, School of Architecture, AUTH
12.00 - 12.30	Break
12.30 - 14.00	Presentation of the workshop's 3 tracks/approaches; Organisation of working groups Discussion on Topics & indications on the expected results, final deliverables Sharing of cartographic materials, texts, researches, photos

Oct. 7th, 2022 (online)

10.00 - 10.30	Introduction to the seminar <i>Konstantinos Sakantamis,</i> HERSUS AUTH Scientific Coordinator
10.30 - 11.20	<i>"Towards the Post-climate City: Optimizing the Transformative Adaptation of Urban Systems"</i> <i>Ivan Simić,</i> PhD, Assistant Professor, Department of Urbanism, U.B.- F.A. Serbia
11.20 - 11.30	Q&A
11.30 - 12.20	<i>"Intangible, yet Impending Lives of Modern Heritage in Obsolescence"</i> <i>Savia Palate,</i> PhD, Postdoctoral Researcher, University of Cyprus, Cyprus
12.20 - 12.30	Q&A
12.30 - 12.45	Break

12.45 - 13.35	<i>"Intervention on heritage as a resilient strategy and resilient strategies for the intervention on heritage"</i> Benito Sánchez-Montañés, Ph.D. Architect
13.35 - 13.45	Q&A
13.45 - 14.45	Lunch break
14.45 - 15.35	<i>"Sustainable Wetlands: projects and governance tools to address environmental fragility"</i> Maria Chiara Tosi, Ph.D., Professor IUAV, Director of the IUAV doctoral school, IUAV, Italy
15.35 - 15.45	Q&A
15.45 - 16.35	<i>"The effects of Climate Change on the cultural heritage of Greece. Future projections, Assessment of the effects on cultural tourism, Prevention, and Adaptation measures to the new conditions"</i> Efsthia (Stefi) Tringa, PhD student, Department of Meteorology and Climatology, AUTH., Greece
16.35 - 16.45	Q&A
16.45 - 17.00	Break
17.00 - 17.45	Debate and Conclusions

All times provided in CET+1 (Greek time)



Nikos Kalogirou was born in 1951 in Veria, Greece, and lives in Thessaloniki, Greece. He studied architecture in Thessaloniki (Dip. Arch. AUTH 1975), continued with postgraduate studies in Paris (Certificat CRU 1976, DEA EHESS 1976, DEA Paris 1 1977, Diplôme CRU 1979), and obtained his PhD from the Paris-1-Panthéon-Sorbonne University, France (1979).

He is an emeritus professor at the School of Architecture, AUTH. He has been a visiting professor at the postgraduate school of Architectural Association (London, 1991-1993), professor and director of the postgraduate program "Environmental Design of Cities and Buildings" of the Hellenic Open University (2000-2017), and professor and director of the postgraduate programs "Museology-Cultural Management" and "Environmental Architectural and Urban Design" of the School of Architecture, Faculty of Engineering, Aristotle University of Thessaloniki (2015-2019).

He has also contributed considerably to academic administration, as Vice Head (2001-2005 and 2017-2019) and Head (2005-2009 and 2013-2017) of the School of Architecture, AUTH, as a founding member of the School of Architecture of the Technical University of Crete in Chania, Greece (2003-2005), and as Vice Head (2004-2008) and Head (2008-2010) of the School of Spatial Planning and Development, AUTH.

Kalogirou has published more than 250 articles in scientific journals, book chapters, and proceedings of Greek and international conferences. He has written or edited 37 books on architecture and urban design.

His research and applied work concerns the fields of architectural and urban design-planning, and rehabilitation of sites and buildings. His architectural work has been selected and published in more than 130 design magazines and exhibition catalogues in Greece and abroad. He has also participated in organizing and managing architectural exhibitions of major importance. His work has received more than 30 awards and distinctions in national and international architectural competitions.

6th Oct 2022
10.30 - 12.00

Nikos Kalogirou,
Em. Professor, School of Architecture,
AUTH

Boulevard De La Société Des Nations; a.k.a. The Aristotle Axis in Thessaloniki

This presentation is based on the Greek participation in the 17th Biennale of Architecture in Venice, curated by a group of professors at A.U.Th. School of Architecture (Nikos Kalogirou, Themistoklis Chatzigiannopoulos, Maria Dousi, Dimitrios Kontaxakis, Sofoklis Kotsopoulos, and Dimitrios Thomopoulos).

A typical example of a radical redesign in a multicultural city is the reconstruction of modern Thessaloniki, a century ago. At the core of this project was the "Boulevard De La Société Des Nations", which materialized in a different manner from the one envisioned by its creators. Today, with the name "Aristotle Axis", it emerges as a mosaic of different architectural styles and human activities, underlining the limitations of design gestures that are inevitably reshaped by the prevailing financial, social, and political context.

