

ARCHITECTURE HERITAGE and DESIGN

Carmine Gambardella

XXII INTERNATIONAL FORUM

Le Vie dei  
Mercanti



WORLD HERITAGE and  
CITIES IN EMERGENCIES

XXII INTERNATIONAL FORUM

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Carmine Gambardella  
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**WORLD HERITAGE and DWELLING ON SPACE | 14**  
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# WORLD HERITAGE and CITIES IN EMERGENCIES

## Le Vie dei Mercanti

### XXII International Forum

Naples | Capri

14 Giugno 2024 | 15 Giugno 2024

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### **Peer review**

Scholars has been invited to submit researches on theoretical and methodological aspects related to the impact of natural ecological disasters and armed conflicts on Cultural Heritage, and show real applications and experiences carried out on this themes. Based on blind peer review, abstracts has been accepted, conditionally accepted, or rejected. Authors of accepted and conditionally accepted papers has been invited to submit full papers. These has been again peer-reviewed and selected for the oral session and publication, or only for the publication in the conference proceedings.

### **Conference report**

300 abstracts and 550 authors from 20 countries:

Albania, Algeria, Australia, Belgio, China, France, Germany, Greece, Hungary, Iran, Italy, Japan, Mexico, New York, Portugal, Romani, Serbia, Spain, Turkey, United Kingdom.

**From the XXI FORUM WORLD HERITAGE and DWELLING ON EARTH  
to the XXII FORUM WORLD HERITAGE and CITIES IN EMERGENCIES.**

World Heritage and Dwelling on Space – World Heritage and Cities in Emergencies: this is the title of the next International Forum “Le Vie dei Mercanti” which will reach its XXII Edition in 2024. A story of love for the Earth, its Inhabitants, Landscapes, Architecture, Cultural and Archaeological Heritage told by more than 7000 Scholars and Lecturers from all over the World to with the aim of integrating expertise, sharing and disseminating scientific knowledge and implementing best practices to protect and safeguard our planet.

The focus of the upcoming Forum will no longer be only Inhabiting the Earth but is stretched and extended to Inhabiting Space, in a broader sense, to reflect on the impact of natural ecological disasters and armed conflicts on Cultural Heritage. Now more than ever, with the war in Ukraine, geographically closer than others, and with the latest events in the Middle East, the theme of wars and conflicts has become even more present in our lives.

Armed conflicts, synonymous with death and destruction, as well as weakening the social and economic fabric, put at risk the cultural heritage of besieged countries whose destruction has a strong symbolic as well as strategic significance because of the enormous identity value that resides in cultural heritage which stimulates a sense of belonging and social cohesion.

And it is precisely in order to deal with the tragic devastation of entire cities and territories and the terrible wound inflicted on the cultural heritage of peoples that the scientific community must create starting points to implement important and immediate actions aimed at safeguarding monuments, architectural works, archaeological sites, works of art, manuscripts, books and other objects of artistic, historical or archaeological interest, as well as scientific collections of all kinds. If the future is an eternal now, as I remind every year, it is good for the Academy, Scientific Institutions, civil society, and stakeholders involved to make their knowledge and expertise available to promote a more widespread and in-depth knowledge on the issues regarding the safeguarding cultural heritage during armed conflicts.

Prof. Carmine Gambardella  
General Chair XXII Forum ‘World Heritage and Cities in Emergencies’  
President and CEO of the Benecon University Consortium  
UNESCO Chair on Landscape, Cultural Heritage  
and Territorial Governance

## **Dal XXI FORUM WORLD HERITAGE and INHABIT THE EARTH AI XXII FORUM WORLD HERITAGE and CITIES IN EMERGENCIES**

World Heritage and Dwelling on Space – World Heritage and Cities in Emergencies: è questo il titolo del prossimo Forum Internazionale “Le Vie dei Mercanti”, che nel 2024 raggiungerà la sua XXII Edizione. Una storia d’amore per la Terra, per i suoi Abitanti, i Paesaggi, l’Architettura, i Beni Culturali e Archeologici raccontata da oltre 7000 Studiosi e Docenti da tutto il Mondo per integrare competenze, condividere e diffondere conoscenze scientifiche e mettere in atto best practices volte alla protezione e salvaguardia del nostro pianeta.

L’obiettivo del prossimo Forum non sarà più solo quello di Abitare la Terra ma è proteso e si estende verso l’Abitare lo Spazio, in senso più ampio, per riflettere sull’impatto dei disastri ecologici naturali e dei conflitti armati sul Patrimonio Culturale. Oggi più che mai, con la guerra in Ucraina, geograficamente più vicina di altre, e con gli ultimi avvenimenti in Medio Oriente, il tema delle guerre e dei conflitti si è fatto ancor più presente nelle nostre vite.

I conflitti armati, sinonimo di morte e distruzioni, oltre che di indebolimento del tessuto sociale ed economico, mettono a rischio il patrimonio culturale dei paesi assediati la cui distruzione ha un forte significato simbolico oltre che strategico per l’enorme valore identitario che risiede nel patrimonio culturale che stimola senso di appartenenza e coesione sociale.

Ed è proprio per far fronte alla tragica devastazione di intere città e territori e alla terribile ferita inflitta al patrimonio culturale dei popoli, che la comunità scientifica deve creare spunti per mettere in atto azioni importanti ed immediate volte alla salvaguardia di monumenti, opere architettoniche, siti archeologici, opere d’arte, manoscritti, libri e altri oggetti di interesse artistico, storico o archeologico, nonché collezioni scientifiche di qualsiasi tipo. Se il futuro è un eterno presente, come ricordo ogni anno, è bene che l’Accademia, le Istituzioni Scientifiche, la società civile, gli stakeholders coinvolti, mettano a disposizione le loro conoscenze e competenze per promuovere una più diffusa e approfondita conoscenza sui temi della salvaguardia del patrimonio culturale durante i conflitti armati.

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**ID 002** *Brutalism as a Post-war Syndrome. The Case of City Archives by Georgy Konstantinovski*

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Images of daily devastation from recent natural disasters and armed conflicts show us the fragility of our environment and bring us back to the subjects of war and architecture. Destructive changes from wars or natural disasters affect life environments and their spatial constitutions — they affect the way environments are perceived, created, and represented. We can associate these critical periods with the effects of post-war syndromes. In this sense the episode of brutalism, from the second half of the twentieth century, can be seen as a reflection of the post-war conditions on a global level, and the different post-natural disaster effects at the local level. We will explore brutalism in architecture through the work of Georgi Konstantinovski, the student of Paul Rudolph, in the post-earthquake period of Skopje. The three city archives, in Skopje, Štip and Ohrid, as parts of his brutalist oeuvre, show the influences of his mentor and simultaneously seem to represent the specifics of post-conflict disturbances in structural, material, and figurative formal sense. The exposed massive concrete structures, the rough textures of the walls, and the dismemberment of the bodies of the buildings have ambiguous associations, show the reform of the modernist idea and the spirit of the time, but also the associations of military architecture and the ruins of post-destructive events.

**ID 003** *Metamorphosis of Persian Architectural Heritage  
Archetype*

**Babak BAHARESTANI**

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The cultural area of Persia is a wide part of the Middle Eastern countries, which in the past formed the country of Persia, but they still share many cultural characteristics such as customs, architecture, and language. The main model of Persian architecture is based on the central courtyard. This model was repeated and evolved as an archetype from the ancient period. This article examines the transformations of this architectural model and presents it in three parts, focusing on residential architecture in Persia. The first part introduces the model and structure of centrality in Iranian architecture. This model, which was developing for many years, was used to build many public buildings, religious buildings, schools, caravanserais, and houses, as well as in urban planning and gardening. The second section mentions the background of social changes in Iranian society. These changes are the reasons and roots of the transformation. In this part, the main focus is on the events of architecture and urban development from 1800 to 1980. In the third section, while presenting three case studies in three time periods between 1900 and 1980, the metamorphosis of habitational structure will be examined. These structural changes happened in various aspects of residential architecture. This paper aims to study the process of a formative model of architecture in a wide geographical area and to examine its transformation into new life aligned with global needs.

**ID 004** *New dwelling areas on the water – Floating homes and amphibic Homes*

**Dr. Heiner HAASS**

*Architect,  
Hannover/Germany*

1. Introduction

Climate change requires building that is adapted to the changed climate conditions.

- Climate change
- Technology change
- Not enough spaces
- Floating and amphibious buildings are models for the new climate conditions and innovative constructions

2. Floating houses

- Floating houses are fixed floating houses
- Not houseboats, no engine, no navigation
- Habitats on and near water have a very high recreational value

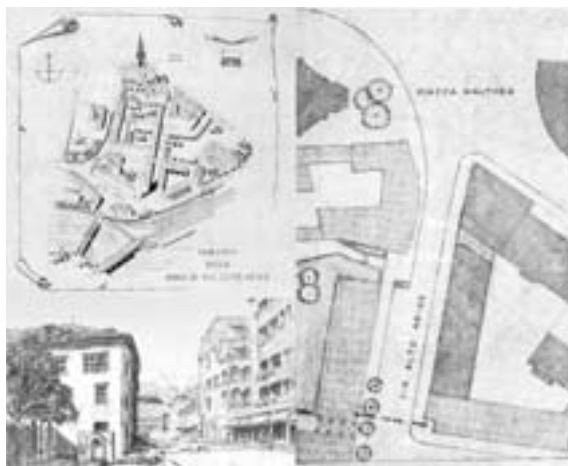
3. Amphibic Houses

- Amphibic houses are buildings on the ground but whenever a flood comes it swimm
- Living in such a development area is also quite attractive because it becomes a highly attractive residential area outside of flood times.

4. Conclusion

- Today we are technically able to build floating and amphibious buildings
- Advancing climate developments will inevitably lead to further consideration of this topic
- Floating and amphibious buildings are new areas for living.





**ID 005** *Bolzano's war damage and urban reconstruction*

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and Mechanical Engineering,  
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Ruins of public and private buildings, destroyed factories, residential buildings reduced to piles of rubble, squares littered with materials, roads, airport bridges destroyed, barracks, civilians and military personnel under the rubble: these are images that the television brings back violently to our minds and fills us with despair. For the Community, these are images we have seen in 1919, in 1945 and many times since.

Images that bring the destruction to our minds and immediately highlight and suggest the difficulties and struggles of the subsequent reconstruction of a healthy economy and places and spaces to live.

Starting from the devastated landscapes of the war, it seemed interesting to trace the reconstruction phase of Bolzano after the Second World War.

Bolzano is a small town in the Alps, founded in 1024 by the prince-Bishops of Trento. Throughout the millennia of its existence, it has undergone progressive growth and several wars have damaged its layout and buildings.

The extensive damage to the original centre of the city because of the bombing during the Second World War has gradually been under repair. Today, almost a hundred years later, the problems of reconstruction are still evident in the image and structure of the city.

**ID 006** *Toxic Heritage. Orphan sites architecture and project*

**Luca ZECCHIN**

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Industrial pollution has left a legacy of many abandoned heritages and toxic residues. In Italy, the areas to be reclaimed cover over one hundred thousand hectares of land. They represent a health risk, an environmental threat, a space of forced oblivion for communities and landscapes. Added to the areas officially recognized in reclamation plans are the so-called orphan sites, one of the most problematic legacies of the logic of the linear economy, for which the person responsible for the pollution cannot be identified. When activated, remediation is usually seen as a stand-alone phase in the life cycle of a site, isolated from the before and after, with technical and regulatory autonomy. It stands between the time of productive use and the eventual time of new use. The third time of remediation is mostly a transition governed by health, environmental, chemical, and physical parameters, where the future is often irrelevant, as the past becomes irrelevant in subsequent use. By integrating the modes of architecture and landscape project, the construction of the necessary artificial greenfield can interpret wildness and take on the naturalization and adaptive reuse of heritages as regenerative tools of space over time. The pollution of environmental matrices, the insubstantiality of polluters, the marginality of contexts, and the sustainability associated with reclamation processes make orphan sites a field of research particularly available for experimentation with new practices of regeneration architecture design. It is about activating long cycles, projects-processes of compensation and reactivation of heritages and landscapes in regeneration.

**ID 007** *Motus sine fine*

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The theme of "waste" as a contemporary finding [Marini, 2010] has been, in recent years, the protagonist of the debate on sustainability. The recent indications of the fashion world on reuse refer to a practice already consolidated [Pilz, 1994] and that is, to date, one of the main objectives of the majors of the most important brands in the fashion industry. There is, therefore, a very close link between the need for fashion business and the world of design due to rethink the space of the show and use it as an opportunity for reflection on issues related to zero consumption and reuse. The theme of this research is therefore the fashion show as the final moment of a long and complex process attentive to sustainability issues. Many brands propose scenarios aimed at highlighting environmental problems and the repercussions that human actions have in creating critical issues, moving away from the objectives set by the 2030 Agenda. The case study focuses on two themes that are considered necessary to really discuss environmental issues such as unfinished architecture and the possibility of rethinking the location of the fashion show as a new condition of the fashion tale. *Motus sine fine* will be based on a sort of census of existing spaces, enhancing the condition of the unfinished as an aspect of beauty not totally expressed and on a concept of innovative fashion show. The project aims to use what is understood as ordinary and, better to say, ugly [Chesterthorn, 1901], as set design for its expressive potential.

**ID 008** *Cities in Emergency: Practices of Sustainable Urban Regeneration in Spain and the United Kingdom*

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**Marsia MARINO**

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The processes of metropolitanisation have triggered a complex urban crisis, characterised by the confluence of environmental demands linked to the climate crisis and deeply rooted socio-economic shortcomings. Within this framework, the new Leipzig Charter (2020) delineates three perspectives for sustainable urban development in cities facing emergencies, namely, “just”, “green”, and “productive”.

In this context, the contribution, which is part of a broader research project (funded within the PNRR) of the PDTA Department at Sapienza University of Rome entitled “New rules, parameters, indicators, operational references of the urban plan for an eco-sustainable approach to urban regeneration” (PI Laura Ricci), aims to construct an interpretative framework of significant European best practices, at a local scale, adopting an ecological-environmental approach to urban regeneration.

