

Fabbrica della Conoscenza

Carmine Gambardella

## XI Forum Internazionale di Studi



Le Vie dei.  
Mercanti



**HERITAGE**  
ARCHITECTURE  
LANDESIGN

focus on  
CONSERVATION  
REGENERATION  
INNOVATION

**Fabbrica della Conoscenza numero 39**  
Collana fondata e diretta da Carmine Gambardella

**Fabbrica della Conoscenza**  
Collana fondata e diretta da **Carmine Gambardella**

*Scientific Committee:*

**Federico Casalegno**

Professor,  
Massachusetts Institute of Technology, Boston, USA.

**Massimo Giovannini**

Professor and Rector,  
University "Mediterranea" of Reggio Calabria, Italy.

**Diana M. Greenlee**

Professor, University of Monroe Louisiana, USA.

**Bernard Haumont**

Professor,  
Ecole Nationale Supérieure d'Architecture Paris Val de Seine, France.

**James Kushner**

Fullbright Visiting Professor  
Southwestern Law School, Los Angeles.

**Maria Grazia Quietì**

Ph.D., Executive Director,  
The U.S.- Italy Fullbright Commission.

**Elena Shlienkovà**

Professor and Director of the Design Department,  
Togliatti State University, Russia.

*Editorial Committee:*

**Pasquale Argenziano**

**Alessandra Avella**

**Antonio Calderone**

**Fabio Converti**

**Nicola Pisacane**

**Manuela Piscitelli**

# **HERITAGE ARCHITECTURE LANDESIGN**

focus on **CONSERVATION REGENERATION INNOVATION**

Le vie dei Mercanti \_ XI Forum Internazionale di Studi

**Carminé GAMBARELLA**



**La scuola di Pitagora editrice**

Carmine Gambardella (a cura di)  
**HERITAGE ARCHITECTURE LANDESIGN**  
focus on CONSERVATION REGENERATION INNOVATION  
**Le vie dei Mercanti**  
**XI Forum Internazionale di Studi**

editing:  
**Caterina Cristina Fiorentino**  
**Manuela Piscitelli**

© copyright 2013 **La scuola di Pitagora editrice**  
Via Monte di Dio, 54  
80132 Napoli  
Telefono e Fax +39 081 7646814

È assolutamente vietata la riproduzione totale o parziale di questa pubblicazione, così come la sua trasmissione sotto qualsiasi forma e con qualunque mezzo, anche attraverso fotocopie, senza l'autorizzazione scritta dell'editore.

**[www.scuoladipitagora.it](http://www.scuoladipitagora.it)**  
**[info@scuoladipitagora.it](mailto:info@scuoladipitagora.it)**

**ISBN 978-88-6542-290-8**

**Finito di stampare nel mese di maggio 2013**

**Heritage Architecture Landesign**  
**focus on Conservation Regeneration Innovation**  
**Le vie dei Mercanti**  
**XI Forum Internazionale di Studi**

Aversa | Capri  
June 13th- 15th, 2013

*Conference topics:*

**Heritage**

Tangible and intangible dimensions,  
Heritage management,  
History,  
Culture,  
Collective identity,  
Memory,  
Archaeology,  
Cultural landscapes.

**Architecture**

Survey,  
Imaging,  
3D modeling,  
Techniques for analysis, diagnostics and monitoring,  
Preservation,  
Restoration,  
Conservation,  
Architecture Design,  
Technologies,  
Building materials.

**LanDesign**

Landscape design,  
Sustainable design,  
Environmental design,  
Eco design,  
Low-cost design,  
Design for all.

## Le vie dei Mercanti \_ XI Forum Internazionale di Studi

Aversa | Capri  
June 13th- 15th, 2013

*General Chair:*

### **Carmine Gambardella**

Professor and Director, Department of Architecture and Industrial Design "Luigi Vanvitelli",  
Second University of Naples – President of BENECON SCaRL

*International Scientific Committee:*

### **Ahmed Abu Al Haija**

Professor and Head, Environmental Design, Urban and Architectural  
Heritage, Faculty of Engineering, Philadelphia University, Jordan

### **Pilar Garcia Almirall**

Professor, UPC Ecole Tecnica Superior d'Arquitectura, Barcelona, Spain

### **Harun Batirbaygil**

Professor and Head, Department of Architectural, Okan University, Istanbul, Turkey

### **Federico Casalegno**

Professor, Massachusetts Institute of Technology, Boston, USA

### **Joaquín Díaz**

Dean and Professor, Technische Hochschule Mittelhessen-University of  
Applied Sciences, Department of Architecture and Civil Engineering

### **Carmine Gambardella**

Professor and Director, Department of Architecture and Industrial Design "Luigi Vanvitelli",  
Second University of Naples - President of BENECON SCaRL

### **Massimo Giovannini**

Professor, University "Mediterranea" of Reggio Calabria, Italy

### **Xavier Greffe**

Professor and Director, Centre d'Economie de la Sorbonne Paris, France

### **Manuel Roberto Guido**

Director Enhancement of Cultural Heritage,  
Planning and Budget Department,  
Italian Ministry of Heritage and Culture

### **Bernard Haumont**

Professor, Ecole Nationale Supérieure d'Architecture,  
Paris Val de Seine, France

### **Mathias Kondolf**

Professor and Chair,  
Landscape Architecture and Environmental Planning,  
University California Berkeley, USA

**David Listokin**

Professor, Edward J. Bloustein School of Planning and Public Policy,  
Rutgers University, USA

**Maria Dolores Muñoz**

Professor, UNECO Chair, EULA Environmental Centre,  
University of Concepcion, Chile

**Jorge Peña Díaz**

Professor, Decano de la Facultad de Arquitectura,  
Instituto Superior Politécnico José Antonio Echeverría, Cuba

**Giovanni Puglisi**

Professor, Rector IULM e  
President Italian National Commission for UNESCO

**Maria Grazia Quieti**

Ph.D., Executive Director,  
The U.S.- Italy Fulbright Commission

**Michelangelo Russo**

Professor, University Federico II di Napoli, Italy

**Lucio Alberto Savoia**

Ambassador and General Secretary,  
Italian National Commission for UNESCO

**Elena Shlienikova**

Professor, Director of the Project Support Center of Regional and International Programs  
of the Russian Presidential Academy of National Economy and Public Administration,  
Russia

**Eusebio Leal Spengler**

Professor, honorary president of the Cuban ICOMOS Committee, Cuba.