Immediately, after the destructive fire of August 1917, the decision was made for a complete reconstruction of Thessaloniki. Ernest Hébrard, a French architect-planner, was assigned the leading role as a member of an international committee. Institutional innovations were introduced: the urban land was redistributed into new building plots, the new properties were sold through auction, the state reserved the necessary public spaces and a capital gains tax was to be levied in subsequent transactions. All this represented an unprecedented reform for Greek urban planning.

The new plan for the central city area was based on neoclassical principles of urban design, with new monumental ensembles and vistas. Urban modernization promoted the emerging modern Greek national identity of Thessaloniki as it strove to move away from its Ottoman past. For the central monumental axis, a special building regulation imposed compulsory facades and decorations that referenced the city's imperial Byzantine heritage.

The Grand Manner of the original plan was realized to a major extent along Aristotle St. and its side markets. The homogenous facades as approved in 1923 referenced some eclectic European models. After 1954, the height of the buildings was increased and the morphological elaboration was simplified.

The rhythmically lined-up facades presented a remarkable variety, with variations on the corner buildings, scaled volumes, and creative handling of particular architectural elements through the alternating use of pillars, columns, balconies, erklers, and openings.

Describing this architectural morphology as "neo-Byzantine", according to the expressed wish of the political leadership, is something to be treated with caution. It was rather a collage of historic architectural elements in the context of eclecticism, which remained strong in the inter-war years.



Ivan Simić (1983), Ph.D., received his B. Arch. and M. Arch. degree from University of Belgrade. From 2009 to 2012 he attended Ph.D. course of urban planning and design on the Faculty of Architecture, University of Belgrade.

During winter and summer semester 2015/2016. he received the scholarship from the Institute for advanced social-technological studies (IAS-STs) in Graz, where he worked as a Research Fellow.

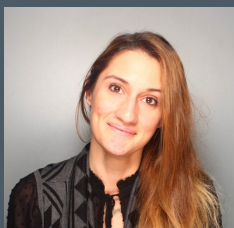
His major fields of research include resilience of cities, sustainable and resilient urban design, and topics related to cities as complex social-ecological systems. He currently holds the position of Assistant professor at the Faculty of Architecture, University of Belgrade.

7th Oct 2022
10.30 - 11.20

Ivan Simić ,
*Assistant Professor, Department of
Urbanism, U.B.- F.A. Serbia*

Towards the Post-climate City: Optimizing the Transformative Adaptation of Urban Systems

Climate change and the energy crisis are transforming our cities. Time has run out for cities to gradually adapt, i.e. to evolve into climate resilient systems. Today's generations will witness a revolution during their lifetime. But the transformation requires great resources: energy and matter, technology and human resources. How to optimize this transformation? We suggest that it is first necessary to find out the generative principles behind the creation of every urban system in order to create an optimal transformation strategy. The following are some instructive insights from an urban design perspective.



Savia Palate is currently the leading investigator of U-SHer (Uneasy but Shared Heritage: Modern Architecture on a Divided Island), that explores the ways architectural history can contribute to the intangible value of modern architecture as heritage that can be shared. The project is part of the Excellence Hubs programme (Grant to a young researcher - Social Sciences category), co-funded by the European Regional Development Fund and the Republic of Cyprus through the Research and Innovation Foundation [www.u-sher.com]. Parts of this research have already been presented in conferences, such as the 2022 SAHGB Annual Conference and the 2022 EAHN Biannual Conference. Forthcoming activities include a session on "What is Shared: Architectural Heritage in Conflict," that will occur online for the 2023 SAH Annual Conference.

She holds a PhD in Architecture from the University of Cambridge as a Cambridge Trust (Vice-Chancellor Award) and an A. G Leventis Foundation Scholar and during her final PhD year, she has been a doctoral resident at the Canadian Centre of Architecture. She further holds an MA in History and Critical Thinking from the Architectural Association School of London with Distinction, and a MArch II in Space, Society, and Culture from the Pennsylvania State University as a Fulbright Scholar. She has taught in various educational institutions as a visiting lecturer and supervisor in the UK, most recently the De Montfort University and the University of Hertfordshire. She is also the convenor of the ECR/PhD network of the Society of Architectural Historians Great Britain, hosting and facilitating seminars and other activities for early career researchers and PhD students in the UK and abroad.