Specifically, a comparative analysis of the Spanish and British contexts is proposed to highlight how the local planning of the analysed territorial contexts supports such an ecological-environmental approach to urban regeneration, with the aim of delineating exportable guidelines capable of implementing, in subsequent phases of the research, Italian local planning within the triple perspective outlined by the new Leipzig Charter.



**ID 009** *Climate-proof urban regeneration and cultural heritage. The case of the “Saxa Rubra” Urban and Metropolitan Centrality in the Municipality of Rome*

**Francesco CRUPI**

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and Technology of Architecture,  
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In order to contribute to the debate on the relationship between climate-proof urban regeneration and cultural heritage, the illustrated study tries to understand how the provision of new multi-scalar and integrated planning tools based on sustainable and resilient strategies can ensure high levels of urban and environmental quality, energy efficiency, and resource circularity, while counteracting the effects resulting from climate change and the degradation of historical, architectural, and identity heritage. Beginning with an analysis of the complex socio-political framework and some design and regulatory references that integrate a new model of an ecologically oriented city into planning, the contribution identifies climate-proof urban regeneration as the approach that can improve biodiversity, foster twin transitions, promote the recovery and reuse of common goods, and restore with natural solutions the quality of the environmental matrices air, water and soil. Through the application of an iterative and interscalar methodology to the Urban and Metropolitan Centrality “Saxa Rubra” falling within the Municipality of Rome and subject to the Urban Project procedure, the contribution proposes design strategies capable of building sustainable energy cycles, within scenarios of morphological reconfiguration of urban fabrics and public spaces. In this perspective it highlights potentials and limitations of the proposed experimentation related, both to the innovativeness of the design solutions and possible evolutionary lines, and to the lack of clear institutional governance that is limiting project implementation.

**ID 010** *“The urban religious archaeology”. A sustainable socio-cultural vision*

**Andrea MARCUCETTI**  
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“The urban Religious Archaeology” represents a transition from the religious to the cultural dimension, highlighting the decline of specific residential and industrial urban areas in contemporary cities. While abandoned industrial spaces can be successfully regenerated, the situation is more complex for sacred places, where a sense of cultural belonging can generate conflicts, exacerbated by the growing digital communication. The emerging phenomenon of Religious Archaeology involves unused churches managed by traditional clergy, and new sacred places often lack vitality. A reconsideration of sacred spaces in new dimensions and urban contexts, such as shopping centers or parks, is suggested to encourage interaction and socio-cultural enrichment. The question of demolishing or repurposing religious archaeology, along with new parish centers, requires a realistic and sustainable approach, transcending the traditional direction of religious architecture toward mere construction. A pause for reflection, a “biological standstill,” is proposed to regenerate both clientele and designs.



**ID 011** *The dissemination of the mediterranean portolan charts by the giménez lorente foundation. The importance of cultural heritage as a tool for harmony*

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**Francisco GARCÍA**

*Universitat Politècnica de València,  
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Portolan charts, are a type of navigation or nautical charts used during the Late Middle Ages, with their use extending roughly until the 17th century. Based on their production centers, they can be grouped into Portuguese, Spanish, and Italian portolan charts. Initially rudimentary texts with annotations, the evolution of cartographic representation techniques turned them into illuminated works of art, sparking an interest in their collection. These charts, alongside the development of ships and navigation instruments during the 15th and 16th centuries, enabled two countries (Portugal and Spain) located at one end of Europe to drive maritime expeditions in search of new trade routes and territories beyond the known world. Clearly, the historical development of maritime routes has, in some way, contributed to shaping the current world and its migratory dynamics. Nowadays, migration flows are driven by a variety of factors, unfortunately, with armed conflicts and the consequences of climate change being the most recurrent in recent times. In this research, we reflect on these Mediterranean migration routes through the ancient and beautiful representations of portolan charts belonging to the prestigious Giménez Lorente Foundation. Our aim is to highlight not only the work of cartographers and the significance of their contributions to human evolution but also to make a plea for cultural heritage to be considered as a useful tool for harmony. We hope that the study of these maps can help understand the different cultural and geographical perspectives that existed in the past, promoting tolerance and respect for diverse ways of viewing the world, in line with UNESCO's ideals of a 'Culture of Peace.'"



**ID 013** *The “Tires School” in Khan al-Ahmar, a symbol of resilience, hope and redemption of a marginalized community*

**Tiziana FIRRONE**

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Near the Bedouin village of Khan al-Ahmar, on the border between Israel and the West Bank, stands the so-called “Tire School”, designed by Studio Arcò of Milan and built in 2009 by the Italian NGO Vento di Terra with the contribution of the Italian Cooperation and of European Union. The village is in Area C of Palestine, assigned, since the Oslo Accords, to the Israeli civil and military administration which prohibits any construction activity in these territories. Structures in the Khan al-Ahmar settlement are deemed illegal due to Israeli government restrictions. In response, the school was designed as a temporary structure, lacking foundations and constructed from waste materials and raw earth. Despite its makeshift nature, it showcases innovative bioclimatic architecture, providing sufficient indoor comfort in an area known for its extreme climatic conditions. The school offered the children of the Bedouin communities present in the area the accessing for primary education, compromised by the limitations imposed by the Israeli authorities and the isolation of the villages. Like the Khan al-Ahmar settlement, school was subject of a clearance and demolition orders for years, which were never carried out thanks to the support of international diplomacy and for this reason it has become over the years a symbol of resilience in defense of the right to education and the rights of the Bedouin communities residing in the area. The recent military operation by Israel against Palestinian civilians, after Hamas attacks, poses a serious threat to the school, its students, and the surrounding communities, potentially marking a tragic end to their history.



**ID 014** *About Steinort castle Intervention*

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The Count von Lehndorff family, the last German owner of the Steinort, is one of the oldest and most important noble families in East Prussia. Today, Steinort Castle (in Polish: Sztynort) is German heritage outside the state borders, in the part of Prussia governed by Poland. Heinrich von Lehndorff was the key figure in the attempted coup against Hitler on July 20, 1944, paying for the failure with his life, which inspired several works of art, consequently making the story widely known. The intervention was urgently required due to the extensive wood decay as well as for the organization which limited access for the visitors. The wooden beam ceilings of the oldest part of the manor have unusually large spans. The size of the beams makes them dominate the space. In addition, they are decorated with unique polychrome paintings in the style of Northern European baroque. Therefore, the essence of the intervention was about wood – the concept, the decision-making, the treatment in realization. The other important challenge was making peace between the central part of the manor, built in baroque style, with the wings built in the spirit of late classicism. In this paper, we discuss intervention on the Steinort in the context of structural demands, heritage theory, regional characteristics of style, and their current understanding of priorities and values of heritage.



**ID 015** *A land factory for preserving, developing and innovating: the Arco terraces*

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The terraced landscape testifies to a historic culture that developed innovative technologies to meet the dual needs of producing food and environmental sustainability, using available resources in a simple and ingenious way. The terraces were built by skilled farmers. Today they are of great value, both for their cultural significance and for their visual impact on the surrounding area. Dry stone walls, 'symbiotic' with the landscape, created a system that must be preserved, managed and improved to maintain its aesthetic qualities, agricultural vitality, ecological balance, cultural and historical significance and local identity.

In terraced landscapes, the potential for use in the present needs to be exploited, for example by seeking opportunities to introduce nature-based tourism activities. In terraced landscapes, it is essential to use current potential by identifying opportunities offered by the landscape for tourism.

For this reason, the terraced landscape of the Arco area was studied and analysed. This area overlooks the northern part of Lake Garda. For more than a century, this area has been the catalyst for efforts to enhance and conserve the territory more than a century, with the introduction of new economic activities in the terraced area in order to promote the protection and enhancement of the landscape.

**ID 016** *Agri-tecture: towards a collaborative architecture. Public spaces and urban agriculture for ecological and resilient transitions*

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According to the latest projections, there will be a significant increase in world's population: by 2050 it will reach 9.7 billion and almost seven out of ten people are projected to live in cities. This data, along with the effects of the current crises – such as climate change – represents the starting point for the creation of new urban metabolisms related to food production aimed at achieving the Sustainable Development Goals (SDGs) of UN 2030 Agenda.

The research is part of the “RESO” PON Project that focuses on the challenges of the Agri-food area of the Southern Italy Regions with the aim of promoting sustainable development through the innovation of processes, products and services, while preserving natural capital. The final outcome is to build a demonstrator of an urban agriculture laboratory as a prototype of NbS platform for training and information on food policies in Matera.

The contribution shows how innovative transformations of public spaces in favor of biodiversity can be achieved through the collaborative forms of the architectural and urban project: spaces to explore new shapes of community between the different actors involved, enhancing the connections between research, enterprise and society.

This vision is linked to the preliminary study “Recycling through agri-tecture” in which urban agriculture is the key to understand urban and architectural recycling: waste, by becoming a resource, generates circular processes in a more resilient and productive city.

**ID 017** *Community connections. Project hypothesis for cable car connections in the municipalities of the Lucanian Dolomites*

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The Lucanian Dolomites represent a fragile territory of the Basilicata Region, in need of a new infrastructural arrangement capable of solving connection problems between the municipalities and the main road infrastructures. Within the MITIGO Project (Mitigation of natural risks for safety and mobility in the mountainous areas of Southern Italy – “FESR, PON Research and Innovation 2014-2020”), co-financed by the European Union, a cable car connection project has been designed between the municipalities of Pietrapertosa, Castelmezzano and the S.S. 407 Basentana road axis. The project aims to solve the problems of landslides on existing road links and their difficult accessibility. The project master plan identifies three “hubs” in the territory where the cable car stations are located, which also serve as community gathering places. The architectural project, focused on the need to guarantee a direct and safe connection, presents an opportunity for the redevelopment of urban and landscape areas that are currently not fully valorised. The architectural forms, materials, and position in the area respond to technical requirements and define a new landmark in the landscape, becoming a tourist attraction. The project of a cableway connection system is a valid tool to respond to the impact of natural ecological disasters, such as landslides, in the inland areas Basilicata, where many municipalities are isolated and without adequate road infrastructure.

**ID 018** *The Power of water*

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"Climate change requires us to take on a different notion of time: what is climate time? How does its long history develop?". Man is now obliged to look critically at the cities and spaces that inhabit posing as a question a crucial issue: the management of the relationship between artifice and nature, and ecology and city. The planet, in fact, today is on a new trajectory that takes it from an interglacial peak situation to a warmer one, causing a series of changes of an unprecedented physical and biological nature. The speed of the rising of the seas has never been so fast, the scenario that shows is a hybrid image generated by the overlap of the Universal Flood by Michelangelo and the images of the flood in Emilia Romagna. The frequent extreme phenomena caused by climate change have a strong impact on the water cycle that becomes one of the main elements through which the task of this issue is perceived, highlighting and questioning the role of the city that fails to cope with this change.

**ID 019** *Climate Heritage between threats and opportunities. Matera and its Sassi as a design-oriented prototype for climate resilience*

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Heritages, and in particular UNESCO sites, are powerful means to deal with a changing climate. They show how vulnerable heritage is to climate change's effects but also the role they can play to proactively pursue adaptation and resilience. Recently, climate heritage has emerged among heritage studies and the international debate as a promising concept that tries to integrate climate action into consolidated heritage management practices. By taking advantage from adaptation processes and enhancing overall resilience to present and future vulnerabilities, adjectify heritage as climatic could have a crucial role in addressing the Agenda 2030's Sustainable Development challenges and update current methodologies and practices. Although climate heritage innovative potential has been recognized, conceptual and procedural gaps that limit its operability still exist. The contribution is part of an ongoing research inside the lab CLIMAD-Climate Matera Adaptation Lab from the UNESCO Chair on Mediterranean Cultural Landscape and Communities of Knowledge. The research aims to identify principles and procedures to operationalize, through a design-oriented approach grounded on transdisciplinary, the concept of climate heritage inside the case study of the Sassi and the Park of Rupestrian churches. The paper, through a qualitative methodology, will let emerge issue, present constrain and future opportunities to leverage the climate heritage potential for the UNESCO Site of Matera.

**ID 020** *The old hill towns in the Ionian settlement system of Calabria. Between conservation and tourist accessibility*

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The Ionian settlement system of Calabria presents a rather original characteristic, linked to historical events and social dynamics: the main urban cities are located along the coast, but on the hills behind, often in strategic positions, there are twin towns. In fact the latter represent the historic centers of the coastal cities. In relation to the orography of the sites, the access routes from the sea towards the mountains are often located along the banks of the numerous rivers, known by the name of "fiumare"; they climb the sides of the mountains with tortuous tracks and often with steep slopes. A road network is configured, schematically structured "comb-like" with a primary axis along the coastal gutter.

The paper analyzes the settlement structure, with particular reference to the Province of Reggio Calabria as a case study, and highlights how, unlike typical cities which enclose inside them historic center, on the Calabrian Ionian side the historic center of the coastal cities is detached, in an elevated position and far from the sea. The results are singular settlement system with historical, architectural and monumental characteristics of the old hill towns, sometimes with common elements and sometimes with peculiar attributes, which make the whole very attractive from a tourist point of view. The theme of accessibility and usability for visitors of the small old towns is also put under the spotlight, in relation to roads network and transport services, with a proposal aimed at enhancing the places.

**ID 022** *A review of urban development plans in Iran and the existing weaknesses in preservation and sustainable development*

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The subject of restoring historical urban fabric and carrying out urban design projects presents a dual challenge.

1. Development-based approach: This approach views historical fabrics as both valuable and practical, but warns against solely focusing on the past. It argues that neglecting present and future needs in favor of historical preservation can result in empty structures or unoccupied valuable houses, ultimately diminishing the quality of life and sustainability of urban fabrics. The consequence of this perspective may lead to accelerated development.

2. Protection-based approach: Contrarily, this approach prioritizes protection as fundamental in urban planning and management. It advocates for learning from the past and preserving city structures to create sustainable plans for the future. However, it risks turning cities into museum-like environments.

While urban development efforts have historical roots, comprehensive research on this topic, particularly in Iran, remains limited. Conducting a literature review can shed light on the background of urban development challenges.