**Isabel Tort**

Professor, Director of the Forum UNESCO  
University and Heritage (FUUH) Programme,  
Universitat Politècnica de València UPV, Spain.

**Andrey V. Vasilyev**

Professor and Director, Institute of Chemistry  
and Environmental Engineering, Togliatti State University, Russia



*Organizing and Scientific Local Committee:*

Department of Architecture and Industrial Design "Luigi Vanvitelli",  
Second University of Naples

**Manuela Piscitelli**

Responsible for the organizing process  
of the scientific proposal

**Alessandra Cirafici,  
Caterina Cristina Fiorentino**  
Graphics and Communication

**Luciana Mainolfi**

*Administrative responsible  
for the management and the financial control*

**Alessandro Ciambrone**

Relationships with the International Scientific Committee

**Giuseppe Klain**

Web master

**Pasquale Argenziano,  
Alessandra Avella,  
Fabio Converti,  
Maria Cristina Miglionico,  
Nicola Pisacane,  
Gabriella Abate,  
Antonino Calderone,  
Gaia Giordano.**

**Peer review** Scholars has been invited to submit researches on theoretical and methodological aspects related to Heritage, Architecture and LanDesign, 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** 200 abstracts received from:

Australia, Austria,  
Brazil,  
Canada, Chile, China, Cyprus,  
Denmark,  
France,  
Germany, Greece,  
India, Israel, Italy,  
Jamaica, Jordan,  
Kingdom of Bahrain, Kosovo,  
Lebanon,  
Malaysia, Malta, Morocco, Mexico,  
New Zealand,  
Poland, Portugal,  
Russia,  
Serbia, Slovak Republic, Spain,  
Tunisia, Turkey,  
Ukraine, United Kingdom, U.S.A.

About 300 authors involved.

157 papers published.

**Preface** The XI edition of the International Forum Le Vie dei Mercanti entitled Heritage, Architecture, LanDesign aims to promote an international debate on local experiences relating to the issues of conservation, regeneration and innovation in heritage, architecture, landscape and design.

In recent years, technological developments have revolutionized not only the forms that surround us but also our daily routines. However, this new global language often does not take into consideration the identity and vocation of the area, which require appropriate courses of action in relation to both the individual context and local traditions.

The historical memory of the characteristics of the identity, local materials, building traditions as well as the tangible and intangible cultural heritage is a repertoire of signs to draw from in order to operate within each historical context and consequently enhance its uniqueness.

The recovery of the authentic vocations of a place does not mean inaction, but rather regeneration through measures to enhance an area by increasing its natural strengths, transforming the weaknesses into opportunities for future development based on innovation.

The international comparison can be an opportunity to share good examples of conservation, regeneration and innovation related to the tangible and intangible heritage in its broadest sense; architecture intended as the identity of the places that shapes the landscape, from traditional to global forms; design at all scales, from the object to the territory, in a sustainable way to start a process of regeneration through a new relationship between man and the environment.

The conference is open to multidisciplinary experiences of one or more of the proposed themes. Scholars are invited to submit research on theoretical and methodological aspects as well as present experiences and practical applications carried out on these issues.

Carmine Gambardella

**Pag. 24**    **ID 000**  
Architecture, heritage, landscape, in time of crisis  
**Carmine GAMBARDELLA**

## **Table of contents \_ HERITAGE**

**P. 35**        **ID 001**  
Noli Me Tangere – On Touch  
**Monika BOGDANOWSKA**

**P. 43**        **ID 002**  
A New Cultural Landscape: The Historic District of Zhong Shan  
**Livio SACCHI**

**P. 52**        **ID 004**  
Disclosure of Historic and Cultural Potential and Proposal for Restoration of the Castels of the Western Ukraine  
**Jawdat GOUSSOUS, Galina TOTOVITSKAYA**

**P. 59**        **ID 005**  
Documenting the Architecture of Modernism in European Seaside Centers. Case Study in Italy and Bulgaria  
**Manuela PISCITELLI, Milena KICHEKOVA**

**P. 69**        **ID 014**  
Brazilian Parties: The Transformation of Obligation into Fun  
**Maria Cristina CAPONERO**

**P. 77**        **ID 015**  
Pursuit of Style: the Importance of Historical, Archivistic and Treatise Heritage  
**Cristiana BEDONI, Daniele CALISI**

**P. 87**        **ID 016**  
Heritage Management in Sydney, Australia – a Case Study on The Replacement of Degraded Sandstone on Heritage-Listed Buildings  
**Elanor PITT, Emma CULLEN, Gwénaëlle PROUST**

**P. 97**        **ID 023**  
The “Neustadt” of Strasbourg: Perception and reception of a late 19<sup>th</sup> century urban extension project at the interface of France and Germany  
**Johannes DAHM, Sophie EBERHARDT**

**P. 107**       **ID 028**  
From the Concept to an Environmental Design of Gaudí: The Batllò House  
**Leonardo BOGANINI, Lidia PADRICELLI**

**P. 114**       **ID 030**  
The Reconversion of Italian Fortress Through the Use of Modern Tools  
**Alice PARRI, Laura BENASSI, Denise LA MONICA, Eliana SIOTTO, Marco CALLIERI**  
**Paolo PINGI, Roberto SCOPIGNO**

**P. 123**       **ID 032**  
Investigation and Knowledge for promoting cultural heritage  
**Antonella DI LUGGO, Riccardo FLORIO, Massimiliano CAMPI**

**P. 132**       **ID 034**  
Beauty and Sustainability - Survey an Liberty Heritage an Varese and Ticino Area  
**Anna ANZANI, Angela BAILA, Claudia CAMEL, Margherita GUARISCO**