7th Oct 2022
11.30 - 12.20

Savia Palate,
*PhD, Postdoctoral Researcher,
University of Cyprus, Cyprus*

Intangible, yet Impending Lives of Modern Heritage in Obsolescence

The Berengaria Hotel in the mountain village of Prodromos in Cyprus has been abandoned due to financial reasons in the 1980s and it is currently under a redevelopment scheme. It was built in the late 1920s when Cyprus was still a colony of the British empire, and even though it has been declared to be a listed building, fluctuations in the economy have turned this once luxurious mountain resort into remnants. The building's redevelopment scheme includes the hotel's renovation, aspiring to potentially bring back some of its past glory, and the addition of luxury apartments for sale. The latter is indicative of new economic trends in the island of Cyprus, which in this past decade has been a global player in high-end real estate to foreign investors. When a heritage activist proposed to the hotel's project manager an art exhibition that unfolds the story behind the woman whose name labelled the hotel, the story was considered to be "dark," and possibly frightening to prospective buyers and users. Even though the building has been haunted for more than four decades with ghost stories and myths associated with its abandonment, it is paradoxical how the story of a sad queen in the 12th century could batter the hotel's impending life more than the hotel's current derelict state.

This presentation will focus on the inception and decay of the Berengaria Hotel to demonstrate the multi-faceted narratives a building may encompass, and the way these narratives alter the building's past, present, and future imaginaries. As part of a broader research project that examines the ways architectural history can contribute to the intangible value of modern architecture as heritage that can also be shared, this presentation speaks of the fluidity and the plurality of a building's life, that does not necessarily abide with its architecture and preconceived purpose. Similar to the hotel's name, the hotel's architecture becomes inseparable from contradicting stories: The hotel was designed by a British architect during the colonial period in Cyprus with explicit references to satisfy the coloniser's pursuit of a Cypriot identity that was closer to Eurocentric influences and detached from

the memory of the Ottoman empire that preceded the British rule. However, what is less known and visible regarding the hotel's development is the agency of the colonized population that made this otherwise private venture of a wealthy individual possible: The creation of the hotel was part of a broader collective and reactionary effort, that the local population of Cyprus envisioned as one step closer to the development of "the industry of the foreigner" (what is known today as "tourism"), which could potentially ensure their financial independence from the British rule.

The life of the Berengaria hotel spans issues of colonialism, elitism, and commercialisation; ghost hunting, obsolescence, and the need for resilience; as well as rebellious and collective efforts for development. Oscillating between dark and bright stories, this presentation acts as a reminder that there can only be a thin line separating the two, and the consequences each may engender.



- + PhD. architect. U. de Sevilla
- + Expert in "BIOCLIMATIC architecture"
- + MASTER in "Architecture and environment"
- + Specialist in "RESTORATION of monuments and ancient buildings". U. Federico II. Genoa
- + RESEARCHER DOCTOR of the group HUM1008_Architecture, Heritage and Ecology. U. Seville.
- + Professor in the Department of History, Theory and Architectural Composition of the University of Seville since 2002, teaching in Architectural Composition, Retrofitting, Environmental Architecture, and Degree Thesis.
- + Professor in the International PhD in Architecture Program of U. Seville since 2012
- + Visiting Lecturer at several universities around the world.
- + Member of the International Research Group Re-Fact on retrofitting industrial heritage, with members from seven European universities. Since 2011
- + Founder and first vice-president of AEB (Eco-building Spanish Association)
- + Founder member of Red "Sevilla por el clima". Association on climate change.
- + Published books, articles, papers and chapters on the environmental approach to the architecture under several aspects, resilience and retrofitting heritage.

7th Oct 2022
12.45 - 13.35

Benito Sánchez-Montañés,
Ph.D., Architect

Intervention on heritage as a resilient strategy and resilient strategies for the intervention on heritage

There is no need to insist here on the huge importance of re-inhabiting the heritage that has been bequeathed to us as a key strategy for its conservation and integration in the common culture. And we continue to accumulate heritage elements at the rate of an increasingly fast spread of the concept of heritage.

This phenomenon takes place in a society and a world that demands urgent sustainability mechanisms or beyond, resilience, facing mutations that may be looming on all orders. The city we have inherited, and we know as the 'historical city', with arguable terminology, is a palimpsest in which the strata of the past form a fundamental part of its physical plot and practically all its memory and identity. And the city as a system has proved to be the focus of the environmental emergency that we suffer. Consequently, this crisis will only find a solution if it can be solved from the city itself.

Fortunately, these two previous statements resonate since, with a conscious approach, heritage retrofitting can be a great strategy for sustainability, proportionate to the size and impact of its building stock; claim that aligns with the fact that rehabilitation is the most sustainable approaches in construction (maybe the only one), which today is generally accepted, and demonstrate some authors, who claim that energy and pollution-saving is approximately 60% compared to building another new one.

It is a fact that most of the architecture that we consider heritage has been built in times with some of the conditions we are afraid to suffer in the next future, namely, shortage of energy and resources. Thus, they embody a great deal of knowledge about managing such conditions that we should be capable to recover and use for the future.

