



DIPARTIMENTO DI ARCHITETTURA  
E DISEGNO INDUSTRIALE  
LUIGI VANVITELLI



UID  
Unione Italiana Disegno



Fabbrica della Conoscenza

Carmine Gambardella



La scuola di Pitagora editrice

**Fabbrica della Conoscenza numero 46**  
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,  
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 Queti**

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

**Elena Shlienкова**

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

### *Editorial Committee:*

**Pasquale Argenziano**

**Alessandra Avella**

**Alessandro Ciambrone**

**Fabio Converti**

**Nicola Pisacane**

**Manuela Piscitelli**

Best practices in heritage  
conservation and management  
From the world to Pompeii

Le vie dei Mercanti \_ XII Forum Internazionale di Studi

Carminc GAMBARDELLA

La scuola di Pitagora editrice

Carmine Gambardella (a cura di)

**Best practices in heritage  
conservation and management.**

**From the world to Pompeii**

Le vie dei Mercanti

XII Forum Internazionale di Studi

editing:

Manuela Piscitelli

© copyright 2014 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 978-88-6542-347-9**

# Best practices in heritage conservation and management From the world to Pompeii

Le vie dei Mercanti  
XII Forum Internazionale di Studi

Aversa | Capri  
June 12th- 14th, 2014

*Conference topics:*

## **Heritage**

Tangible and intangible dimensions, History, Culture, Collective Identity, Memory, Documentation, Management, Communication for Cultural Heritage.

## **Architecture**

Surveying, Representation, Modelling, Data Integration, Technology Platforms, Analysis, Diagnosis and Monitoring Techniques, Conservation, Restoration, Protection, Safety, Resilience, Transformation Projects, Technologies, Materials.

## **Landscape**

Cultural landscapes, Territorial Surveying, Landscape Projects, Environmental Monitoring, Physical Parameters, Government of the Territory, Sustainable Development, Social Sustainability, Economic Sustainability.

Le vie dei Mercanti \_ XII Forum Internazionale di Studi  
Aversa | Capri  
June 12th- 14th, 2014

*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

**Ali Abughanimeh,**

Director of the Department of Architecture, University of 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, USA

**Joaquin Diaz,**

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

**Yankel Fijalkow,**

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

**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

**Tatiana Kirova,**

Professor, Polytechnic of Turin, Italy

**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

**Andrea Maliqari,**

Dean of the Faculty of Architecture, Polytechnic University of Tirana

**Maria Dolores Munoz,**

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

**Raymond O' Connor,**

President and CEO TOPCON Positioning Systems

**Jorge Pena Diaz,**

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

**Giovanni Puglisi,**

Professor, Rector IULM, and President, Italian National Commission for UNESCO

**Michelangelo Russo,**

Professor, University Federico II di Napoli, Italy

**Paola Sartorio,**

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

**Lucio Alberto Savoia,**

Ambassador, General Secretary, Italian National Commission for UNESCO

**Elena Shlienкова,**

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*

**Manuela Piscitelli**

Responsible for the organizing process of the scientific proposal

**Alessandra Cirafici** (coord.), **Caterina Fiorentino** (visual image),

**Rossella Bizzo, Ludovico Mascia, Pasquale Vaiano**

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.**

**Peer review**

Scholars has been invited to submit researches on theoretical and methodological aspects related to Architecture, Industrial Design and Landscape, 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**

238 abstracts received from:

Australia,  
Brazil,  
China, Colombia, Cuba, Cyprus,  
Denmark,  
Egypt,  
France,  
Greece,  
Indonesia, Italy,  
Japan,  
Madagascar, Malta, México,  
Portugal,  
Russia,  
Saudi Arabia, Slovakia, Spain, Sweden,  
Turkey,  
United Kingdom, U.S.A,  
Yemen.

About 400 authors involved.

196 papers published.

## Preface

The XII International Forum Le Vie dei Mercanti has the aim of promoting a debate on local and international experiences relating to the themes of the conservation and management of cultural, architectural, archaeological, landscape and environmental heritages. This debate is particularly relevant in Italy, with it not only being responsible to the world for housing the largest number of UNESCO sites but also having a natural and landscape heritage of great variety and beauty in a region characterised by an intrinsic geological fragility. The management of this vast heritage requires both a serious planning of the interventions as well as adequate funding. The same goes for the protection of the landscape, which in the past was systematically devastated within a myopic perspective that did not take into account the enormous amount of damage caused by wild speculation and hydrogeological instability.