The primary aim of this research is to comprehensively review the history of sustainable development and protection of architectural and urban heritage in Iran. It also seeks to examine the history of managing conflicts between development and heritage conservation plans.

The research methodology involved analyzing 42 articles based on thematic relevance, abstracts, and results. The findings highlight an ongoing conflict between development and preservation plans, posing a significant threat to Iran's historical urban textures if left unresolved.





**ID 023** *From SfM acquisition of the current state to the as-built model state. The Village of Pietrapizzuta in Francavilla di Sicilia*

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The article focus on Information and Communication Technologies (ICT) for Cultural and Environmental Heritage. More specifically the case study deals with an area of the 20th-century Italian heritage that is now abandoned and in ruins, the village of Pietrapizzuta, an area of the larger village of Schisina, designed in 1942 and built in the 1950s by the Ente di Riforma Agraria in the municipality of Francavilla di Sicilia (ME). Inhabiting Space, in this case, to reflect on the impact of natural ecological disasters and human carelessness on Cultural Heritage. The model was developed starting with Structure from Motion (SfM) video acquisition using an unmanned aircraft system (UAS). With respect to the multi-scalar nature of the final model, two different work flows were established, one relating to the entire settlement and another processed using dedicated images aimed at reconstructing a single building. The dimensional characteristics of the complex, the simple orography with slight slope undoubtedly favored the development of a fully verified SfM reconstruction model in terms of shape and metric reliability. The widespread state of ruin of the site, favoring a detailed analysis of the techniques and materials used, required particular attention when selecting the materials used to develop the textures for the as-built model. Multimedia archival images were also used to obtain a rendering that could approach the perceptible representation when finalizing the construction.

**ID 024** *“Sueña el agua peregrina... invisibility and architectural design for San Pietro in Montorio”*

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The article starts from an analysis into the memory of the Convent of San Pietro in Montorio, located on the Roman hill of Gianicolo, from its mythical origin, to the most important moments in its history, with a special focus on the 15th and 16th centuries that left records significant architectural features, of which Bramante's Tempietto is an example, and from the 19th century with the insertion of the Royal Spanish Academy.

In 2021-22, the building was the subject of an international architectural competition that aimed at functional programmatic redefinition and an architectural extension. The architectural proposal that we presented to the competition, under the motto of Miguel de Unamuno – “Sueña el agua peregrina”, where water fulfills a determining bioclimatic playful and symbolic role, – starts from a prior understanding of the axes and invisible lines of force of the existing urban-architectural complex, which underlie the design decisions, associated with an integration of continuity and dialogue between historical memory and the contemporary intervention.

The intentional discretion of the half-buried building hidden by vegetation, conforming the interior garden, a new roof garden and an upper pathway, takes into account the existing axes that establishes a counterpoint in between Bramante's Tempietto and a new square courtyard, for the library and restaurant, crowned by a circular day-light opening, with the same tempietto's diameter “in praise of emptiness”.

**ID 025** *Human centered approaches: flexibility as a design strategy for dwellings*

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Flexibility emerges as a possible human centered design strategy that allows users with changing needs to choose the suitable solution among the possible ones and readjust it at low cost, in line with the SDGs. The theme of flexibility is addressed as a useful design strategy if declined together with objectives essential to the design such as sustainability, energy efficiency, innovation and reuse, because it can lead to integrated design solutions for the achievement of technological, environmental and social quality of architecture.

Referring to the results of a research on the topic of flexibility for dwellings, granted by the Foundation of Cassa di Risparmio di Lucca.

The research aimed to build an operational tool in the form of design guidelines for the development of flexible solutions in the design of living spaces. However, this goal requires a prior phase of theoretical systematization of the theme, in which a framework of design solutions is outlined, in turn, from the tools of flexible design, recognizing the potential not only in relation to the project but also to the process and presenting the effects in terms of sustainability, efficiency, effectiveness and fallout on the language of architecture.

The paper returns the theoretical research framework to underline forms and types of flexibility as design tool to ensure the usability of spaces.

**ID 026** *HIA methodology for safeguarding minor historical and cultural heritage from the impacts of natural disasters*

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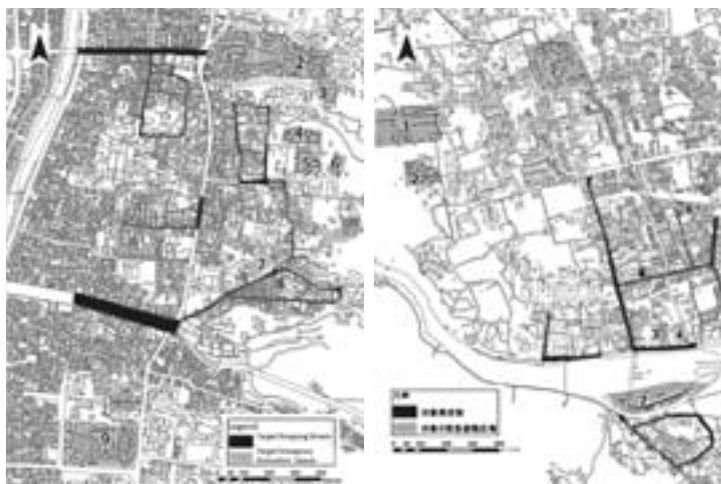
The catastrophic events that have struck Italy in recent years, in addition to the painful loss of human lives and considerable property damage, have, in some cases, affected significant elements of the cultural heritage.

It follows that, within the broader theme of risk mitigation associated with the effects induced by climate change and natural disasters, a separate chapter is represented by the widespread presence of historical sites that, due to their particular nature, are extremely vulnerable.

Heritage Impact Assessment, promoted by ICOMOS (International Council on Monuments and Sites), is the assessment methodology that examines the impact of transformation projects on the values, attributes, authenticity and integrity of World Heritage sites. This paper proposes to broaden the scope of the HIA, extending it to the assessment of impacts produced by natural events on minor historical and cultural heritage.

The proposed methodology involves three distinct steps: (I) assessment and classification of the degree of significance of cultural heritage elements; (II) assessment of the level of risk for different classes of cultural heritage assets located in historic areas; (III) assessment of the resilience of local communities in historic areas.

Decisive for the success of the proposed methodology is the collaboration of local communities. With this in mind, it is envisaged to use the Living Lab approach (which can help, among other things, to incorporate intangible heritage aspects into the HIA) as a useful ecosystem to develop shared solutions with communities to improve the resilience of historic areas.



**ID 027** *Possibility of Countermeasures for Visitors' Evacuation by Utilization of Tourist Resources in Historic City Kyoto*

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Kyoto City has positioned local open spaces, temples and shrines etc. as “emergency evacuation spaces” under the agreement, but in the event of a large-scale disaster, we believe that it is necessary to present and study additional possibilities of measures by utilizing existing tourist resources for supporting people who have difficulty returning home.

This paper examines the possibility of using “emergency evacuation spaces,” as “temporary stay facilities” for tourists and other visitors, as well as new possibilities of measures for supporting people by utilizing on-site resources such as souvenirs etc. as relief supplies.

As a result, we were able to clarify the possibility of positioning these facilities as below.

[1] About living space: It became clear that accommodations with a sufficiency rate of about 21% and 37% can be secured in the Gion and Arashiyama areas.

[2] About drinking water: Upon considering the use of water from “disaster cooperation wells” in Kyoto City, it became evident that a sufficient amount of drinking water could be secured.

[3] About food: It became evident that by using “Unbaked Yatsunami” as most famous souvenir stocked in the shopping streets as food to be provided to the emergency evacuation spaces, a sufficiency rate of about 17% and about 11% with respect to the food required for 3 days can be secured in Gion and Arashiyama areas. (1384 characters space included).

**ID 028** *Cultural and environmental heritage amid conflicts, climate change and overexploitation: an unsustainable and often underestimated cost for the future*

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Unfortunately, today we add to the climate vulnerability and the dangers of overexploitation of environmental resources the effects of conflicts fought with increasingly devastating weapons. Alongside the dead and injured in the disastrous toll of wars, there are silent victims: monuments, landscapes, urban and building fabrics, environmental ecosystems, water and natural resources of territories and places. On the other hand, although the 1954 Hague Convention imposes measures for the protection and safeguarding of cultural heritage in the event of armed conflict, this is often disregarded. In the Middle East, the wars fought in recent decades, from the Gulf War onwards, to which were added the destruction of the so-called Islamic State of Jihadist groups, have plundered and destroyed forever a thousand-year-old heritage belonging to all of humanity. In Europe itself, during the conflict in Yugoslavia in the 1990s, sites of great material cultural value were deliberately bombed, in Dubrovnik, Vukovar, Mostar to name a few, probably because attacking the identity and memory of a people means contributing to their annihilation. Six years separate us from 2030, the year towards which the sustainable development objectives of the UN Agenda 2030 aim. Objective 16 Peace, justice and solid institutions seems utopian and distant but pursuing it with tenacity is the main hope for the future of humanity.



**ID 029** *Agricultural and environmental recovery between  
archeology and viticulture in Alta Val d'Agri*

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Val D'Agri is known for its scenic beauty, with a combination of mountains, hills and wide valley for creating an evocative landscape. The valley is crossed by the Agri river to which the city owes its name and is surrounded by the mountains of the Lucanian Apennines. Famous for its natural resources, it is the headquarters of one of the largest Italian oil companies created by the ENI Company.

The article highlights how there are specificities at the root of southern agricultural territorial systems and the combination of these elements that have also emerged thanks to the archaeological discoveries. The case studies are emblematic for this application, for example Agrivanda arises from the desire to recover, redevelop, and enhance land with a purely agricultural vocation and is part of the broader integrated "Energy Valley" program of landscape and territorial redevelopment underway in area around the Val d'Agri Oil Center in Viggiano

The Alta Val d'Agri itself is an area that reveals within it a varied and complex richness from many points of view, from biodiversity to the many historical-cultural aspects that characterize it.

**ID 030** *The Mutations of Time: Erbil Citadel's Heritage Dwellings Between Architectural Preservation and Transformation*

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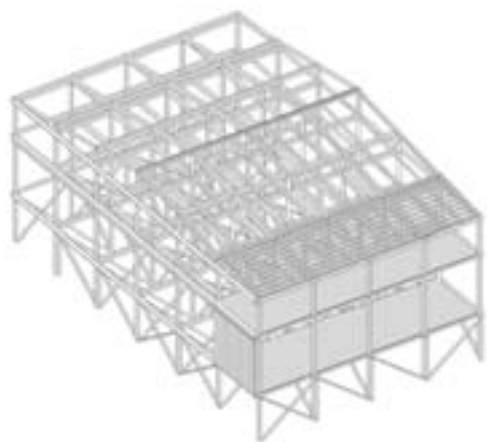
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The investigation of architectural mutations within the historical Fabric of Erbil Citadel Houses aims to focus on the different types of influential factors that have contributed to their development. This employs a systematic approach to analyze the diverse manifestations of mutations, categorizing them into natural and alterations. The study endeavors to contribute to a wider discussion on the preservation of cultural heritage, offering valuable perspectives between upholding historical reality and accommodating present day necessities.





**ID 032** *Taxonomy of the Wood-framed Stilt Buildings in Coloane Macau Through a Computational Shape Grammar Method*

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Wood-framed buildings can be found in many parts of China. The extensive literature on Historic Wood Buildings discusses the general similarities between stilt timber framing in various provinces of China and the architectural styles associated with specific Chinese ethnic groups, such as the Dong, Tujia, Miao, and Yao. However, no evidence has been found regarding the traditional stilts in Macau, an autonomous territory in the Guangdong province. The wood frame traditional architecture distribution maps of China do not include Macau. It is true that the stilt wood-framed houses found in Southern Macau, Coloane, do not often conform to the broader traditional concept of wood buildings. This study aims to investigate the construction of stilted houses in Coloane to enhance our understanding of vernacular architecture in Macau. The objective of this study is to analyze Coloane's stilt houses using a shape grammar as a computational design methodology. The underlying hypothesis is that the informal constructions in Coloane are the result of a geometric modular structural composition that can be identified and described through a computational design approach. This research contributes to the definition of an architectural language specific to Coloane's stilt houses.



**ID 034** *A dip in the pool in Milan: Cozzi and Caimi swimming pools*

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The construction of a capillary system of swimming pools in Milan was part of the Fascist program, in which politics, architecture, and urban planning were intertwined.

This policy has bequeathed us sports facilities that are still used today and that, at the time of their construction, were internationally renowned for their technical and technological research, as well as for their innovative spatial solutions and their focus on the relationship with figurative art.

From this premise, the paper examines the projects and conservation interventions that have affected the Cozzi and Caimi baths designed by the Eng. Secchi.

In both facilities, each element is designed to support the function of the building, favouring «serene lines to achieve an aesthetic and relaxing whole». These aspects have been partly modified by the conservation interventions that have affected the two facilities. Moreover, while the Cozzi continues to fulfil its function, the Caimi has two different souls: it is used as a swimming pool during the day and transforms into the Mysterious Baths at night.

The complex, damaged during the Second World War, has undergone several restoration interventions. The last by De Lucchi, restores the original design principle: «to achieve elegance through simplicity» - with the addition of some rooms to create «a city within a city, where architecture is the support of scenography».

The innovation inherent in the original project is also found in the latest intervention, unique in Italy, a public space «where scenic and performing arts, sports and leisure activities stimulate and contaminate each other».

**ID 036** *The disaster of the future: the impact of Sea Level Rise on Southern Florida american society*

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The right distance from the sun, the composition of the atmosphere, and the presence of the water cycle are the three factors that, when combined, allow life on Earth.

Today, we increasingly discuss climate issues, but it may be necessary to make a distinction, distinguishing between climate change, which has always been part of the Earth's life cycle, and the climate crisis, linked to changes generated by human actions over the past 150 years. The climate crisis is increasingly becoming a focus of scientific inquiry, and as global disasters multiply, the problem is becoming more urgent, requiring hypotheses that can stabilize our settlements, almost crystallizing them in their current state, giving us the opportunity to continue living in the world we have known or, optimistically, improve the state of our cities and, consequently, our lives, making them potentially sustainable. This challenge, particularly in areas experiencing more rapid and abrupt climate changes, has driven research to identify emerging practical applications, allowing for more precise monitoring and analysis to determine detailed responses in the intervention measures identified.