- P. 142**      **ID 036**  
Heritage and Sustainable Development: The Middle East and Doha  
**Francesca Romana MORETTI**
- P. 150**      **ID 038**  
Industrial heritage, the *Fabra I Coats* engine room in Barcelona: a terrestrial laser scanning pointcloud classification  
**Juan Manuel CORSO, Alejandro MARAMBIO, Pilar GARCIA-ALMIRALL**
- P. 160**      **ID 039**  
Southeast Asia's Built Heritage at the Cross-Roads –  
How to Reconcile Tradition and Modernity within Competing Constraints  
**Ahmad Najib ARIFFIN**
- P. 170**      **ID 040**  
Archaeology and Architectural Design. Project for Alexandria in Aria-Herat (Afghanistan)  
**Luisa FERRO**
- P. 181**      **ID 047**  
A Settlement of The Knights of Malta in Campania: the *Castrum* of Cicciano (Na)  
**Maria Archetta RUSSO**
- P. 191**      **ID 048**  
The valorisation of Italian rural historical buildings and territory  
**Valentina CINIERI, Emanuele ZAMPERINI**
- P. 201**      **ID 053**  
Peripheral Porosity: Cultural Landscapes of Indigenous Heritage Conservation  
**Hannah Hunt MOELLER**
- P. 208**      **ID 054**  
The End of Urban Exploitation and the Rise of the Urban Imaginary:  
Histories and Futures of Detroit, Michigan  
**William MARTIN**
- P. 218**      **ID 055**  
The San Antonio River: a Rich and Complex Cultural Landscape in Texas  
**Angela LOMBARDI, Sedef DOGANER**
- P. 227**      **ID 056**  
Managing Heritage Sites while Accelerating Cultural heritage. Tourism in Antalya, Turkey  
**Sedef DOGANER, Angela LOMBARDI, Ege Uluca TUMER**
- P. 236**      **ID 057**  
The Historic Center of Lima, Peru: a Gis Database as a Tool for Safeguarding and Developing  
**Angela LOMBARDI, Patrizia MONTUORI**
- P. 245**      **ID 061**  
Memories in stone  
**Ornella ZERLENGA**
- P. 256**      **ID 063**  
Eminent De[con]struction: Conservation Acts of Modern Vandals within Built Forms,  
Landscapes and Cities  
**Catharine PYENSON**
- P. 262**      **ID 066**  
Hidden Cultural Landscapes: Survey and Digital Enhancement of The Catacombs of San Giovanni in Syracuse  
**Elisa BONACINI, Graziana D'AGOSTINO, Mariateresa GALIZIA, Cettina SANTAGATI, Mariarita SGARLATA**

- P. 272**      **ID 068**  
 Integrated Approach to Museology: Proposal for a Route Linking Archaeological sites in Çanakkale, Turkey  
**Harun BATIRBAYGIL, Susana ALVES, Bahar BASER, Ayse Özbil TORUN**
- P. 278**      **ID 069**  
 Comparison of 3D Documentation Methods in Sculptural Figures with Poor Radiometric Information: Shape from Stereo vs Shape from Silhouette  
**Antonio ÁLVARO TORDESILLAS, Jorge GARCÍA FERNÁNDEZ, Salvatore BARBA**
- P. 287**      **ID 076**  
 Ancient Ruins of the Future  
**Adriana ROSSI**
- P. 297**      **ID 079**  
 The Monumental Unit of Massenzio: environmental requalification project and development of the archaeological emergencies  
**Maria Grazia CIANCI**
- P. 308**      **ID 081**  
 The Matter of Architecture: the Medieval Walls of Benevento  
**Luigi GUERRIERO, Luigi D'ORTA, Antonietta MANCO, Francesco MIRAGLIA**
- P. 316**      **ID 088**  
 Dwelling on the Past - Built Heritage and Urban Development Policies. The Case of Vienna (Austria)  
**Barbara RIEF VERNAY**
- P. 325**      **ID 092**  
 Turin for the French  
**Nadia FABRIS**
- P. 330**      **ID 095**  
 Building a new landscape. Land reclamations and new rural towns during the fascist regime along the Coast South of Salerno  
**Antonella MARCIANO**
- P. 341**      **ID 103**  
 Sensory Experience in Architectural Memory: Transformation of Industrial Buildings  
**Mads Harder DANIELSEN**
- P. 349**      **ID 106**  
 Characters of The Rural Heritage in the Var  
**Laura BLOTTO**
- P. 357**      **ID 109**  
 Permanences and morphologies of historic landscapes. The hill of the Vomero in Naples  
**Maria MARTONE**
- P. 367**      **ID 111**  
 A Landscape in Transition or a Landscape in Danger? The Olive Groves' Cultural Landscape of Corfu  
**Spyridoula ARATHYMOU**
- P. 372**      **ID 112**  
 Landscape as Cultural Heritage – the Several Dimensions of Heritage Management – Aljezur and the Vicentina Coast Portugal  
**Maria João PEREIRA NETO, Mário S. Ming KONG, Andreia GARCIA, Pedro JANUÁRIO**
- P. 379**      **ID 116**  
 Becoming the Olympics: the Sound Proof Series of Exhibitions (2008-2012)  
**Monica BIAGIOLI**

- P. 389**      **ID 117**  
The rural landscape in Campania. The role of the graphic representation in the documentation and valorization process  
**Stefano CHIARENZA**
- P. 399**      **ID 127**  
Milan-Turin: a bundle of infrastructures to access to a network of places, between cultural heritage and landscape  
**Andrea ROLANDO, Alessandro SCANDIFFIO**
- P. 407**      **ID 128**  
Water and its forms. Natural elements semantic icons in Turin  
**Maria Paola MARABOTTO**
- P. 414**      **ID 129**  
Historic Gardens as a Part of the National Cultural Heritage – a short view on a garden history in Bratislava, the Slovak Republic  
**Tamara REHÁCKOVÁ**
- P. 424**      **ID 137**  
The origin of the conservation of the twentieth century architecture in France: the action of Andre Malraux in favor of Le Corbusier's work  
**Antonella VERSACI, Alessio CARDACI**
- P. 434**      **ID 142**  
Understanding Location Preferences of Entrepreneurs and Innovators in Historic Maritime Cities  
**Laurie ZAPALAC**
- P. 444**      **ID 144**  
"The Fragile Ecosystem of Memory": Literary House Museums in New Zealand  
**Elizabeth AITKEN ROSE**
- P. 454**      **ID 145**  
Representation and Continuity. The regeneration of the area, the city and the architecture  
**Paolo GIORDANO**
- P. 464**      **ID 147**  
The Conservation of Jerusalem's City Walls  
**Avi MASHIAH**
- P. 473**      **ID 155**  
Two Different Approaches of Urban Renewals of Historical Districts: the Comparison of Bordeaux, France and Cincinnati, United States  
**Ana Gisele OZAKI**
- P. 483**      **ID 160**  
Palazzo Marziani in Furnari Project of Restoration and Reuse  
**Alessandra MANIACI, Caterina GULLO**
- P. 491**      **ID 161**  
Greater Amman: Metropolitan Growth and Scenarios for Sustainable Urban Development  
**Ahmed ABU AL HAIJA, Rob POTTER**
- P. 502**      **ID 164**  
The Challenge of Urban Sustainability in Seaside Cities Between Unlimited Growth and Serene Degrowth  
**Massimo CLEMENTE, Daniele DEMARCO, Eleonora GIOVENE DI GIRASOLE**
- P. 510**      **ID 171**  
Port Cities, Peoples and Cultures: Waterfront Regeneration and "Glocal" Identity  
**Gabriella ESPOSITO DE VITA, Stefania OPPIDO, Stefania RAGOZINO**