Furthermore natural disasters, such as earthquakes, have led to the transformation and loss of environments which reflect local identity no less than the cultural heritage, in addition to economic damage and in terms of human lives.

In order to conserve and manage the heritage, it is necessary to adopt an integrated and resilient approach in which different skills contribute to the development of improvement and restoration projects, carried out through knowledge, sharing of decisions and proactive sharing, taking into account the social and environmental sustainability of interventions that should characterise the design method in all its aspects.

The key issue is the exchange of ideas so as to give life to a *technological humanism*, understood as the union between the cultural vitality that has characterized humanism and the Renaissance, producing excellent results in all fields of knowledge, and the possibilities currently offered by technological innovation to create platforms in order to support this knowledge. Thus, Pompeii, the most famous archaeological site in the world, is taken as the prime example of the need to adopt a virtuous cycle of conservation and management, supported by the dialogue between the different skills that interact by sharing the same technological platform.

The international debate can be an opportunity to share prime examples of the conservation, management and development of the archaeological, architectural, landscape and environmental heritage through the integration of ideas and experiences of specialists working in different disciplines as well as geographical and cultural contexts.

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

*Carmine Gambardella*

## Table of contents

<b>P. 28</b>	<b>ID 000</b> Best practices in heritage conservation and management. From the world to Pompeii <b>Carmine GAMBARDELLA</b>
<b>P. 39</b>	<b>ID 001</b> The Fourth Right - a possible new way to conserve Chinese urban villages <b>Yu-HUAN WANG</b>
<b>P. 48</b>	<b>ID 002</b> Turin observe the time Gian Giacomo Plantery <b>Nadia FABRIS</b>
<b>P. 55</b>	<b>ID 003</b> The “illusory space” from wall frescos to “quadraturismo”, to cyclorama. Planar and solid representation techniques and restitution of imaginary space <b>Antonio MOLLICONE</b>
<b>P. 65</b>	<b>ID 005</b> SmartEcoPhone, between research and enterprise. Enhancing the natural and cultural heritage of Rome <b>Fabio ATTORRE, Giulia CERIANI SEBREGONDI, Fabio FRANCESCONI, Roberto VALENTI</b>
<b>P. 72</b>	<b>ID 006</b> Conservation and structural safety rehabilitation: a renewed approach needed <b>Paola RONCA, Pietro CRESPI, Alberto FRANCHI, Nicola GIORDANO</b>
<b>P. 80</b>	<b>ID 007</b> Methods and approaches of estimation of negative impact of physical factors in conditions of urban territories <b>Andrey VASILYEV</b>
<b>P. 87</b>	<b>ID 008</b> New approaches to estimation of ecological risks of urban territories <b>Andrey VASILYEV, Vlada ZABOLOT SKIKH, Julia TERESHCHENKO, Ivan TERESHCHENKO</b>
<b>P. 94</b>	<b>ID 009</b> Improvement and realization of system of waste management of urban territories <b>Andrey VASILYEV</b>
<b>P. 98</b>	<b>ID 010</b> Musealization and exhibit questions inside the archaeological site <b>Gioconda CAFIERO</b>
<b>P. 106</b>	<b>ID 011</b> Restoration of the feudal castle of Ventimiglia family in Castelbuono (PA) <b>Federica SCIBILIA, Marcello LA GUARDIA</b>
<b>P. 115</b>	<b>ID 012</b> The digitalization of cultural heritage’s tangible & intangible dimensions <b>Davide MEZZINO</b>
<b>P. 123</b>	<b>ID 014</b> Accessibility of historical students accomodations: methods and solutions <b>Alessandro GRECO, Matteo LOCATELLI</b>