We're talking about South Florida, specifically Miami-Dade County, which is facing an unprecedented challenge.

**ID 037** *Regeneration of City-Port Interaction - Areas: a New Method for managing a contested space*

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City-port interaction areas represent a crucial contested space for urban development, marked by complex governance and planning challenges. This paper introduces a new methodology for the urban regeneration of such areas, emphasizing the importance of integrating governance models and planning tools to effectively address the specific issues of these zones (Hein, 2021).

Through a critical examination of existing governance models and urban planning tools (Merk, 2013), the contribution highlights the main gaps and opportunities in treating city-port interaction areas. The proposed methodology is based on a participatory and multidisciplinary approach, aiming at the creation of livable, sustainable urban spaces that strengthen the bond between city and port (Schubert, 2008).

The advanced regeneration process involves stages of mapping urban planning tools and the most affected functions, defining adaptive intervention strategies, and implementing specific measures for each area (Hall & Jacobs, 2012). The goal is to promote an integrated vision, overcoming the traditional divisions between urban and port planning (Bird, 1963).

The contribution not only proposes an innovative methodology for the regeneration of city-port interaction areas but also prompts a critical reflection on current models of urban governance, highlighting the need for more flexible and integrated planning tools (Hoyle & Pinder, 1992).



**ID 038** *Pelayos Monastery, B.i.c. heritage site. Reorganization of the cistercian ruins as Cultural Center and new Museum*

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This proposal focus on Contemporary architecture as answer urban and rural places recovery and is inserted in Contemporary Architectural and Urban design relationship with tradition and identity of Places research carried out by the author. This objective is pursued working on architecture of museum typology and cultural centers, its variation over time, and with both theoretical and operative aspects. Some of the Places that have been investigated by the research have as a common condition of post-war sites and some of them have been recognized and protected by UNESCO in the Near East including Aleppo, Baghdad, Bamyian, Kandahar and Mosul. Some others have in common the Archeological Ruins held in Cultural Heritage context both by UNESCO and by local protection laws including Portugal, Tunisia, Italy, Swiss, Spain. This abstract proposal presents the project for the refurbishment and the complete reorganization of the dimiss and abandoned cistercian monastery of Pelayos, not so far from Madrid, promoted by an international competition started by the international association N.E.A. as well as a training course on Cultural Heritage held in 2023. The process that drove the design team is the core of this essay. Research work have been carried out trying to establish a deep bond with this far away and high emotional Place recognized as cultural heritage context. This part has been focus on critical redraw of places and its main built architectures elements, in order to learn and understand natural and anthropic rules and traditions, to discover hidden metrical rules and space declinations, to unearth stratigraphy proportions and traces of landscape identity and memory.



**ID 039** *The earthquake of 1783 in Calabria: reconstruction, transformation, forgetting*

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The essay aims to focus on the reconstruction/transformation/abandonment actions implemented in Calabria, in the Serre Vibonesi area, after the disastrous earthquake of 1783.

Three centuries after the well-known event, the territory is still seriously wounded. In a landscape with a strong historical-architectural-archaeological value, today we find cities totally rebuilt and/or transformed together with a varied fabric of forgotten historical nuclei which remain in ruins with their historical traces. The area stripped of its identity appears as a land without memory, in reality it embodies a single tangle of reconstructed sites, differently urbanized and fragmented between them, together with nuclei of rare beauty affected by marginality.

The reconstruction did not take into account what existed, or rather what was historic that had been saved from the destructive fury of the earthquake, but agglomerations were rebuilt according to new urban principles, in places different from the original ones.

We want to draw attention to the natural disaster and the repercussions it had on the ancient centres with a focus on some of these.

The aim of the study intends to activate interest in the silent villages through their knowledge, understood as a preparatory action for any conservation and recovery intervention for a renewed cultural and/or tourist re-usability.

**ID 040** *World heritage declarations and tourism. Risks and opportunities as future strategies*

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The declarations of assets inscribed on the World Heritage (WH) list are, for the most part, highly outdated in terms of the identification of Outstanding Universal Values (OUV), which makes it difficult to carry out Heritage Impact Assessments (HIAs) in change management situation. Most of the dossiers were written in the 1980s and 1990s, at a time when this type of documents was limited to describing the assets and their characteristics, focusing on mainly material issues, without specific attention to environmental and social aspects. The evolution of the concept of heritage, its complexity and that of environments in which these assets are located, require the updating of the significance/associated cultural values that complete the OUV included in the declarations. A task, as the Faro Convention (2005) points out, must be carried out hand in hand with the communities, implementing participatory processes with guarantees in terms of the application of methodological processes.

In this work we focus on the study the Guadalquivir River in Spain as a geographical axis, an example of a natural space that overlooks and supports heritage sites in Andalusia, specifically in the case study Royal Alcazar of Seville, declared together with the Cathedral and A General Archive of the Indies in the city of Seville. An observational study of the characteristics of heritage spaces and the relationship between citizen participation and tourists will be carried out.

**ID 041** *Digital Connections between educational contexts for a Sustainable Cultural Heritage: Protection, Innovation, Training*

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Safeguarding, valorization, and enjoyment are core values underlying Italy's vast cultural heritage. With the ongoing process of computerization and digitization of heritage, there is the possibility of making tangible and intangible cultural assets accessible to a wider pool of users. Through the introduction of, for instance, artificial intelligence or NFT (Non-Fungible Token) technology, it is possible to visit museums through augmented and mixed reality, interact and 'immerse' oneself in them, document, catalog, preserve, monitor, diagnose and even create art itself. But what role can the digital context play in this panorama of actions for the protection and enhancement of cultural heritage? Can these new media act as a link between educational institutions and territorial resources such as museums, archaeological sites, etc. for heritage education? This study, carried out by a meta-analysis, attempts to analyze to what extent the use of new technologies in cultural heritage can make them more usable, immersive, and accessible to an increasingly heterogeneous population and, at the same time, they can become the element that characterizes the collaborative nature between different educational contexts to create a broader vision of culture and education beyond the individual and specific functions traditionally assigned to them to train future citizens of the world to respect and protect the common heritage.



**ID 042** *Hydroponic/soilless crops*

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In recent years, due to the various climate changes and the need to satisfy a consumer increasingly attentive to the production process of what he is buying, new cultivation systems are being born, and, in some realities, are already in the production phases.

The aim of these innovative cultivation systems is to control most of the factors that affect agriculture, so as to reduce the stresses typical of open field cultivation and increase yields by using inputs such as water, nutrients, light and growing area more efficiently. These are soilless systems with very different characteristics.

In this article, among the “soilless crops” we will examine the cultivation techniques that are implemented in the absence of common agricultural land and in which the supply to the plants of water and nutrients, generally takes place through the administration of a nutrient solution of macro- and micro- nutrients.

In particular, we will study soilless or hydroponics (from the Greek hydros, water, and ponos, work) crops dividing them into two groups: crops in bare root nutrient solution (without substrate) and those in containers on natural or artificial substrate.



**ID 043** *The fresco in the inner loggia of palazzo Petrucci at Carinola: survey of a lost work of art*

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In violent times, art is often damaged or destroyed and the memory, however detailed, of what is lost is never anyone's truth: neither of the person describing the work, nor of those who are described, because memory is the unconscious drawing of the work of art.

The research in Palazzo Petrucci at Carinola, a medieval building belonging to an urban reality that is among the most original as regards its Catalan architecture, was undertaken with the intention of attempting to recover the primigenial image of the scenography of its court, now lost due to the neglect and violence of man, and to halt the memory of the unconscious.

This paper describes a methodology aimed at the virtual recovery of the wall paintings that originally decorated the walls of the palace's inner loggia, a process of knowledge and documentation carried out through metric and photogrammetric survey using software of the latest generation, in which the modules were developed for the reconstruction of the perspective view.

The documentation produced describes the wall painting in its original position. These are evocative photographs, which we believe can contribute to strengthening the collective memory and sense of identity of this community, and from which, adopting the appropriate precautions, one can read a chapter of the medieval history of the Province of Terra di Lavoro.



**ID 044** *Combining Missions and enhancing Tourism.  
Cultural Heritage between experimentation and  
innovations*

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The pandemic emergencies and conflicts that are characterizing these last few years lead to a dislocation of physical space as well as a weakening of social inclusion. Planning today requires the implementation of an integrated public government strategy aimed at regeneration through the cultural valorization and social revitalization. An important occasion was the announcement by the Ministry of Tourism “Fund for small municipalities with a tourist vocation”(2023), for innovative interventions in field of accessibility, mobility, urban regeneration and environmental sustainability.

The PDTA Department of La Sapienza University of Rome oversaw the participation of numerous municipalities designing technical proposals for the municipalities of Capodimonte and Arlena di Castro (Vt), Cellere (Vt) and Ortezzano (Fm), for Anticoli Corrado (Rm) and Bevagna (Pg), aimed above all at enhancing local identity and prevent depopulation through the valorisation of the cultural and naturalistic environmental heritage and by focusing the projects on the identity aspects of the intangible cultural heritage, strengthening forms of sustainable mobility and promoting both the diffusion of shows and theatrical forms and the artisan activities linked to the primary sector. All projects combined both the missions of the university (first, second and third mission) and those of the PNRR based on digitalisation and innovation, ecological transition and social inclusion.

**ID 045** *The Rendano theater in Cosenza (Calabria). Notes on post-war restoration*

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The paper aims to analyse, by a historical-critical reading, the city of Cosenza bombed by the Anglo-Americans during the Second World War. The centre was extensively damaged, the bombings affected the main communication routes, public and private buildings. The historic city was hit in several places and the Italian government included Cosenza in the list of municipalities damaged by the war that needed a reconstruction plan, indeed never completely realized.

One of the most representative buildings was seriously damaged in August 1943, the Alfonso Rendano theatre, a nineteenth century building particularly interesting for its artistic value, built in the largest square of the historic center, not far from the Norman-Swabian castle.

By reading archive documents and a photographic repertoire, it is possible to analyse the state of ruin after the bombings and to highlight the design criteria and methods of intervention used for restoration.

The paper focuses on the evaluation of war damage on one of the architectural and cultural symbols of the city of Cosenza, highlighting the need, inherent in the post-war period, to reconstruct, restore and safeguard the building fabrics and the architectural heritage.



**ID 046** *The refunctionalization project of an abandoned industrial work. The case of the former “Tabacchificio Salvati” in Eboli*

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The sites of disused industries offer an opportunity for territorial redevelopment as they are endowed with relevant architectural features to return spaces of aggregation to the community. The study of disused industrial buildings addresses multidisciplinary issues that embrace different aspects: technological, social, aesthetic and historical.

The proposed text, the result of academic research work, investigates the theme of decommissioning in relation to the project for the conservation and re-functionalisation of the former Tabacchificio Salvati, located in Eboli, in the province of Salerno.

A conscious methodological approach is adopted, through adaptive reuse and proactive protection, respecting the building’s history and architectural qualities while transforming it into a functional place for current and future needs, outlining three main design strategies.

After a careful analysis of the Sele Plain territory and its peculiarities, the design decisions focus on different and new functions affecting both material and immaterial actions. These actions are aimed at improving economic, social, cultural and scientific aspects. Optimising brownfield sites is a key objective in urban regeneration.

The sustainable approach to the restoration of these areas can lead to a better management of resources and the environment, reducing the negative impact on the surrounding nature and creating more eco-friendly spaces.

The valorisation of abandoned places emerges as a key theme in urban regeneration, and in building a resilient and sustainable society.

**ID 047** *A rehabilitation project for peace education.  
Recovery of the Mutilated House of Catania, Sicily*

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At the 1937 International Exhibition in Paris, Le Corbusier stated that the world should not produce war but architecture, in short, create and not destroy. The Second World War was a huge tragedy; in Italy, it produced spaces with popular and propaganda purposes whose language defined buildings that distinguish our cities. Today, at a time characterized by wars even quite close, these buildings are a reminder of emotions and events not easy to manage.

In the historic center of Catania, overlooking one of the most important squares of the city, in a state of neglect, there is the House of the Mutilated, a building erected as a temple of sacrifice and a place of memory, as a container of services for assistance to former invalid fighters.

The research aims to study the rehabilitation of buildings constructed for specific educational-social purposes, in the period of the Second World War, to make them a social incubator of peace, culture and innovation.

If the future is an eternal present, the past can direct the present not to make the same mistakes, but to use it as a lesson in life. The research, in summary, intends to propose a reinterpretation, in terms of design and technology, of the physical and social history of the building with the help of innovative communication strategies. In this sense, the theme of rehabilitation is declined starting from buildings that represented the values of an era of war and it can be the best allies for education to an era of peace.



**ID 048** *Contemporary City and Archaeological Areas:  
towards an integrated urban regeneration project*

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The paper focuses on the relationship between the contemporary city and territorial cultural frameworks, with particular reference to archaeological areas, within innovative governance and planning systems based on an integrated multidisciplinary approach. This relationship, although debated at an architectural scale, is still insufficiently deepened in recent reflections and experimentations.

Archaeological areas are often considered as heterotopies, separated entities in opposition with the active city. This exclusion, increasingly when they constitute an infrastructural layer in the landscape, turns into fragmentation, indifference and, consequently, degradation following a process that is both material and immaterial as involves the community and its identity values. This issue should be brought back to the centre of the debate in order to pursue an integrated and sustainable territorial development, capable of generating employment, stimulating creative activities, increasing social inclusion and cohesion. The paper compares different case studies selected to define an experimental proposal of methodological and operational references related to an integrated regeneration project. Looking to deepen in the actual cultural and social frame the concept of musealisation in opposite to trivialization, the conclusion identifies potential and limits of the design solution in terms of innovation, integration, regulation and management also considering the socio-economic costs and the feasibility of the process.