- P. 522**      **ID 176**  
 Bioclimatic Structures Design for the Archaeological Park of Nola  
**Antonella VIOLANO, Lucia MELCHIORRE**
- P. 529**      **ID 177**  
 The Missing "Fan Vineyard" in San Leucio (Caserta, Italy). An "Agri+Cultural" Heritage" of "Two Sicilies" Borbone House  
**Andrea BUONDONNO, Eleonora GRILLI, Rosaria PARENTE, Nicola PISACANE**  
**Pierclaudio ODIERNA, Gian Franco CAPRA, Sergio VACCA**
- P. 538**      **ID 181**  
 The "Capri style", a Debate Over a Century. Architecture, Environment and Preservation in the Island of the Sirens Since the Convention on the Landscape of 1922  
**Elena MANZO**
- P. 547**      **ID 182**  
 The Management Plan of Unesco Sites: from the Conceptual Model to the Methodology Application through Gis  
**Lina ABATEGIOVANNI**
- P. 557**      **ID 190**  
 Promotion of cultural heritage as an engine for territorial development in France  
**Alessandro CIAMBRONE**

## **Table of contents \_ ARCHITECTURE**

- P. 568**      **ID 006**  
 "Santa Sapienza allo studio" Chapel in Rome: a representation of its domed ceiling. Borromini master of "Trompe-l'œil"  
**Antonio MOLLICONE**
- P. 578**      **ID 007**  
 Survey of the architectural and historical characters of the Pavone "ricetto" for the retrieval of its own environmental identity  
**Pia DAVICO**
- P. 588**      **ID 009**  
 The Conservation Project of the Roman Theater of Málaga  
**Esteban José RIVAS LÓPEZ, María Victoria, LÓPEZ GALLARDO**
- P. 598**      **ID 013**  
 Designing Future Heritage: Aldo Rossi's *Citta Analoga* as Incomplete Algorithm of Individual Expression within Collective Imagination  
**Jean-Pierre CHUPIN**
- P. 606**      **ID 018**  
 Kultur-Fabrik-Perugia  
**Paolo BELARDI, Valeria MENCHETELLI, Luca MARTINI**
- P. 614**      **ID 019**  
 Interpreting the Transformation of the Identity of Asmalimescit  
**Avsar KARABABA**
- P. 623**      **ID 020**  
 Avalanche hazard on mountain chalets: prevention and modelling  
**Bernardino CHIAIA, Barbara FRIGO, Valerio DE BIAGI**





## Archaeology and Architectural Design Project for Alexandria in Aria-Herat (Afghanistan)

**Luisa FERRO**

ABC Department of Architecture Built Environment Construction Engineering, School of Civil Architecture, Politecnico di Milano, Milan, Italy  
Luisa.ferro@polimi.it

### Abstract

Herat founded (or re-founded) by Alexander the Great, capital of Timurid Kingdom (1405-1506), oasis-city along the silk trade-route played a decisive role in the Islamic Art. Now is a devastated country. The salvation and the preservation of its cultural heritage is one of the tasks which international community must be faced.

The project proposed, therefore, from a full concept of cultural heritage, wants to build an open air museum *promenade* capable of detecting hidden forms of settlement and landscape and offer potential alternatives to architecture. Starting from the ancient cisterns, the citadel, the old fort and the area of the Timurid Musallas the project creates an urban archaeological itinerary: rather than be an obstacle, archaeological remains provide an excellent opportunity for developing a coherent contemporary project design.

The museum tour-landscaped and re-unification of archaeological sites (new excavation areas) is built through a structured path that restores the visual relationship between the heights, creating new relationships between the archaeological sites and city.

Besides, the presentation introduces an architectural design project for the Gohar Shad archaeological Park and for a new building complex around the Husseyn Bayqara minarets (UNESCO heritage). This area have not yet completely investigated is presented as a vast and fascinating stretch of land from which emerge ancient fragments and traces of three large enclosures.

**Keywords:** Archaeology, Alexandria in Aria-Herat, Husseyn Bayqara minarets, Open air Museum, School of Art and Craft

### 1. Archaeology and Architectural Design

What gives us archaeology is a complex mechanism in which design is seen immortal intelligence. Start from this is to discover the laws of things, knowing "the spirit that comes out of places" (Aristophanes, *The Clouds*).

We try to trace what returns from the ground: the former was constructed so that the parts functioned properly, with only the necessary accessories and their placement area, nothing was out of place even when expressed with apparent randomness. A set which is multiple without disorder: temples, statues, gardens, columns, capitals, regulated and open spaces. Then there was also a substantial component: the Providence, the wisdom that is to maximize the potential of a place (Strabo, *Geography*). So the architectural types (figures travelling throughout the Mediterranean and the East) were arranged and combined according to rules made directly to the place where they had to rise, the figures entered in the cycle of metamorphosis and fed the contemporary, keeping within itself the formal

character of the matrices from which they came, matrices that live deeper in the folds of the collective consciousness.

But mind you the contemporary design is neither nostalgic nor reconstruction, because of performing arts of antiquity there are traces of a life that once was full. Too much wealth of phenomena and original atmosphere has vanished with the collapse of time. The ruins are part of a whole that no longer exists.

Ruins and fragments open up for us new possibilities and the architectural project is not the reconstruction of something lost, is (again) its metamorphosis.