On the other hand, we can't ignore that any type of intervention is not necessarily a sustainable intervention. It needs to be addressed with techniques in terms of materials, energy, and strategic conception that consider the positive environmental impact as a goal, where every intervention becomes an ecological activator of resilience for the society.

This will ensure that the heritage becomes an opportunity to improve our inhabited environment and our ability to harness any possible future with success.



Maria Chiara Tosi, PhD in Urbanism, is Full Professor in Urban Design at IUAV University of Venice where she is also the Director of the School of Doctorate Studies. She has been part of numerous national and international research projects on the study of the evolution of urban settlements.

She has been the scientific coordinator of the Interreg Project CREW (Coordinated Wetland management in Italy-Croatia cross border region), and partner in the Interreg project DIVA (Development of ecosystems and value chains of innovation: support cross-border innovation through Creative Industries), and in the H2020 project CITIES 2030 Co-creating resilient and sustainable food systems towards FOOD2030 also funded by the European Commission.

She is IUAV representative in Venice International University Academic Council, has been Expert for the Panel "Science and Technology of Constructions and the Built Environment" at the Research Foundation Flanders FWO-Belgium, and currently responsible for the Double Degree in Architecture with the College of Architecture and Urban Planning of Tongji University.

7th Oct 2022
14.45 - 15.35

Maria Chiara Tosi,
*Ph.D., Professor IUAV, Director of
the IUAV doctoral school, IUAV*

*Sustainable Wetlands: projects and governance tools
to address environmental fragility*



Stefi Tringa has graduated from the University of the Aegean in 2018 with a BSc in Geography. From her early undergraduate years her interest was towards the domain of Meteorology and Climatology whereas she actively participated in international conferences with multiple publications. In 2020 she graduated from the Aristotle University of Thessaloniki with MSc in Meteorology, Climatology and Atmospheric Environment. She did her internship at the National Meteorological Service of Greece. Today, Stefi is enrolled as a PhD candidate at the Aristotle University of Thessaloniki. Her doctoral research focuses on the effects of Climate Change on the Cultural Heritage of Greece in the past and in the future. Her doctoral research work is supported by the Hellenic Foundation for Research and Innovation (HFRI) under the 3rd Call for HFRI PhD Fellowships. In addition to the research, she acting as a teaching assistant in the Department of Meteorology and Climatology of Aristotle University of Thessaloniki.

7th Oct 2022
15.45 - 16.35

Efstathia (Stefi) Tringa,
*PhD student, Department of
Meteorology and Climatology, AUTH*

The effects of Climate Change on the cultural heritage of Greece. Future projections, Assessment of the effects on cultural tourism, Prevention, and Adaptation measures to the new conditions

During the times of a rapidly changing climate, the impacts on different societal sectors become day by day more obvious. Cultural heritage and climate change have an intense relationship. Taking under consideration that the heritage assets have always been and will continue to be highly associated with their environment, such as weather conditions it becomes obvious that climate change is and will have an additional negative impact to them. Cultural heritage is directly affected by climate change and is permanently exposed to the risk of damage and degradation. Its effects potentially could expose cultural heritage monuments to new risks that have not experienced in the past. The Greek heritage on which this work focuses, includes more than 21,000 monuments and archaeological sites, 18 of which have been recognized by UNESCO as world heritage sites. In addition to the high importance in the country's cultural identity, Greek monuments attract a large number of tourists every year, strengthening country's largest industry, tourism. While the country's cultural heritage plays an important social and economic role, climate change poses serious threats to the protection and preservation of these non-renewable heritages and resources.

The objective of this research is to study the effects of climate change on the cultural heritage of Greece, whether it is the monuments or building facilities (museums). The effects of climate change on cultural heritage are approached through three guidelines: 1) climate change and risk of damage to cultural monuments, 2) climate change and economic impacts, 3) climate change and cultural tourism. Two Greek areas with high cultural value, namely, Thessaloniki, and Delphi are the cases study of this work. The study is carried out for the present and the future. Data from three different sources are used (observed, reanalysis and simulated data) which have first been correlated. The simulated data are derived from the most updated Regional Climate Models covering the domain of interest with different spatial resolutions.

This finer spatial analysis has been proven that in the case of a sharp orography country such as Greece is far better and more efficient in simulating the regional and local climate conditions. In order to assess the effects of future changes of climate to cultural heritage the future projection of the aforementioned regional climate model is used, for the same fine spatial resolution. To explore more efficiently these future changes and the future climate suitability of destinations, an updated emission "medium" scenario RCP (Representative Concentration Pathways) (RCP4.5) is used for the model's output. The final goal is the creation of 3CHeritage which will provide study results and offer scientific support, proposing a series of proposals - measures to mitigate the effects of climate change on cultural heritage and its adaptation to new climate conditions.