**ID 050** *Preservation of the identity of an exiled population and Architecture: the settlements built for Italian exiles from Istria, Fiume, Dalmatia after the IWW*

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More than 300,000 people of Italian language and culture were forced to abandon Istria, Fiume and Dalmatia at the end of the Second World War, in particular after the signing of the Peace Treaty (Paris, 1947) and the London Memorandum (1954) which sanctioned the passage of a large part of Venezia-Giulia to Yugoslavia.

For tens of thousands of exiles, initially hosted in refugee reception centers, over one hundred dedicated settlements were designed and built in Italy, in fifteen Regions.

In these settlements, attempts were made to replicate spaces and characters of the cities and villages of origin of these communities in exile, in order to promote the preservation of memory, religion, popular traditions and social life. Even the names that were chosen for these settlements were intended to clearly identify the communities that would populate them (Borgo Giuliano, Villaggio Giuliano, Villaggio dell'esule, and so on), very often linking them to the name of the patron saint of the place of origin, and giving the streets the names of the cities abandoned by the exiles.

The proposed contribution aims to present the results of research carried out in recent years on the distinctive aspects of these places, on the methods that guided the choice of sites, on the designers, on the methods followed in the design, on their criticisms and current conditions, on the issues of their problematic conservation and transmission to the future.



**ID 051** *Farmsteads and suburban country houses, itineraries of conservation of a damaged heritage of the Adriatic coast*

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The paper aims to draw attention to some categories of constructions, such as farms, farmsteads, country houses or "retreat villas" that outline the profiles of a cultural heritage with a identity bond with the territories of origin: the building techniques, architectural typologies and the location of the constructions acknowledge their connection and reciprocal influence with the local resources and landscape.

These buildings developed according to a unitary project or as a result to the architectural stratification of older structures, are often altered by far too many changes due to state of neglect, rampant overdevelopment and by inappropriate interventions of demolishment and change.

The edifices, built outside the historic centers, in the open countryside or along the coast, represent a turning point in the social and economic dynamic settlements of the past also connected to the transformation of the productive activities between the nineteenth and twentieth century.

The path of mindfulness of the tangible and intangible values verifiable in the studies of the buildings in their environment identifies a starting point of the consideration on the uses consistent with the proper conservation of these particular realities of settlements; knowledge this architectural heritage appears today important for the expansion of the reference points for the safeguard and the enhancement within sustainable development.



**ID 052** *Rosettes (Gülbezek)  
on Muradiye Complex Tombstones*

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Muradiye Complex, located in Bursa province, was built by Sultan Murat II in the 15th century. Muradiye Complex is a widescale structure consisting of a mosque, bath, madrasah, imaret and tombs belonging to the dynasty and was included in the Unesco World Heritage list in 2014. Within the complex there are two open areas where the tombs of the courtiers who are not members of the dynasty are located. When the tombstones here are examined, the diversity in the rosette motifs on the stones draws attention. With their circular form, rosettes are ornamental elements that have been frequently used in architecture since pre-Islamic times. In addition to their formal diversity, these motifs are also iconographically important in terms of representing concepts such as time, life cycle, etc. Within the scope of the study, the rosette forms on the tombstones of Muradiye Complex were analyzed, their typologies were determined and an inventory was created.

**ID 053** *Rebuilding settlement culture through children: playground as a tool to reactivate the social cohesion in fragile communities*

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Besides destroying cultural heritage, armed conflict tends to undermine social cohesion. Children are the most affected victims, and the value of play in the reconstruction of cities has to be primarily restored to them.

The research explores the strategic role of playgrounds in rebuilding fragile communities through the regeneration of children's facilities. After the Second World War, in high-risk contexts, the emergence of playgrounds was an attempt to respond to social problems exacerbated by conflict and enemy occupation. Nowadays, one of the European key issues is the welcoming of child refugees. They have come to safe territory fleeing from the ongoing wars in the international context.

The main actors of the research are children and third-sector associations. They work in settled urban contexts, characterized by social, cultural, economic, and physical emergencies.

By involving different stakeholders in the regeneration of open spaces for collective use, the research deploys innovative participatory approaches to reactivate the link between community and place.

The study of historic playgrounds aims to identify requirements, based on children's right to play denied by armed conflict, to stimulate their creativity for adaptive reuse and maintenance of a shared built environment.

The results of the research are design guidelines for playgrounds, based on the new requirements introduced by the UNI standards regarding the sustainability of materials.

**ID 054** *Urbanization in Protected Areas and beyond their boundaries: An analysis of National Parks in Italy for integrated management*

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The dynamics of global urbanization and metropolization exacerbate the pathologies of contemporary cities and territories affected by the impacts of climate change, biodiversity loss, ecosystem fragmentation and pollution. Today, the disciplinary debate recognizes Protected Areas (PAs) not only for their role in nature conservation, but also as strategic components for territorial resilience, sustainable development, climate change mitigation and adaptation and well-being of communities and settled species. This role aligns with international policies and programs that outline commitments for a quantitative increase of protected territories on global scale. Furthermore, this trend is leading to an increasingly widespread presence of PAs in urbanized areas. This phenomenon highlights the need for the renewal of strategies and tools for territorial governance in order to overcome the “dual protection model” and the insularization of protected areas, and to embrace the “new paradigms of conservation” for open and integrated PAs capable of reflecting the benefits of their actions onto the surrounding context.

Within this conceptual framework, the study proposes a quantitative and qualitative analysis of the 25 Italian National Parks concerning the urbanized territory both within and beyond the protected boundaries, in the so-called contiguous areas, highlighting potential synergies between the planning of the Protected Areas and the surrounding context.



**ID 055** *Protection of Cultural Heritage from War Damage in Aleppo During the Time of War*

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Generally, in Europe, when “war damage” suffered by the built cultural heritage is mentioned, it refers to the experience coming from the damage caused by WWI and WWII. Nowadays, the consequences of the war in Ukraine prompt reflection due to its geographic proximity and sudden change after 70 years of peaceful living in Europe. Studies on the Middle East’s context often focus on political issues and cultural comparisons and rarely delve into the existing relation between the local communities and the built heritage. This paper examines the ongoing war in Syria that began in 2011, specifically focusing on the case of Aleppo, where the violence raged from 2012 to 2016, having thereby destroyed the city’s urban fabric and its built heritage, with a huge impact on the social fabric.

The paper presents various preservation acts realised by the local community of Aleppo between 2013 and 2014 to protect the city’s built cultural heritage during the war. The analysis of specific examples of heritage that the local community chose to protect shows a mixture of cultural values within the protection initiatives. The strategies developed by Aleppinians to safeguard their cultural identity prove their crucial role in preserving the urban-built heritage and reveal a strong cultural resilience. Therefore, the article highlights the complex relation between the Aleppo local community and the city-built heritage, revealing the identity value that was conferred on it during the war. As a result, the paper offers a new perspective on the complex social processes that link together the cultural values and the identity of the locals.



**ID 056** *Strategies for reusing Albanian bunkers*

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The rehabilitation and adaptive reuse of buildings designed for military purposes is a controversial issue at the international debate. Changes in national and international policies, as well as the influence of technological advances in conflict have led to the abandonment of buildings and sites that were once strategic for military purposes.

The research addresses the potential for enhancing the network of military bunkers dotting the Albanian territory. The militaristic Albanian government of the second half of the Twentieth Century had invested in the construction of hundreds of thousands of bunkers for defence use, not only along the borders and coastlines, but also within urban areas. Indeed, more than 150,000 of these bunkers of various types and sizes were built: ranging from large anti-nuclear bunkers designed to house vehicles and people, to small bunkers intended to defend the territory. Actually, these buildings have never been used for military operations: in the beginning, a spontaneous reuse was undertaken; nowadays, the population is gradually, albeit with difficulties, beginning to recognise their value as cultural heritage. A systematic survey of this endangered heritage is still lacking; studies on the conservation status and potential for reuse are still limited. Based on the analysis of some significant case studies and the identification of recurring characteristics in the Albanian bunkers, the paper aims to define a methodology for classifying and analysing this heritage, in order to identify a comprehensive intervention strategy, as well as criteria for evaluating compatible reuse hypotheses.

**ID 059** *Re-build identity. Ukraine War and digital preservation*

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The objective of this research consists of a series of actions to support and implement the digital reconstruction of places destroyed in the Ukraine war by the NGO Pixelated Realities. Starting from the concepts of “collective memory” and “national identity,” this will subsequently provide the possibility to identify the symbolic places of Ukrainian culture from which to rebuild the destroyed identity of the people.

Ultimate goal will be to enhance the work of the OMG in order to rethink the preservation of tangible heritage – physical places – and intangible – symbolic places – at the times of conflict with new digital tools.

This work, moreover, may allow, subsequently, to be able to implement the digital models with different materials, such as archival material or video, in order to be able to preserve a wider Cultural heritage.



**ID 060** *The culture of protection between Architecture and Archaeology: the case of the “Parco Archeologico di Metaponto”, Matera*

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In a time considered to be a time of crisis, tangible and intangible cultural heritages are exposed to phenomena that accelerate their degradation and very often cause their disappearance. Natural disasters and their causes undermine the choices made in sites, such as archaeological sites, where the preservation and protection of finds is considered a priority; it would be desirable to consider at the same time the relationship between the building and the context, between unexpected events and environmental fragility, in order to guarantee a margin of time useful for developing a “culture of protection”. This is the case of archaeological sites, which are the custodians of fragments of our history that are constantly being revealed, thanks to the daily work of archaeologists, architects, historians and restorers. The survey site of the “Parco Archeologico di Metaponto”, in the province of Matera, characterized by ancient ruins and urban layouts, strongly compromised over the centuries, risks disappearing under the effect of increasingly frequent flooding phenomena, as a direct consequence of climate change. The paper investigates the relationship between Architecture and Archaeology, which has reached increasing points of interest, in the practices of an integrated approach of knowledge and design; from the protection of historic sites through sustainable construction and reconstructive practices, to digital practices for the preservation of memory.





**ID 061** *Cities and cultural heritages: resilient policies and safeguard measures*

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Cities represent living treasures of history, culture, and art. Every corner tells millennium-old stories, interweaving civilizations and showcasing human ingenuity. However, over time, urban centres and their cultural heritages have become increasingly vulnerable to risks arising from rapid urbanization, climate change, and anthropogenic threats. In this study, we will seek to address this issue starting from the social and economic role that cultural heritage plays in cities – as a vehicle for identity and dialogue between diverse cultures – an important resource to be valued and protected through methods and strategies, as already specified in Target 11.4 of the 2030 Agenda. The objective is to identify the best policy actions and specific safeguarding measures to make cities and human settlements inclusive, safe, resilient, and sustainable, strengthening the protection of cultural and natural heritage and promoting responsible cultural tourism, in order to avoid harmful and vandalistic behaviours, as unfortunately documented by recent events. Our focus is on those virtuous urban realities that are already addressing the problem of risk and fragility of cities and their cultural heritages through the implementation of innovative and collaborative planning policies, and the realization of digitization and computer archiving projects. These are valuable tools that allow the preservation and sharing of cultural testimonies of urban centres with a global audience.

**ID 063** *Designing safety in museums during pandemic emergencies: an integrated approach between Space Syntax and an AI-based analysis of visitors' trajectories*

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The COVID pandemic emergency has brought changes in the use of highly crowded public buildings, including large museums, which, upon reopening to the public, have had to manage visitor flow strategies that ensure social security and distance. However, while effective, these measures have often compromised the quality of the visitor experience, resulting in a restricted and less inclusive fruition experience. Hence, to address future emergencies, it's crucial to apply lessons learned from COVID research on space and visitor management. In this context, several studies have considered the application of methodologies and tools to analyze visitor movements in museums. In particular, the "indirect" methodology referring to configurational analyses (Space Syntax) emerges as one of the most effective in interpreting the role of spatial configuration and characterization in guiding user movement, facilitating the post-pandemic reopening of important international museums. Simultaneously, a more "direct" approach utilizes modern AI technologies to collect and analyze visitor flow data. Examining the pros and cons of each of the two approaches, this contribution aims to evaluate an integrated approach using Museo di Roma at Palazzo Braschi as a case study. By combining these methodologies, the goal is to gather comprehensive data for designing strategies that ensure safety, optimize visitor experiences, and enhance cultural heritage appreciation.

**ID 065** *Urban resilience: facing catastrophe, rebuilding community*

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We live in a realm where the specter of apocalyptic calamity is ever present, casting its shadow over our daily existence and evoking our deepest fears. A day may come when the bakery, the bus stop or, worse, the school will no longer exist. Everything we know and love could be swept away and reduced to rubble. History teaches that during these trials the indomitable human resilience shines through, unwavering and determined. Though plagued by anguish, we would soon find the strength to begin again. We would be guided by the memory of the places we had lost, the stories we used to tell, and our shared imagination. Digging through the rubble, we would once again discover hidden treasures and forgotten stories. Technology can enable us to preserve the image of the lost city in secure and geographically distant servers. From this multifaceted heritage we can rebuild our city. Like an eternal Rome. This article aims to explore, through the dystopian image of an imminent catastrophe, the potential of urban storytelling. Starting from a project carried out in the city of Formia (Latina, Italy), it addresses the issue of augmented reality applied to the existing city as an opportunity to unveil the urban invisible, with the aim of engaging citizens of all age in the creation of a new active and responsible community that takes care of the polis and its riches.



**ID 066** *Knowledge and project for the protection of cultural heritage affected by armed conflict: some case studies from Afghanistan*

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Afghanistan has always been a crossroads of cultures, as it is situated in a significant position in relation to the historical stratifications of the “Silk Roads”. Its cultural heritage and architectural and archaeological heritage, in fact, reflect a past characterized by intricate interactions between Buddhism, Islam, Alexandrian Greece, and Achaemenid Persia. The vast Afghan territory is characterized by a variety of architectural and urban forms, which over the past fifty years has suffered extensive damage caused by different man-made factors, such as illegal excavations, looting of museums, and the armed conflict that has plagued this land since 1978. These disastrous events have, on the other hand, also provided valuable lessons and opportunities for critical intervention in the knowledge and protection of architectural and cultural heritage.