The project brings together the fragments, builds relationships unimagined, governs the objects according to a lyrical scansion, a wavelength of composition. Generates new rules, measuring things with the same number using an ancient discipline: rigor tempered by the imagination that creates juxtapositions apparently unheard. Returns, finally, the real meaning of belonging to another reality, unknown, but belonging to the origin of ideas in architecture and with whom it would seem necessary to innovate, confront again [1].

## **2. Archaeology and Urban Project**

The excavation is no longer avoidable, it is one way to know of modernity, however, it can feel like a run, an obstacle in everyday life and in the construction of the city. But how is it possible to devise new strategies of cross-protection, enhancement and use of archaeological sites and what can be a good way to organize the results of the search for physical traces of history in the urban centres.

In the recent works of refurbishment of archaeological sites is often revealed a broad program of excavations, through which the sites are hit by a process of transformation without the project.

The objective of intertwining the point of view of archaeology with that of architecture is taken as a grounds for investigating the theme of a project conception in its relationship with the stratification of the city, considered as a field for research of a profound and hidden order of things and forms.

Rather than be an obstacle, archaeological remains provide an excellent opportunity for developing a coherent project design, especially in urban contexts: archaeological excavations rediscover artefacts and ancient contexts that re-emerge as “new” components for the architectural project.

The problem of protecting the historical and natural landscape from the present uncontrolled urbanisation is an urgent one.

In forecasting a future development for Ancient and its surrounding area, presents difficulties that arise in assigning a role to archaeological sites can be met with a project for an itinerary covering the city’s museums. Posing the question in this way, the aim of such a project would be to recreate a hidden compositional unity, following open air museum itineraries, thereby restoring significance to single finds severed, until now, from an earlier and more complex context to which they once belonged.

As in excavation, the project isolates single objects from their context layer by layer, restoring its renewed significance, immanence of the antique being thereby embodied within the reality of the project. Following this line of thoughts, the aim of this specific project is to envisage an “archaeological promenade” following a sequence of ruins and monuments at present detached from a context to which they originally belonged, re-arranging them to enhance their significance.

Further, the chosen places of significance constitute the key points of the urban plan worked out on a metropolitan multi-disciplinary museum-school itinerary able to express the structural features of places. As simplified by Alexandria Museum, the word “museum” thus came to mean a place devoted to study and learning.

Following is introduced a recent and on-going experience carried out in prominent archaeological places of Herat, city founded (or re-founded) by Alexander the Great. There the museum-itineraries follow the matrix route of foundation and as in great *collage* - there are excavations, ruins, the archaeological finds. There are also the fragments of townscape, theories of art and ideas of architecture, modern contemporary projects.

### 3. Alexandria in Aria-Herat

Herat is the only city in Afghanistan to have largely retained its traditional form. The name itself, Herat (or Harat), derives from the same Iranian root as 'Aryan', from which 'Iran' also derives, presumably reflecting the early movement of Iranian tribes from Central Asia into Iran in the second millennium BC. Thus, it appears under the name 'Haraiva' in the sacred writing of Zoroastrians in the late second millennium, and it became a provincial Achaemenid capital of the same in the mid-first millennium, known as 'Aria' to the Greeks after the conquest of Alexander. So far, the Iron Age or Achaemenid origins of the city have not been confirmed by archaeology, although an Achaemenid cuneiform cylindrical seal were found by chance in or near Herat in the early century century. However, both the Qal'a-I Ikhtiyaruddin and Kuhandazh are on large artificial mounds which, if excavated, might well reveal the ancient city. Herat remained a provincial capital during the Hellenistic, Parthian and Sasanian periods. There are detailed descriptions of the city by Early Islamic geographers from the ninth century onwards when it became one of the more important cities of the eastern Islamic world. Herat became a capital city of the Ghurid Empire from 1175 to 1221, along with Fīrūzkuh in the mountains to the east. It was destroyed twice in the Mongol invasions in the early thirteenth century, but after 1244 there was some revival under the local Kart dynasty who rules Herat on behalf of the Mongols. Its greatest period came after 1404 when Shah Rukh, the son and successor of Tamerlane, moved the capital to Herat from Samarkand. This was the city's golden era, being embellished with many spectacular monuments by Shah Rukh, his wife Gohar Shad and their descendant Hussayn Bayqara. In 1507, Herat fell to the Uzbeks when much of it was devastated. The city's greatest architectural ensemble, the Musalla complex outside the walls to the west, were largely blown up in 1885 at British instigation as part of defensive preparations for a threatened Russian invasion, and considerably more damage to this and other monuments were inflicted in the fighting following the Soviet invasion of 1979.

#### 3.1 Morphological urban matrix

The basic principle of the new towns by Alexander the Great and his successors (the Seleucids in particular) and the new cities that differ from those earlier Greek (erroneously identified as Milesian, but rather different in some fundamental aspects) is the construction of a single longitudinal axis origin of which the whole system of functional and spatial subdivision provided the foundation project.

In the repetition of standardized units of Gran Via - the longitudinal original matrix route - becomes supreme act of the foundation and an autonomous architecture. The place of aesthetic effects combined between buildings and landscape.

In the East the Afghan cities founded by Alexander in their original morphology assume a symbolic aspect that adapts to the Buddhist culture rooted in place for some time. It is known that Alexander was the first to promote the emergence of cosmopolitan cities and are carriers of convergent traditions: Hellenism from the west, Buddhism from the east.