- P. 132**      **ID 016**  
Foligno city lab. The earthquake as a research opportunity  
**Paolo BELARDI, Fabio BIANCONI, Valeria MENCHETELLI, Simone BORI, Marco FILIPPUCCI, Luca MARTINI, Giulia MATERAZZI, Giacomo PAGNOTTA**
- P. 142**      **ID 017**  
Paris saclay – urban textures  
**Anna MANDIA**
- P. 148**      **ID 018**  
Projects overlooking the sea, between stone and leaves  
**Cesare AJROLDI, Flavia SCHIAVO**
- P. 157**      **ID 020**  
The development of Bad Nauheim as jugendstil spa complex  
**Elena MANZO, Manuela PISCITELLI**
- P. 173**      **ID 021**  
Revitalization of Port Area as an Effort to Preserve the Identity of the City. Comparative Studies: Clarke Quay-Boat Singapore and Albert Dock Liverpool  
**Ari Widyati PURW ANTIASNING, Ashadi HADIWINOTO, Luqmanul HAKIM**
- P. 183**      **ID 022**  
Requalification of historic buildings with special reference to the typological, technical and energetic aspects of collective residences  
**Elena ROMANO**
- P. 193**      **ID 023**  
The management of vulnerabilities in cultural heritage: a possible model to parametrize the intervention priorities  
**Carlo MAMBRIANI, Eva COÏSSON, Elisabetta FADDA**
- P. 203**      **ID 024**  
Green road project: promoting art, food, mobility and energy  
**Giulio CEPPI, Antonio PROTA**
- P. 208**      **ID 025**  
Earthen Architecture: the ancient experiences as basis for the development of contemporary architecture  
**Alice PALMIERI**
- P. 218**      **ID 028**  
Constructive technology and climate adaptation in modern architecture of Yucatan  
**Manuel Arturo ROMÁN KALISCH, Raúl Ernesto CANTO CETINA**
- P. 228**      **ID 029**  
An advanced model to represent and manage knowledge in cultural heritage  
**Caterina GATTUSO**
- P. 234**      **ID 030**  
Cultural itineraries and slow paths. Historical and environmental resources for the territorial planning  
**Massimo SARGOLINI, Roberta CAPRODOSSI, Maria Teresa IDONE, Paolo SANTARELLI**
- P. 244**      **ID 031**  
Correct use of materials and technologies for a sustainable design: the study of “Acrilica” lamp by Joe and Gianni Colombo  
**Francesco TAMBURRINO, Raffaella AVERSA, Antonio APICELLA**

- P. 251**      **ID 032**  
Methodological approach for the restoration of the Castle of Belvedere Marittimo (CS) – Calabria  
**Caterina GATTUSO, Renato OLIVITO, Elena BENCARDINO, Rosamaria ODISPOTI**
- P. 261**      **ID 035**  
Specifics and landscape conditions of dispersed settlements in Slovakia - a case of natural, historical and cultural heritage  
**Ingrid BELČÁKOVÁ, Zuzana PŠENÁKOVÁ**
- P. 269**      **ID 036**  
The Appian Way: enhancement of the landscape between nature and culture from Rome to Capua  
**Clelia CIRILLO, Ugo ZANNINI, Luigi SCARPA, Giovanna ACAMPORA, Marina RUSSO**
- P. 276**      **ID 037**  
Laser scanning as a measuring tool: a practice in laser scanning at Pompeii for archaeology and architecture  
**Osamu AJIOKA, Yoshiki HORI**
- P. 284**      **ID 038**  
The documentation for the knowledge of the disappeared centers between “memory and measurement”  
**Antonio BIXIO, Giuseppe DAMONE, Enza TOLLA**
- P. 292**      **ID 039**  
The museums’ world tries to safeguard and communicate the intangible dimension of heritage  
**Lucia GASPARINI**
- P. 302**      **ID 040**  
Some thoughts about conservation and enhancement of archaeological heritage in France  
**Emanuele MOREZZI, Emanuele ROMEO, Riccardo RUDIERO**
- P. 312**      **ID 043**  
Archaeology and architecture, the Stagnum Neronis of Baia  
**Marco RUSSO**
- P. 322**      **ID 044**  
The subtraction architecture  
**Stefania DI DONATO**
- P. 332**      **ID 045**  
Steel in the historic buildings: concealing vs exposing  
**Laura CIAMMITTI**
- P. 341**      **ID 046**  
Almohad stamped jars of Seville  
**Daniela LALLONE**
- P. 351**      **ID 049**  
Art production as social, built and cultural heritage  
**Rita BREDA**
- P. 357**      **ID 050**  
Developmental dynamics of the hypogea of Piazza Duomo in Syracuse  
**Giacinto TAIBI, Rita VALENTI, Mariangela LIUZZO, Tiziana PATANÈ**