This research will start from some conditions related to the presence of doctoral knowledge that intends to examine, through extensive documentation, the redesigning, and cataloging of some artifacts, comparing them to the progress made in the field of cultural heritage rights protection in Afghanistan from 2001 to 2021 and highlighting the efforts of local and international humanitarian groups in the process of historical preservation. The terms of protection and preservation carried out through appropriate regulations and legislation will be critically analyzed through some examples that can become case studies. In addition, the foundations of contemporary legislation, tools, and methods for the knowledge and cataloging of heritage assets, and project management practices will be investigated.

**ID 068** *Revitalizing Joybareh: a Case Study of Endogenous Development & Contextual Design for a Historic Neighborhood*

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Revitalizing historical fabrics within cities presents crucial challenges due to their

multifaceted nature and diverse needs. This research explores these concerns using the case study of Joybareh neighborhood in Isfahan, once a protected urban development area (designated in the 2000s) but now facing resident dissatisfaction and neglect.

The challenges stem from a lack of adherence to Endogenous Development principles, focusing instead on superficial interventions. Residents' needs and the unique historical context haven't been prioritized.

This qualitative study employs a descriptive-analytical approach. Criteria for Endogenous Development and Contextual Design are derived from literature review. A SWOT analysis of Joybareh, based on field observations, document analysis, and interviews, assesses the current situation. Finally, recommendations for improvement are proposed.

This research offers a framework for revitalizing historical neighborhoods using Endogenous Development and Contextual Design, ensuring resident participation and respect for the unique character of the place. Joybareh serves as a valuable case study, and the findings can be applied to similar contexts worldwide.

**ID 069** *The spatial articulation of the Valley d'Itria pignon buildings, a UNESCO-protected architectural asset*

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In the panorama of architectural typologies, it is rare that a particular construction technique, which identifies a well-defined, unique and characterising typology of an area, is placed under the aegis of UNESCO for its protection and preservation. This paper, in proximity of the 30th anniversary of the annexation of the Alberobello trulli among the UNESCO World Heritage Sites, intends to investigate this particular architectural speech, in order to better explain its roots and its future evolution.

The study conducted on building types and techniques, investigates some characteristic cases of these particular architectures, carrying out an analysis of the dry-stone construction technique with which these factories are built. These constructions, in fact, are presented as wonders of statics, being realised without the support of scientific calculation but only with the experience of the mastri strullai who, handing down their knowledge orally, make it possible to create the typical cone-shaped roofs that define these characteristic architectural volumes.

The adoption of this particular architectural language, expressed by peasants and shepherds, has contributed to characterise a large number of territorial areas, creating a widespread architectural speech from Gargano to Salento. The goal of the paper allow for reflection on the future of this architectural typology, which UNESCO, sensitive to the evidence produced by cultures of the past, has recognised its importance by declaring it a World Heritage Site.

**ID 070** *The new physical model about the ancient city of Pergamon for the Pergamon Museum Berlin*

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**Catherine TOULOUSE**

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As part of the ongoing general renovation of the Pergamon Museum Berlin, a building that houses a large number of museums, including the Collection of Classical Antiquities, one of the most prominent objects of which is the actual Great Altar, the so-called Pergamon Altar, the display models in the same main hall are to be updated to reflect the latest scientific state of the art. While for the 1:20 scale model of the actual altar this merely means integrating the 3D scan of the Giant Frieze and reconstructing it using tangible material, for the model of the city mountain this means a completely new concept. It is now beyond question that the majority of the mountain was built on and not a spacious park with a few large structures as the old model suggested. The basis for this is provided by the virtual overall model of the metropolis created by the authors for the first monographic exhibition in 2011. However, this model was designed for visualisation, which opens up many possibilities, but also implies significant limitations. A plastic model that can be viewed from all sides, on the other hand, requires a meaningful visual representation of archaeological knowledge from any conceivable viewing angle. The special method of visualising uncertainty in knowledge is of benefit here, which will be exemplified in the paper.

**ID 071** *Digital twin for cities. Helsinki and Chicago as a case study*

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Digital twins of cities represent an innovative perspective to improve the urban environment, the management and control of resources, as well as the quality of life of citizens. These virtual models reflect the state and functioning of urban infrastructure in real-time, enabling more efficient and sustainable management of resources. In this context, several cities have adopted advanced digital twin solutions to address environmental, functional and social challenges. Through data collection and analysis, these systems enable better urban planning, transportation optimization, pollution monitoring, and emergency management. The research aims to investigate digital twins on an urban scale, delving into social, environmental and economic characteristics. By analyzing the digital twins of the cities of Chicago and Helsinki, through metrics originating from various studies and therefore coming from heterogeneous sources, with the aim of providing a common language that is understandable for the community of professionals and that allows them to communicate in a synthetic way an evaluation of the various characteristics, we want to understand, Starting from the comparison, what are the positive aspects and to be encouraged in order to create a perfect collaboration between the digital twin, the city and people.





**ID 072** *The eighth day*

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Nowadays change has become a constant, but in this vortex of unpredictable variables and events that transcend human beings, we cannot forget the material and immaterial heritage that has made our history.

There are many initiatives taking place in the artistic sector for the protection and valorisation of art and architecture, often the object of disgrace in conflicts, almost as if to inflict a sort of "damnatio memoriae".

We can essentially distinguish two macro-categories of initiatives, denunciatory art which with its works demonstrates against the war and fundraising initiatives by museum bodies and individual artists to financially support the tormented populations.

A special case is New Palmyra, a platform that is based on memory and rigorous historical foundations to return to the global community a testimony of a partially destroyed cultural heritage.



**ID 073** *Surveying visual-spatial relations between Bisentina Island and its environment. The Atlas of the Coastal Villages of Lake Bolsena*

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The complexity and profound beauty of the territory surrounding Lake Bolsena, located in the Upper Tuscia near Viterbo, Central Italy, facilitate our ongoing research aimed at establishing a permanent investigation laboratory on this landscape, for the conservation and enhancement of its tangible and intangible qualities.

As a part of the Atlas of Lake Bolsena, which aims at documenting the qualities of a complex system, we propose a reflection on the heritages 'nestled' into the various coastal villages.

The possibility to 'dwell' these places – to traverse them from land, water, and sky – both in daily life and in the context of the research activities undertaken, has allowed us to identify new opportunities for in-depth study and investigations. The Island Bisentina is a unique heritage, a landmark and a visual focal point for the urban hierarchies of the coastal towns. Located in the southern quadrant of the lake basin, the Island is a remnant of one of the eruptive cones that generated the largest volcanic lake in Europe. The presence of the Farnese family has played a significant role in shaping these places; actually, they opted for their family Shrine the Bisentina Island in Lake Bolsena. The 'qualities' of this immense cultural and environmental architectural heritage leaves ample space for multidisciplinary readings that we have elaborated through surveying actions in which the languages of Drawing and Photography are integrated and stand together complementarily.

**ID 074** *Buildings of worship and peoples in conflict: Church of Saint Porphyrius and Great Mosque in Gaza Strip*

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Armed conflicts, synonymous with death and destruction, as well as weakening the social and economic fabric, put at risk the cultural heritage of besieged countries whose destruction has a strong symbolic as well as strategic significance.

The text presents two emblematic cases of this situation, the Orthodox church of Saint Porphyrius (5th century) and the Great Mosque (5th century, ex Byzantine church), both in the Gaza Strip and both affected by bombing, two buildings symbol of the stratified cultural heritage of a disputed territory torn apart by war underway.

**ID 075** *Multirisks and multiresilience planning*

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The term resilience is used in many disciplines due to its adaptability to theories of complexity, including economics, ecology, political science, cognitive science, new technologies, and land use planning. Consequently, Zolli and Healey's (2012) definition of resilience as "the ability of a system, company or person to maintain its fundamental purpose and integrity in the face of radically changed circumstances" integrates ecology and sociology and offers an overview of the multidisciplinary nature of the issue.

Cities, in fact, are not just uniform landscapes of people distributed randomly, but organized places that produce socio-economic differences; it is therefore not easy to describe a city as resilient in its entirety. The sole reference to the Covid-19 pandemic, for example, has led to problems of security, fragility and differences in resilience not only between the affected cities, but also between the areas within them. If to that of the pandemic, questions related to conflicts are added it is possible to comprehend that the adaptation require a more complex typology of resilience capable to involve both the safeguard of cultural heritage and safeness of people.

Therefore, the aim of this study – carried out as part of the PRIN 2020 SUMMA research project – is to define multirisk places and the multi-resilience starting from the concept of risk and resilience and guide lines for multiresilient planning which take in consideration safeness of people and their cultural heritage.

**ID 076** *Cultural heritage in distress. Fragments of the Appia Antica in Sinuessa*

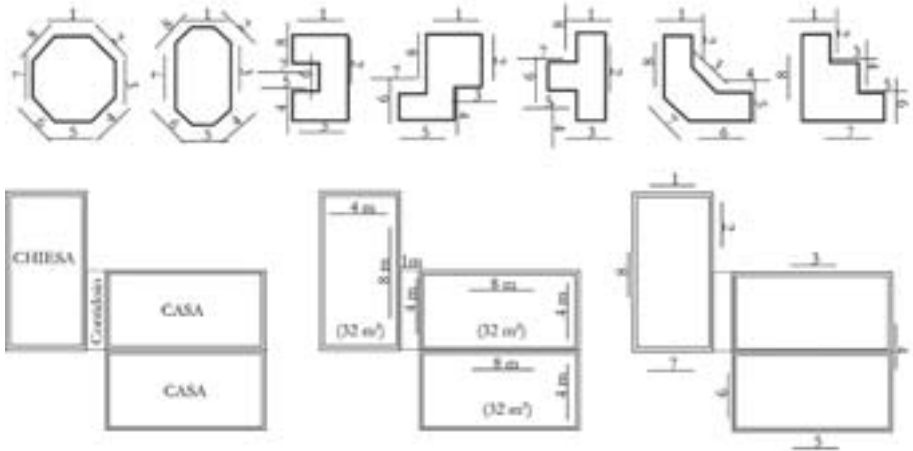
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Climate change is causing irreversible environmental damage to the world's cultural heritage in addition to the disasters caused by ongoing war events, synonymous with death and destruction.

Art cities, archaeological areas, monuments, and cultural landscapes are in danger of being severely damaged or disappearing along with our identity as inhabitants of the earth. It is necessary, therefore, to monitor the health of cultural Heritage to address the major future challenges aimed at protecting and preserving our planet.

Aware that the recommendations and intervention strategies elaborated by Unesco and various national and International Observatories should be supported with an action of dissemination of knowledge of the state of affairs of the many cultural assets present in our territories, the contribution proposes to document some surviving traces of the Via Appia near the area of ancient Sinuessa, in the province of Caserta, which unfortunately are not valued as they should be even though they represent testimony to civilization and therefore the identity heritage of a place.



**ID 077** *An italian place to discover in Shaoguan*

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Based on the textual descriptions reported in the testimonies of the most famous Italian missionary in China, the Jesuit Matteo Ricci, the conformation of what his residence in the Chinese city of Shaoguan could have been like is analyzed. Having built his first home on Chinese soil in the city of Zhaoqing, which was taken from him by the local Governor as it was a unique and representative work, Ricci built his second Chinese home in a local style so as not to see it also taken away this second home. The study focuses both on the possible location and on the form taken by the house built by Ricci for himself and for the other missionary who accompanies him, as well as to establish a school there. The result of the study offers useful indications for understanding the forms of adaptation to the local culture also from an architectural perspective. These values were taken up again a few centuries later when the Apostolic Delegate for China Celso Costantini indicated the use of a local architectural style when works were to be carried out at the service of the Catholic religion. Thus, through the work of Matteo Ricci, we understand how architecture also plays an important role in communication between peoples.



**ID 078** *The social value of living historical space*

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Concerning the very topical issue of cities in emergencies due to several kinds of hazards such as natural disasters or armed conflicts and their related impacts, nowadays, many actions and strategies are being researched, mainly focusing on risk mitigation and assets conservation applied to the built heritage. On the other hand, another kind of emergency – equally crucial – is affecting urban environments and heritage: a social and cultural emergency, related to the loss of identity values and the historical memory of places.

The identity of a place with a rich historical context has great influence on individuals, playing a vital role in developing and maintaining self and community identity, giving the chance to live the space in a broader sense.

By recognizing the correlation between the contemporary trends of urbanization, lifestyles, and climate change with psychologically taxing circumstances due to environmental stressors, this study seeks to investigate if living in an environment rich in both natural features and culturally significant artificial elements (e.g., historical architecture, art) is relevant for health and psychophysical well-being of the citizens. As part of the multidisciplinary project iNEST (Interconnected Nord-Est Innovation Ecosystem), funded under PNRR Program, this research explores the connection between natural and built historical environment, using new technologies to improve mitigation solutions thanks to the opportunity to collect digital data related to different kinds of features and conditions (urban, territorial, social, cultural).



**ID 079** *From the UN Agenda 2030 to the organisation of a mega sustainable event: the case study of Paris 2024 Olympics*

**Celeste D'ERCOLI**

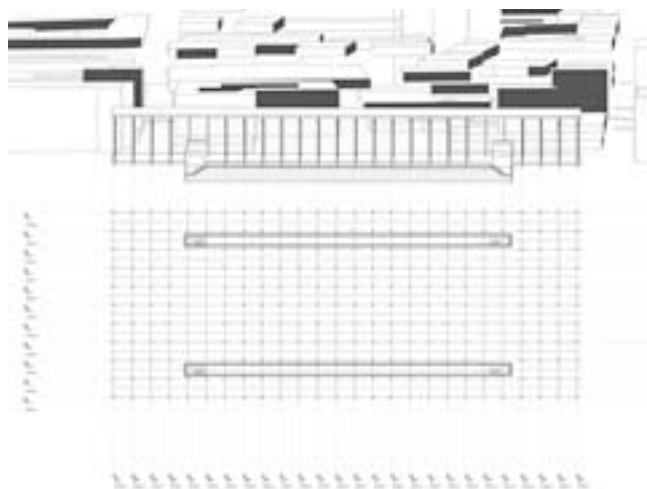
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In 2015, with the publication of the UN Agenda, sport has been recognized as instrumental for sustainable development. The Agenda consists of guidelines for the future and is in line with the recommendations of the 2020 Olympic Agenda: in fact, the International Olympic Committee (IOC) believes that sports and the Olympics can help develop the majority of the Agenda goals.