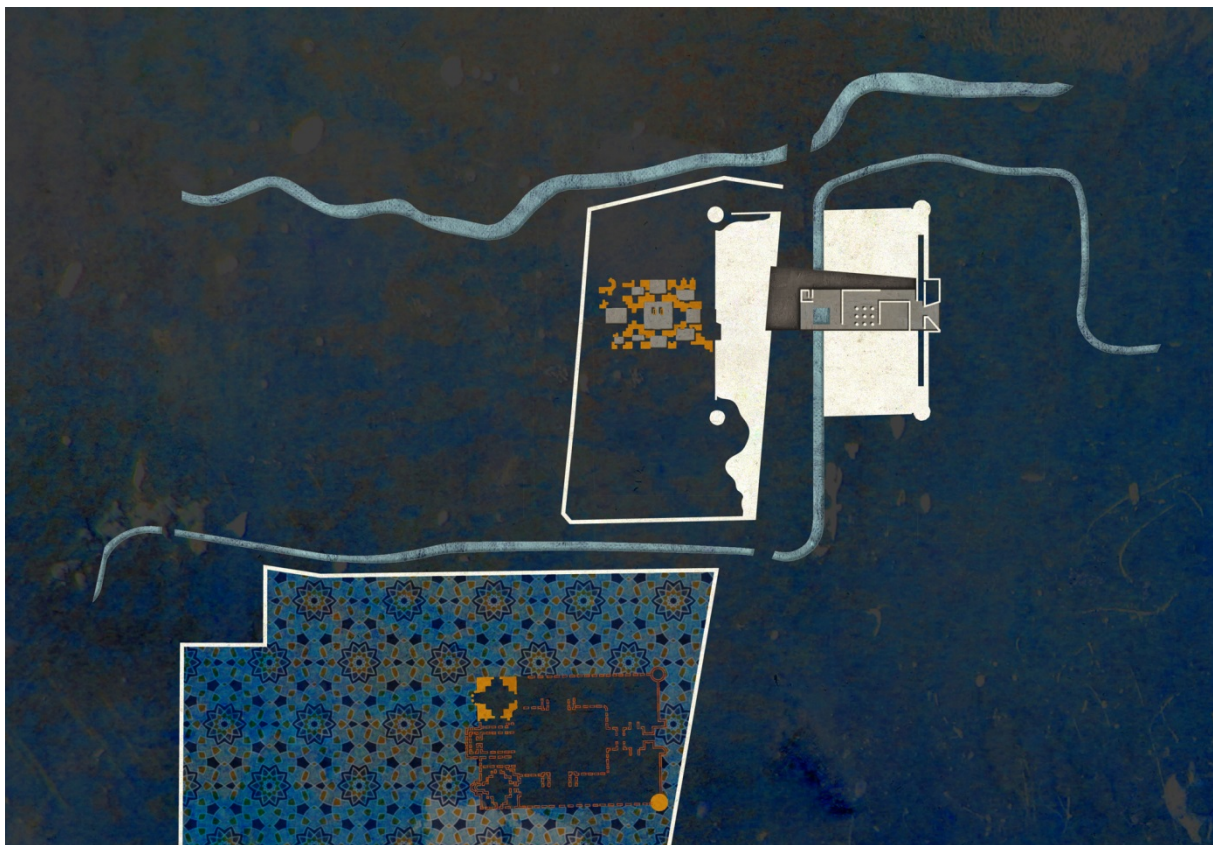
So foundation matrix route no longer represents symbolically the founder, but the diagram of the universal order, the particular cosmography that represent Afghanistan as the end of the World.

Herat, as well as Alexandria in Arachosia (Kandahar), Alexandria in the Caucasus (Begram), Alexandria in Bactria (Balkh in the Hellenistic re-founding) are built on an orientation matrix axis. This axis as the so called Canopic route of Alexandria in Egypt is the *plateia* of the city along which stand public buildings.

The legend of Alexander is sent in the Qur'an. And so during the Fifteenth-century Timurid empire, the new capital Herat is redrawn in the myth of Alexander. The urban design reinterprets the Hellenistic foundation assuming the shape which is still recognizable (and largely unchanged in the existing urban morphology of the old city). The squared general plan (about 2kmx2km) is characterized by a north-south matrix axis through the walled city which connects with the monumental outdoor areas (Timurid Musallas and Madrasa) and the famous gardens of delights described by Babur the last Timurid king and the founder of the Empire of India. A secondary axis perpendicular cuts in the geometric centre of the city's main axis dividing the urban fabric into four quadrants.

### 3.2 The Musalla Complex

Most of the city's important monuments lie outside the walls. To the north are the very fragmentary remains of a particularly elaborate ensemble collectively known as the Musalla Complex, once described as one of the most magnificent architectural ensembles in the Islamic world. Much of this was deliberately destroyed in the 1880s. These are the remains of three separate buildings. The first is the Mosque of Gohar Shad, of which only the north-western minaret still survived into the present, the finest of surviving minarets in Herat. Immediately to the north is the Madrasa and Mausoleum of Gohar Shad, of which only the mausoleum and the very further damaged by artillery. The Mausoleum is covered with the distinctive Timurid fluted dome and the interior has fine painted decoration, but it sustained extensive damage from shelling in the 1980s, with most of its tile-work lost. The third buildings is the Madrasa and Mausoleum of Husain Bayqara. Only the four corner minarets still stand, all of them originally covered in faïence tilework of the finest quality; of the Mausoleum and the remainder of the Madrasa, not a trace survives. Following extensive bombardment in the area in the 1980s, the four minarets are still standing but have now lost almost all their tile-work, and one of the minarets has been punctured by shells.



**Fig. 1:** Concept plan of the project for the Musalla of Huseyn Bayqara, The school of Arts and Craft of Herat and the archaeological site.

### 3.2 The Historical-archaeological promenade and a project for the Hussein Bayqara minarets

In the general context of rebuilding the devastated country, the salvation and the preservation of its cultural heritage is one of the tasks which international community must be faced. Along the main ancient axis (N-S) starting from the cisterns, the citadel the old fort and the area of the Timurid Musallas the project creates an urban archaeological itinerary, a sort of built itinerary where the works of arts could dialogue with the architecture, both inside and out: the culture and typology of architecture and of settlement itself are necessary and specifically involved.

This main route axis becomes an open air museum promenade to be considered as an engine for a future general plan of development and restoration of the city, but also to be understood as a itinerary of culture, in a larger meaning as well as in Alexandria (Egypt).

The milestones of the promenade: the domed cisterns, the larger ones which stand near the crossing of the two matrix routes; the immense fortress-palace of Qal'a-i Ikhtiyaruddin standing on an artificial

mound, probably incorporating earlier archaeological remains, covered by fired brick glacis. Following the Unesco project report ( by architect Andrea Bruno) the lower buildings restored could become Herat Archaeological Museum. Outside the ancient city walls the large artificial mound known as Kuhandazh, which probably represents the (never excavated) remains of the pre-thirteenth century city. On top are two monumental Timurid Shrines. The promenade comes to an end at one of most astonishing landscapes: the famous minarets of Herat. The very fragmentary remains of the Musalla and Gohar Shad and Hussein Baiqara complexes have been part of the three elaborate ensembles once described as one of the most magnificent architectural buildings of Islamic world; all deliberately destroyed by English army in XIX century and further damaged by recent fighting.