The next Olympics will be held in Paris in 2024 and will be the first organized according to the sustainability principles set up by the Agenda. This case is supposed to mark a turning point in the history of the Olympics. However, these objectives remain fairly vague in that they are not defined by concrete criteria.

Here we develop a method that starting from the analysis of the Agenda goals provides a series of requirements to discretise and evaluate quantitatively the long-term sustainability of the event. This study investigates, with particular focus on the urban and architectural aspects, the relations between the event and the host city, between people and context and between event and environment. Much importance is given to public infrastructures, the wellbeing of visitors and athletes and the needs of the host city. We study the Olympic venues, assessing how many of them already exist, are temporary, or have been built for the event and we pay attention to the legacy of the event, which implies planning from the beginning the future of the city after the Games.





**ID 080** *Archetypes of resilient architecture. Primary forms for community preservation*

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The recent wars in eastern Ukraine, the even more recent Israeli-Palestinian conflict, or even the consequences of the strong variation of the climate in recent years, especially the case of Andalusia, which has been in drought since last spring, produce damage to spatial and moral configurations.

In this condition of disequilibrium and fragmentation, it is architecture that is present with forms of representation of the community, of union of the parts.

The primary and elementary elements of architecture become the main tools, the constituents of a clear and sometimes allegorical architectural language. The hypostyle is a clear application of this. By representing the singular element-column, within the multiple and repeated, it recalls the image of the singular element-tree within the forest as a whole; a strong image of collectivity and being in union.

The hypostyle is so frequent in architecture because it responds to functional needs such as sustaining. Remember how Greek temples were originally made of wood and this explains how they are, all the more reason why they are perfect examples of the reference to a natural hypostyle, that is, the forest, which is a set of styluses (columns).

Sustaining would therefore be the primary function of the architectural envelope. Most scholars imagine the hypostyle only as an underneath: under something, under ground, or more precisely under column (from Gr. ὑπόστυλος, comp. of ὑπό 'under' and στῦλος 'column'). The column rises below the ground with its roots.

**ID 082**    *The absence of colors*

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The destruction of recent decades, anthropic and natural, has highlighted how precarious is the condition of the elements that make up the world cultural heritage.

The “Beni”, movable and/or immovable, have been failed, disappeared, heavily damaged, deprived of their essence, erased.

This lack, of which we are aware, does not, however, exclusively concern only their physical component, but at the same time we lost the chromatic parameter that is specific for places or artworks.

The theme of color in architecture and art has always been at the center of numerous debates, but we never talk about is absence and how that loss compromise unconscieced the way we relate to the world Heritage.

The absence of color could compromise the cultural heritage uniqueness; in this sense we need to reflect on how destruction determinate a sense of emptiness in those places, that would never be fulfilled. So we can rebuilt but we will never be able to get back, because color represents the intangible component that we will never be able to recover.

We live in a word that is made of images, social networks are built over it and the main theme of those images are not places but colors and war, natural events, pollution changes color of heritage and we will never be able to regain it.

**ID 083** *Public Housing in Campania: Challenges and Opportunities for Urban Heritage Recovery*

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Public housing in Campania is extremely important in addressing the housing needs of the population and promoting sustainable urban development in the region. However, it faces daily challenges such as structural degradation caused by lack of maintenance, abandonment of buildings, natural wear over time, and phenomena such as building abuses, vandalism, and conflicts. This damage can have serious consequences on urban appearance, safety, and local quality of life. It is necessary and fundamental to engage in the requalification and maintenance of public buildings as part of the cultural and social heritage of the community. This process may include the restoration of existing buildings, the construction of new structures, and the regeneration of degraded urban areas, thus contributing to sustainable development and social integration, in order to preserve the rich heritage of Campania and enrich the experience of residents and visitors.



**ID 084** *The notion of “Drawing” as a contribution to the notion of “Existential Space”. Architectural graphic representation: user, space and landscape*

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The Drawing that anticipates Architectural Space, establishing an original relationship (well defined in *L’Oeil et L’Esprit*, by Merleau-Ponty, 1960) with an object yet to be built and yet to be inhabited, is just an image and not the space that will emerge from it (or, better, in-function of it); and, much less will this image be able to incorporate the relationships that that will be established between the future user of that space and that space – let’s us say it without fear and categorically: the relationships between the user of that space (its inhabitant) and that space (its dwelling) and the landscape, let’s call it Architecture. The thing is, architecture is not just the architectural object; it is, from this point of view, a relationship – the relationship between inhabitant and housing and landscape.

It deserves to be asked: what can be drawn from this relationship? On a first observation, the dichotomy between exterior and interior, between the facade that is offered to the contemplative gaze and the existential space from which the act of living can take place, is the matter that Architecture manages as a phenomenon that extends to practically the entire scope of the image.

However, it does not seem clear to us what we mean by Space; Therefore, before advancing our reasoning, we must explain what we mean by “space” – therefore, closely related to Existence. And, “since then”, for example, because: “[...] existence is spatial.”; and “You can’t separate the man from the space.”

A new paradigm for inhabiting Inhabiting Spaces?

A paradigm that goes beyond living between Heaven and Earth? – as Heidegger told us in 1951 in Darmstadt?



**ID 085** *The memory of the protection of the Italian historical-artistic heritage among the wounds of the last war*

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**Vincenzo LANDI**

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The ongoing conflict in Europe brings to our mind the devastating madness of war which manifests itself in the atrocity of death and in the destruction or plunder of the historical and artistic heritage, with the intention of erasing the cultural heritage of the attacked people. During the Second World War there were many examples of individuals or groups of people who, risking their lives or arrest, saved numerous works of art from destruction and looting. This contribution aims to recall two events of safeguarding and protection of the Italian artistic heritage. The first was completed by a woman, Fernanda Wittgens, director of the Pinacoteca di Brera since 1940, who managed to save several of her works from destruction by bombing and raids by the Nazis, hiding them in safer places. The second, that of the Benedictine community of Montecassino which with a collective effort, under the guidance of the then Abbot Diamare and with the help of the German occupying troops themselves, managed to save the works kept in the abbey, transferring them to Rome, before the terrible bombing that destroyed a large part of the sacred building. This last example is the demonstration that art is the heritage of all humanity and goes beyond any boundaries of belonging to a people, political or religious ideas.



**ID 086** *Relations between Intangible and Tangible in the insula of Monteoliveto in Naples*

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Preserving cultural heritage is one of the objectives and at the same time one of the most important challenges of our time because it alone can guarantee the protection of the tangible and intangible values of our civilisation. However, the issue of their relationship is both broad and complex.

On the one hand, tangible values are able to express the image and identity of a place in a simpler and more direct way. On the other, they fit into an intangible framework, made up of signs and stories, capable of giving meaning and significance in a more detailed manner.

This complexity of reflections gave rise to the research that this contribution presents, centred on the monastic complex of Monteoliveto and the annexed church of Sant'Anna dei Lombardi in Naples, as the most interesting examples, in the city's rich cultural heritage, of the early Renaissance.

Specifically, the contribution aims to investigate, through survey and representation, the relationships between the Intangible and Tangible that the monument and its insula subtend in their material form (Fig.01). Therefore, the study aims to make visible what is concealed today by using the poetic power of surveying articulated in the combined and integrated use of traditional techniques and more innovative technologies.

To this end, the focus is not only on the architectural complex, but also extends to the urban context in which it originates and evolves, pursuing the still relevant principles of the International Restoration Charter of Venice.

**ID 087** *Housing moments of uncertainty: Adaptive reuse*

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This article investigates adaptive reuse as a solution to the complex challenges associated with abandoned public buildings, focusing specifically on the Fascist-era Houses and, in particular, the “Nicola Bonservizi” Regional Fascist House located in Sturla, Genoa. Initiated in 2021, the research aims to develop a replicable model, offering an innovative strategy for managing and enhancing these architectural assets, currently left unused. Through a detailed analysis, intricate connections emerge between physical measures, human needs, and urban context, highlighting the importance of both measurable and immeasurable values.

The examined work proposes an innovative approach to the refunctionalization of abandoned buildings, emphasizing spatial flexibility and adaptability as crucial tools for addressing periods of fluctuation and emergency situations. Founded on a strategic vision and a replicable model, the project aspires to transform these buildings into attractive centers, contributing to urban growth, territorial reorganization, and socio-economic development. The proposed methodology aims to reconcile concepts and techniques, providing an adaptable solution to future circumstances and events, intending to offer an innovative response to contemporary living challenges.



**ID 090** *About Hadrian's Mausoleum*

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The paper aims to present the work carried out for a three-dimensional model of the Mausoleum of Emperor Hadrian.

The starting point was the architectural survey done by prof. arch. Cesare Cundari using different survey techniques together, with a considerable photographic documentation, so as to make the mausoleum a true teaching and research laboratory. It was a challenge very complex due to the scarcity of archival documents and their interpretative uncertainty.

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*University of Salerno, DISUFF,  
Salerno, Italy*

The research carried out by prof. Arch. Cesare Cundari took into account the dimensional aspects of the architectural complex and the different existing representation referring to the part above the original mound and the part that includes the square bastion wall.

**Gian Carlo CUNDARI**  
*Rome, Italy*

The model of Hadrian's Mausoleum, created in this rereading, was therefore able to benefit from rich and rigorous documentation of the entire monumental complex, which covered both the internal and external spaces.

**Giovanni Maria BAGORDO**  
*I.I.S. Blaise Pascal - Pomezia  
Rome, Italy*

The reconstruction operation, under the supervision of Dr. De Franceschini, who carried out a careful rereading of the complexity of the building, was mainly the removal of all the added elements which, over the centuries, had altered the appearance, so as to recover the information still present relating to the nucleus of the imperial mausoleum. At the same time it was possible to hypothesize a plausible configuration for the temple area, congruent with the actual formal and dimensional data detectable.





**ID 091** *Degenerate Art Posters*

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History is a cycle that alternates phases of growth, prosperity and peace with moments of terrible bewilderment, despondency and conflict for both the collective and the individual.

Art, as a mirror of the present and a memory of the future, has always been an instrument of denunciation that raises reflections and stirs the soul. In the past, high-calibre artists have been actively engaged in bringing different social issues to light: Artemisia Gentileschi in the 17th century denounced the violence suffered; Francisco Goya in the 19th century put the emphasis on the Madrid rebellion; Pablo Picasso with 'Guernica' denounced the horrors of Franco's war; Salvador Dali in 1940 the Spanish Civil War and the Second World War; Keith Haring, again, in the late 1960s the battle against the scourge of crack cocaine and finally Banksy fought the horrors of war through contrasting images on city walls.

Artists are not the only ones to use art as a social manifesto; in recent years, in fact, many activists have exploited its media power to denounce, through questionable acts of protest, issues such as food waste, illegal arms trafficking, environmental problems, etc.

Art thus becomes a manifesto and vehicle for conflicting feelings and reactions that raise awareness and generate debate. The aim of this research is to identify the communicative methods related to visual language, tracing a historical – national and international – course and investigating the compositional and perceptive spaces inherent in the drafting of a message, including a social one.



**ID 092** *Architecture on the Net: from Analogical Drawing to Social Communication*

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**Michela SCAGLIONE**

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In social networks, architectural representation evolves through real and virtual space convergence. This hybrid relationship offers fertile ground for exploring new dimensions of architecture and its communication. Social networks serve as dynamic platforms where architects, designers, and enthusiasts can share drawings, ideas, projects, and visions, blurring the boundaries between tangible reality and its digital representation.

Through images, videos, interactive 3D models and virtual tours, users can immerse themselves in architectural spaces, exploring and interacting with them as if they were physically present. This virtual experience enables a deeper understanding of projects and amplifies the potential for community involvement and participation; instant feedback and viral sharing on social networks can directly influence the design process, stimulating dialogue and collaboration between professionals and users.

However, this fusion of real and virtual space also raises ethical and practical questions: digital representation may distort the perception of architectural reality, presenting challenges related to scale, proportion and materiality of spaces. Furthermore, issues of privacy, security and intellectual property require careful handling in the digital environment of social networks.



**ID 093** *Protection and valorization of the modern rural heritage: ICT methodologies, rehabilitation projects and reuse of agrarian land reform villages in Basilicata*

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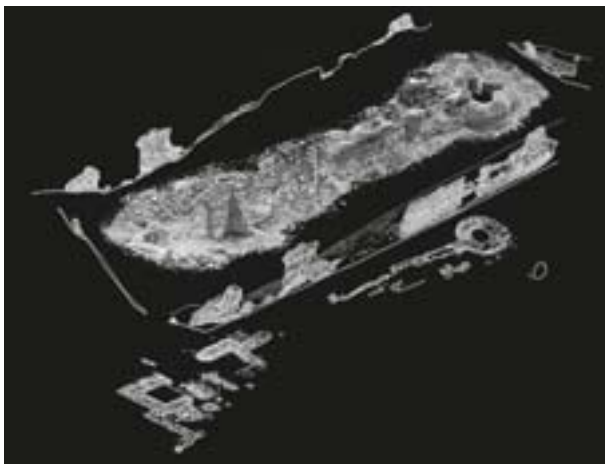
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The topic of rediscovering and systematising the knowledge of historical and testimonial value examples among the rural hamlets of the agrarian land reform in Italy currently acquires particular relevance for the purposes of their protection, possible rehabilitation and compatible reuse of the existing settlement and building heritage. Starting from a preliminary recognition of the particular cases of interest, the proposed contribution focuses mainly on the projects that took place in the land reclamation and transformation area of Basilicata, and in particular in the Middle Bradano Valley sub-region in the province of Matera. In this area of reference, about thirty colonization settlements, including residential-type villages, service centers and scattered-type settlements, were built by the Land Reform Authority sometimes with the UNRRA-CASAS agency.