The project, therefore, from a full concept of cultural heritage, wants to build an integrated system of places and paths capable of detecting hidden forms of settlement and landscape and offer potential alternatives to the architecture. Morphological characteristics of the area, water availability over time have allowed the spread of crops and gardens of delight, to be supported and regained.

The museum tour-landscaped and re-unification of archaeological sites (new excavation areas) is built through a structured path that restores the visual relationship between the heights, creating new relationships between the archaeological sites and cities along a route that follows the old matrix route, the supreme act of the Hellenistic foundation.

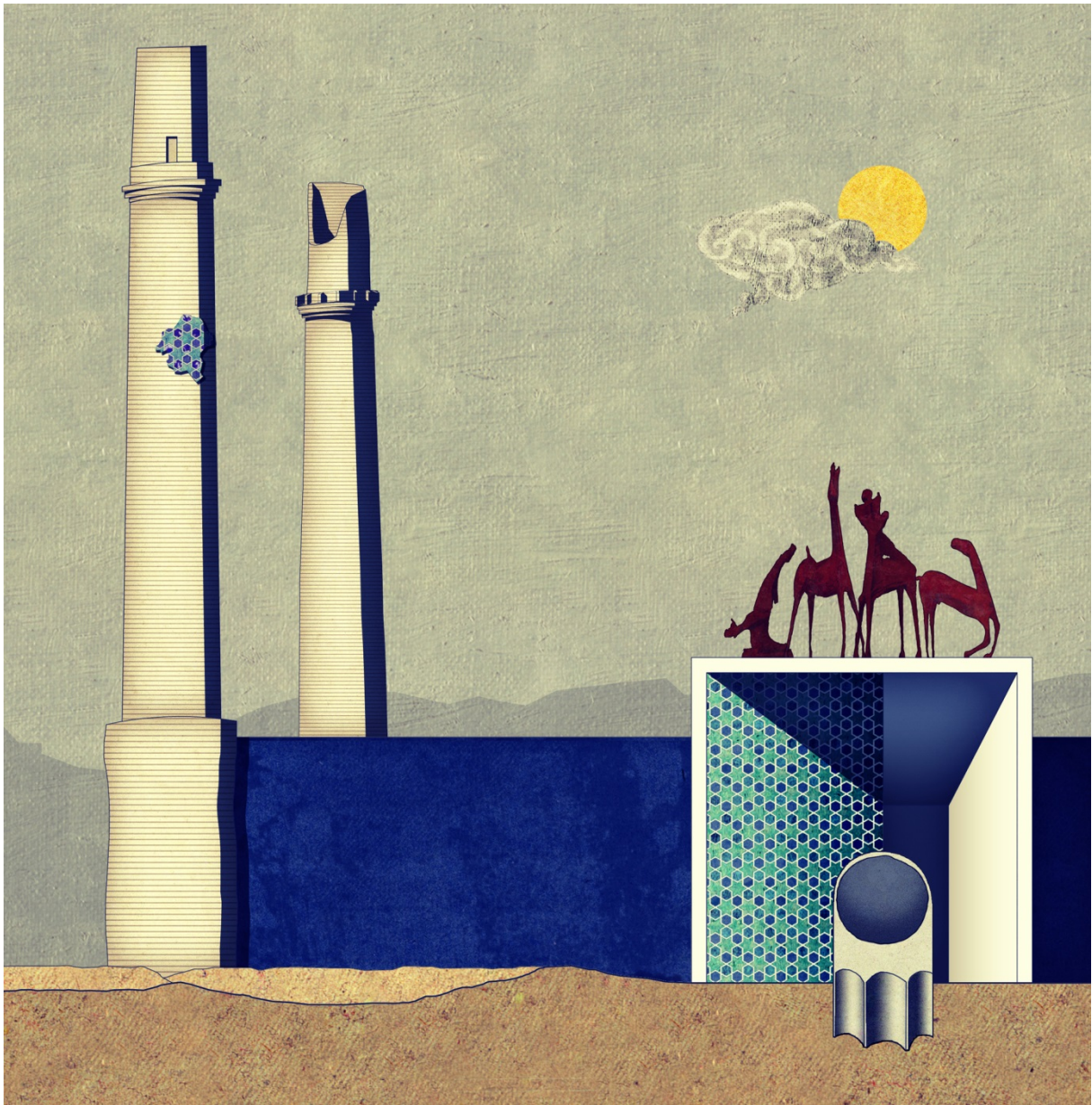
The research introduced aims to elaborate an architectural design for the Gohar Shad archaeological Park and for a new building complex around the Hussein Baiqara minarets: library (in connection with Bibliotheca Alexandrina), centre for the development of handicrafts, the girls' school of arts and crafts, the palace of brotherhood and tolerance.

This area have not yet investigated is presented as a vast and fascinating stretch of land from which emerge ancient fragments and traces of the large enclosures.

The new school will evoke the Iwan, the monumental entrance to the enclosure Timurid complex.

Along the promenade lined gardens will repair from a merciless summer sun, creating shadows and infusing the *mezzaombra* characterizing the performance of legendary landscapes, surrounding the visitors in the magic of myth. In excursions *en plein air* views are never natural, immediacy and linearity of the tracks is a function of memory. What we glimpse again, what has impressed in the form of the place and reappears through the project, open angles, opens scenarios, create relationships between differences and does belong to the same view [2].





**Fig. 2:** Main entrance of the School. The Iwan.





**Fig. 3:** The new archaeological park of the Timurid Musallas and the School of Arts and Craft of Herat. General Plan.





**Fig. 4-5:** Plan level 0 and E-W section of the School at Husseyn Bayqara Musalla, the enclosure of the archaeological site.