According to the evaluations carried out on the current state of conservation of this heritage, in many cases abandoned, altered or in an advanced state of decay, possible methodological approaches are proposed, aimed at surveying the existing architectural typologies also through the use of digital tools pertaining to the ICT field (in particular GIS and HBIM technologies), at the basis of possible project proposals for the recovery, reuse and completion of these settlements.

Specifically, a number of case studies, as the result of different research works, will be analysed: the villages of Santa Maria d'Irsi and La Martella.



**ID 095** *Heritage digitalisation to preserve memory. Studying the archaeological evidence of Herdonia through the measure and the sign*

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The Apulian city of Herdonia is known for its remarkable architecture from the Republican and Imperial periods, but the archaeological site shows a historical stratification covering a wider time span than the Roman era. Since the 1960s, the site has been well documented with the studies of Professor Mertens first and the University of Foggia later, but several excavation campaigns have passed and exposure to weathering and lack of continuous maintenance are causing a slow transformation of the ancient structures compared to when they were first brought to light. In 2023 an Agreement was signed between the Secretariat for Apulia of the Ministry of Culture and the ArCoD Department of Polytechnic University of Bari to study the site through a scientific survey campaign using advanced technologies for data acquisition and processing. Surveying structures once again freed from vegetation to record their material and visual consistency in their current state of conservation means fixing their image in time, making them usable for studies and research also in the future, even in the hypothesis that any event could determine their definitive loss. In addition, the transposition of information from the survey into a digital environment and its restitution through modelling and drawing are necessary interpretative acts to complete the picture of knowledge on the architecture, the city, the landscape, fundamental in the case of site recovery and valorisation projects.

**ID 097** *What Is Architectural Heritage? - A Phenomenological Approach*

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An architect's action upon pre-existences is, typically, two-fold:

- 1) to determine what parts have historic and artistic value, and freeze them;
- 2) elsewhere, to take a freely creative stance, more fashioned by the architect's idiosyncrasies than the pre-existence's atmosphere.

Consequently, the result of this action is somewhat double-minded: the pre-existence plus the new intervention.

The new intervention, while respecting the postulates of reversibility and minimal intervention, often perceptually shuts the pre-existence, becoming the main input for the visiting people or dwellers. The reason why the community decided to preserve such a piece of heritage in the first place becomes, henceforth, unnoticed – no more an active recall of and to the collective memory.

What, then, is to be done?

It is my belief that one can determine the pre-existence's value, not by checking a list of pre-established categories (from Riegl to Brandi, or more economicist perspectives), but by following the experience of the people who have chosen to preserve the piece of heritage – the experience of the "atmosphere" (phenomenologically speaking). Then, it is possible to point out to the architect not only the material parts to be preserved, but the "soul" of that piece of architecture. This "soul" will inform the design process. Respecting this soul, preserving that atmosphere, becomes the foci of the new intervention.



**ID 098** *Seismic vulnerability: the case study of new Conza della Campania (AV) rebuilt on a different site after the 1980 Irpinia earthquake*

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In the last fifty years, earthquakes of Richter magnitude greater than five have destroyed entire Italian villages in the Belice Valley (1968, magnitude 5.9), the Tagliamento Valley (1976, magnitude 6.5), Irpinia (1980, magnitude 6.9), Umbria (1997, magnitude 6.1/6.9), Abruzzo (2009, magnitude 6.3/5.8) and Emilia (2012, magnitude 5.6/5.8). The criteria used for analyzing and assessing the earthquake vulnerability of a settlement are only building criteria (Civil Protection Department - National Group for Earthquake Defence DPC-GNDT) and do not interpret the city as a complex system of adapted spaces. The simplified model assumes a city as a simple sum of its building elements, but the city is a complex system in which the relationships between the various components are equally important. The Minimum Urban Structure (SUM) method is aimed at analyzing the vulnerability of functional, settlement and infrastructure systems to the occurrence of an earthquake, in an extended time perspective that considers not only the immediate damage, but also the deferred and long-term effects. The paper aims at comparing the seismic vulnerability index, obtained from the application of two methods (DPC-GNDT and SUM), to the new Conza della Campania (Av) entirely rebuilt off-site after the 1980 earthquake.

**ID 099** *Cultural Heritage Governance in the aftermath of a crisis: How policies are supporting the revitalisation of the Rione Terra in Pozzuoli*

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Effective management of cultural heritage in the aftermath of a crisis, such as an earthquake, plays a pivotal role in safeguarding historical treasures and revitalizing impacted regions. The study investigates how policies influence the revitalisation of an area post-crisis, focusing on stakeholder perceptions regarding the impacts of investment endeavors. Specifically, we explore a case study centered on the Rione Terra of Pozzuoli, Italy, which received funding through various financial instruments.

The analysis examines the dynamics involved in managing cultural heritage post-crisis, highlighting the link between policy frameworks, community engagement and resource allocation. Through in-depth interviews with stakeholders, we aim to elucidate the efficacy and obstacles of heritage management strategies.

This study aims to comprehend the effects of investments in cultural contexts, providing insights for decision-making regarding future investments in the city. Insights gleaned from the case study shed light on the complex balance between preservation imperatives, economic considerations and social cohesion goals in post-crisis recovery efforts.

Moreover, the analysis emphasizes the importance of holistic approaches and comprehensive frameworks in cultural heritage governance. It is anticipated that revitalization will emerge as crucial for engaging the local community and reclaiming territorial identity.





**ID 101** *Dynamic Climate Adaptation Strategies. Bådparken Project for Coastal and Port Areas of Aalborg Vestby*

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The manifestations of climate change, characterized by a greater frequency of extreme weather events and rising sea levels, represent an unprecedented challenge that requires adaptable and far-sighted public policies.

In urban contexts, the impact of climate change is particularly pronounced, requiring specific urban planning strategies that are not only adaptive and reactive, but also preventive.

However, the complex dynamics of climate change and the extent of sea level rise present a high degree of uncertainty that grows exponentially with increasing time. Managing uncertainty, particularly the profound uncertainty linked to sea level rise, is a challenge in adapting to climate change.

A new paradigm for planning under conditions of deep uncertainty has emerged in the literature: the “Dynamic Adaptive Policy Pathways” (DAPP) which provides an analytical approach to explore and sequence a series of possible actions based on alternative developments over time and adaptation strategies to deal with changing circumstances.

The DAPP method was used for the Bådparken climate adaptation project in the coastal and port area of Vestby in Aalborg (DK). The area is subject to flooding due to rising sea levels and more frequent storms; the project includes a series of complementary strategies to mitigate risks, adapt architecture to coexist with water and make the city safer.



**ID 102** *Drawn Scenarios: City Visualization for Urban Development Planning*

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Post-war reconstruction represents a critical moment in the history of cities, wherein drawing emerges as a fundamental element in urban development planning. This contribution aims to explore the role of representation in city visualization, with particular attention to the rebuilding that follows military conflicts. Through interdisciplinary readings integrating historical studies, urban planning theories, and innovative approaches linked to digitality, this study investigates how design can influence socio-cultural community dynamics and contribute to the economic recovery of war-affected areas. The use of participatory approaches based on representation, involving the community in the decision-making process underlying city reconstruction, highlights the potential of design in fostering awareness and a sense of belonging among inhabitants to urban space, which is then the basis for processes of valorization and sustainability.

This is further underscored by emerging technologies in the field of representation that strongly contribute to transforming graphic approaches to post-war urban reconstruction.

By analyzing a series of significant case studies, the role of design as a tool to communicate tangible and intangible qualities of prefigured urban spaces is examined, thanks to the use of maps, architectural models, renderings, and other digital representation systems that define innovative ways to describe “reconstruction” projects and open up new perspectives in visualizing urban development ideas.

**ID 103** *From bombs to cities: the silent spread of particulate matter and metals*

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Wars cause human suffering and devastate the environment and the climate. Weapons of war often release many pollutants into air, such as particulate matter and heavy metals, which can also poison soil and water, damaging the entire ecosystem. This can also jeopardise food safety and people's health. These pollutants tend to remain in the environment even years after the conflict. In addition, the remediation of contaminated sites is often expensive and burdens the economies of countries, already severely tested by the war.

**ID 104** *Changing Agriculture: Enhancing Crop Quality and Production Through Remote Sensing and Artificial Intelligence*

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The agricultural sector is undergoing a transformative shift with the advent of groundbreaking strategies aimed at enhancing crop quality and production levels. This paper presents an innovative approach that leverages remote sensing technologies to revolutionize agricultural management practices. By harnessing the power of real-time monitoring through satellite or airborne sensors, coupled with sophisticated artificial intelligence algorithms, this approach enables precise management of agricultural areas. Through continuous monitoring and analysis of data, valuable insights are extracted to optimize production processes, prevent abandonment of agricultural lands, and mitigate risks to crop health, including the threat of epidemics such as xylella.

The proactive nature of this system ensures timely interventions to address emerging challenges, thereby safeguarding crop health and enhancing overall productivity. By integrating remote sensing technologies and artificial intelligence algorithms, agriculture is propelled into a new era characterized by increased efficiency, sustainability, and resilience. This holistic approach not only optimizes resource utilization but also minimizes environmental impact, contributing to the long-term viability of agricultural practices.

Furthermore, the ability to extract actionable insights from vast amounts of data enables informed decision-making and strategic planning. This empowers farmers and agricultural stakeholders to adapt to changing environmental conditions and market dynamics, thereby ensuring the continued success and viability of the

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agricultural sector. Ultimately, the integration of remote sensing technologies and artificial intelligence algorithms represents a paradigm shift in agriculture, paving the way for sustainable and resilient food production systems capable of meeting the challenges of the 21st century.

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**ID 105** *Aerial Remote Sensing for Land Monitoring*

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In the vast field of digital technologies and transformation, observational devices assume a crucial role, acting as extensions of the researcher's mind. Although they may seem like simple tools, they actually amplify the ability to understand the environment.

This concept is reflected in the Research, focused on aerial remote sensing activities with hyperspectral sensor, conducted in the Albanian Territory by Benecon University Consortium, is aimed at land control and monitoring. The appropriately configured hyperspectral technologies, algorithms developed by the Consortium, and cartographic interpretations, allow to discretize and analyze the territory in detail, improving the ability to detect the spectral tracks of cannabis, thus identifying and monitoring, illegal cultivations with precision.

The data, processed in this way, provide an accurate snapshot of the overflowed territory, allowing for a detailed representation of the current state of the area. Using multi-temporal footage, it is possible to monitor landscape transformations over time, both those due to natural causes and those caused by anthropogenic activities. This approach allows for a better understanding of environmental dynamics and for planning more effective interventions for land management and conservation.

**ID 106** *Integrating Facility Management, Machine Learning, and BIM for Cultural Heritage Preservation*

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**Elif Hasret KUMCU**

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Preserving cultural heritage is a complex task that benefits from advanced technologies and strategic management. This paper examines the integration of Facility Management (FM), Machine Learning (ML), and Building Information Modeling (BIM) to improve heritage site preservation. FM provides a framework for systematic maintenance, ensuring longevity and usability. ML analyzes data to predict issues and optimize maintenance, reducing damage risks. BIM offers a detailed digital representation of heritage structures, aiding in analysis and decision-making. This synergistic approach combines the strengths of each discipline: Facility Management ensures efficient daily operations and long-term maintenance, Machine Learning offers predictive analytics for proactive conservation, and BIM provides a detailed digital twin for enhanced visualization and planning.

The paper presents a case study showing the successful integration of FM, ML, and BIM in heritage projects, highlighting benefits like improved condition assessment, predictive maintenance, and resource allocation.

This example demonstrates the potential of this approach to revolutionize heritage preservation, ensuring effective maintenance for future generations while respecting historical significance.

**ID 110** *Beyond the devastation of war. The reconstruction of Montecassino Abbey between regulatory measures and symbolic impulses*

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Wars have the extraordinary ability to erase, with equal destructive force, not only human lives, but also works of art and monuments, evidence of the past of communities and societies settled in a specific territory. On February 1944, 15, Montecassino Abbey was bombed by the Allies as part of the bombing campaign on the Gustav Line. It suffered irreparable damage and was reduced to ruins. The involvement of a site of historical and artistic interest in the bombing was caused by different reasons: on a material level, the desire to control a crucial territory in the conflict and to occupy a site that had become a stronghold for the Germans; on a moral level, the desire to demonstrate the Allies' determination to achieve the goal at any cost and despite any impediment. The bombing of Montecassino, a treasure chest of culture and an identity monument for an entire territory, had a high symbolic meaning: the same value that its reconstruction was destined to take on in the same architectural lines existing before the destruction. Thanks to the synergy between various institutions and regulatory initiatives aimed at its reconstruction, the abbey has returned to its splendor, as a model of resilience as well as beauty.

**ID 111** *Innovative Policies for Sustainable Development: Learning from Organic Farming Leaders*

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Facing escalating environmental challenges, this paper explores how the principles of organic farming pioneers can inform sustainable development policies. Examining Masanobu Fukuoka, Albert Howard, Bhaskar Save, Rudolf Steiner, and Eve Balfour, the study highlights their contributions to sustainable agricultural practices.

Masanobu Fukuoka's "do-nothing" farming philosophy emphasizes minimal human intervention, advocating for natural processes to maintain ecological balance and soil health. Albert Howard, the father of modern organic agriculture, promoted soil health and recycling organic matter, aligning with circular economy principles. Bhaskar Save's non-violent farming approach demonstrated sustainability without chemical inputs, emphasizing traditional knowledge.

Rudolf Steiner's biodynamic agriculture integrates spiritual principles, promoting ecosystem vitality and long-term sustainability. Eve Balfour's advocacy for organic practices and soil health through the Soil Association underscores the importance of grassroots movements in policy change.

These pioneers offer profound insights into sustainable agriculture, emphasizing ecological balance, soil health, and minimal human intervention. Their principles can guide contemporary policy frameworks to address current challenges, fostering food security and socio-economic resilience, and contributing to global sustainability goals.



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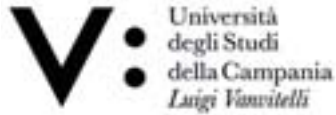
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