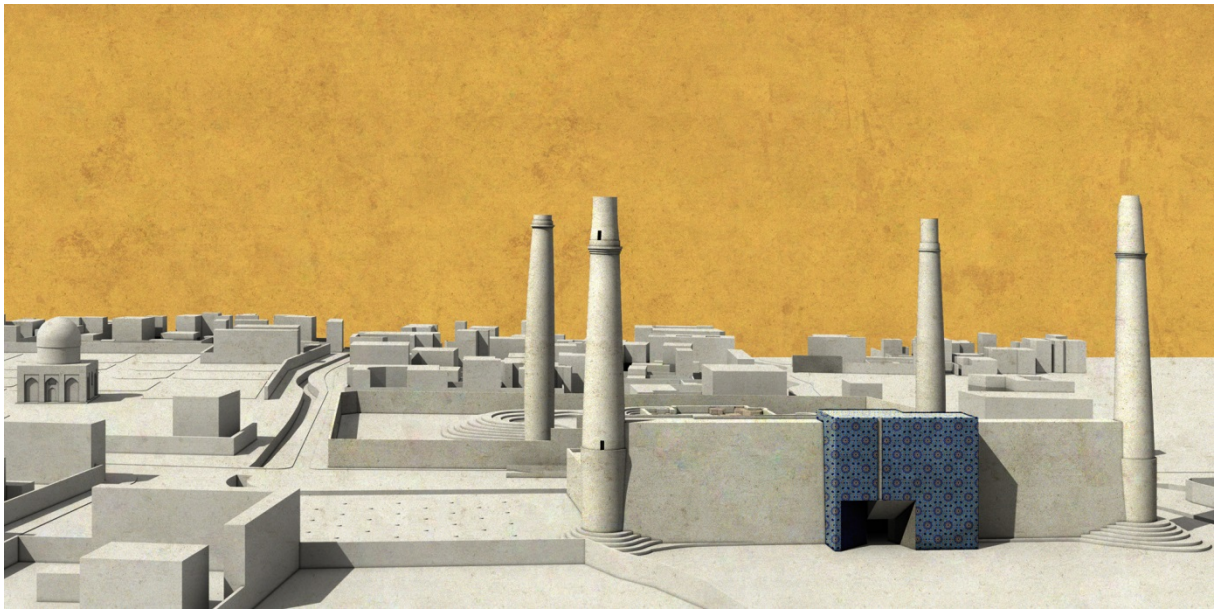




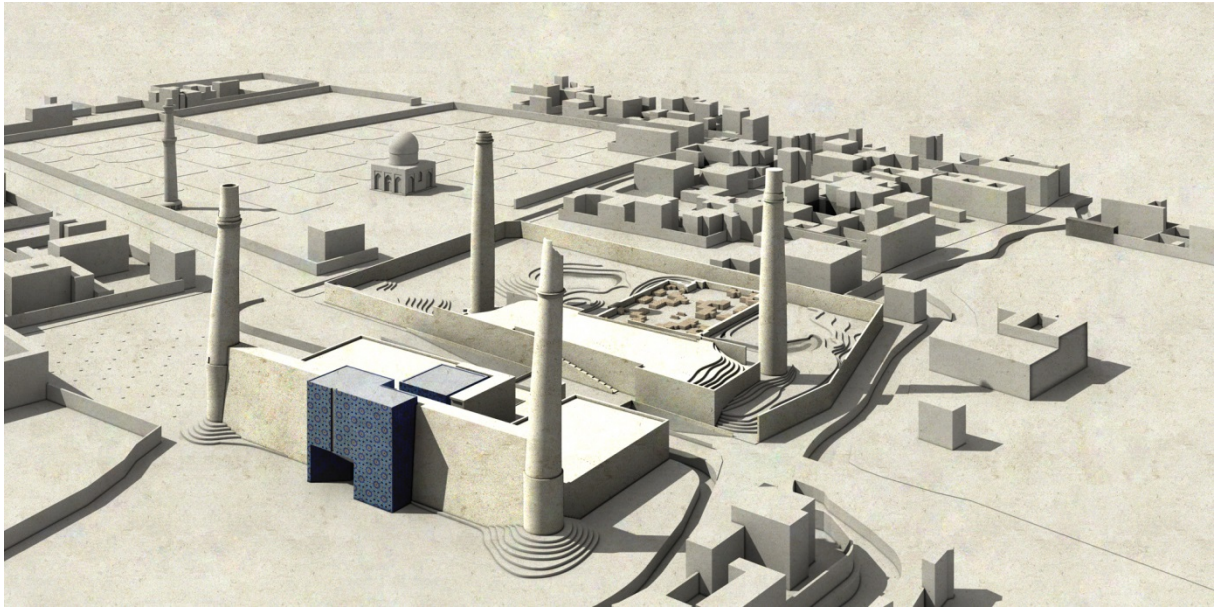
**Fig. 6-7:** Plan of the Library level and section of the School enclosure and archaeological excavations.







**Fig. 8-9:** General views of the school at Husseyn Baiqara Musalla archaeological site.



**Fig. 10:** Figure caption (Arial – 9 pt, Lower case letters – Left aligned – Number style 1, 2, 3

## Captions

[1] This research project (title *Archaeology and Architectural design*) is part of a long-standing tradition of study and design in which theory and practice are productively combined.

Research Team group: proff. A.Torricelli, L. Ferro (coordinators), Dipartimento di Progettazione dell'Architettura, Politecnico di Milano with the Architects Viola Bertini, Elena Ciapparelli, Giovanni Comi, Davide Grazi, Maria Luisa Montanari, Sara Riboldi, Gianluca Sortino, Valerio Tolve.

The production and scientific research is closely connected to teaching knowledge and methodology in its intentions, also finding time processing in the Scuola di Architettura Civile del Politecnico di Milano (Laboratorio di Progettazione 3, Luisa Ferro e Laboratorio di Laurea Magistrale, Angelo Torricelli, Luisa Ferro); in practice activities of Dipartimento di Progettazione dell'Architettura and in the Ph.D research (Milano, Venezia).

Subjects and case studies (Atene, Campi flegrei, Milano, Villa Adriana Tivoli, Alessandria Egypt, Alexandria in Aria Afghanistan) have been introduced in several international seminars, workshops and publications.



DIPARTIMENTO DI ARCHITETTURA  
E DISEGNO INDUSTRIALE  
LUIGI VANVITELLI



**UID**  
Unione Italiana Disegno



*forum* UNESCO  
UNIVERSITY AND HERITAGE



United Nations  
Educational, Scientific and  
Cultural Organization



Commissione Nazionale  
Italiana per l'UNESCO



The US-Italy Fulbright Commission  
Linking Minds Across Cultures