- P. 367**      **ID 052**  
The epistemological measure of the quality of the natural landscape  
**Giacinto TAIBI, Sebastiano GIULIANO**
- P. 375**      **ID 053**  
Confiscated property: best practices in management of cultural inheritance  
**Flora BERIZZI, Caterina MUSOLINO**
- P. 383**      **ID 055**  
'The Bosphorus, Istanbul: magnificent past, dubious future'  
**Ahmet VEFIK ALP**
- P. 388**      **ID 057**  
Mosques of Medina: Designing towards Authenticity  
**Mahmud MANNING, Ahmed ABU AL HAIJA**
- P. 398**      **ID 058**  
The accessibility of archaeological area of Pompeii. Knowledge methodology and sustainable proposals  
**Renata PICONE**
- P. 407**      **ID 060**  
Ornaments and vibrations in the geometry of the sound  
**Rosario Giovanni BRANDOLINO, Domenico MEDIATI**
- P. 417**      **ID 061**  
Architectural conservation in China. The master plan of Nanjing heritage park  
**Alessandro PERGOLI CAMPANELLI**
- P. 427**      **ID 062**  
Communicating regional identity, empowerment and preserving cultural heritage of Sant'Elia  
ciociarian cuisine through slow food tourism  
**Charmaine I. KAIMIKAUA, Liza SALVATORE**
- P. 435**      **ID 063**  
Gathering treasures and distributing the spoils  
**Paul RAPPOPORT**
- P. 447**      **ID 064**  
On the safeguarding of sites and historic cities: a study on the evolution of French legal system  
**Antonella VERSACI, Alessio CARDACI**
- P. 457**      **ID 065**  
Architecture for archeology. Identifying new modular and flexible types of shelter adaptable to  
the diverse needs of archaeological sites  
**Giuseppe PARELLO, Marco IMPERADORI, Carmelo BENNARDO,**  
**Salvator-John A. LIOTTA, Yuta ITO, Fausta OCCHIPINTI, Andrea VANOSSI**
- P. 467**      **ID 066**  
Design process for a led based luminaire in exterior lighting application  
**Giovanni CIAMPI, Antonio ROSATO, Michelangelo SCORPIO, Sergio SIBILIO, Carla**  
**LANGELLA, Antonia AULETTA**
- P. 477**      **ID 067**  
Photometric measurement for led based sources  
**Giovanni CIAMPI, Antonio ROSATO, Michelangelo SCORPIO, Sergio SIBILIO**

- P. 484**      **ID 068**  
Applications of augmented reality to understand an archaeological site: problems and future development  
**Mara CAPONE**
- P. 494**      **ID 069**  
Paths to knowledge for the preservation of identity cultures  
**Rita VALENTI, Sebastiano GIULIANO**
- P. 503**      **ID 070**  
The Irc of Uah, as an example of heritage rehabilitation  
**Flavio CELIS, Ernesto ECHEVERRÍA, Fernando DA CASA, Pilar CHIAS, Ignacio DELGADO, Juan Manuel VEGA, Blanca MORENO**
- P. 510**      **ID 071**  
Retrofit actions on the envelope of an existing historical public building: energy and economic Analyses  
**Giovanni CIAMPI, Antonio ROSATO, Michelangelo SCORPIO, Sergio SIBILIO**
- P. 519**      **ID 072**  
Urban planning and administration in a provincial city in the early 20th century  
**Maria Paola GATTI, Giorgio CACCIAGUERRA**
- P. 528**      **ID 074**  
A SPECIAL LAW FOR SANA'A  
The old city of Sana'a (Yemen): Proposal for a special fund for its conservation  
**Nabil AL-MAKALEH, Abdulhakim AL-SAYAGHI, Renzo RAVAGNAN, Massimo KHAIRALLAH**
- P. 537**      **ID 075**  
The case of the XVII century "Teatro Farnese" in Parma: integrated conservation, between conservation and valorization  
**Federica BORGHI, Federica OTTONI**
- P. 545**      **ID 076**  
MICRO\_CITIES  
**Marinella ARENA**
- P. 554**      **ID 077**  
Endangered heritage: a polemic intervention in one of the most protected areas of the Vicentina Coast Natural Park  
**Maria João Pereira NETO, Pedro Miguel Gomes JANUÁRIO, Mario Say Ming KONG, Maria do Céu Ferreira RODRIGUES**
- P. 561**      **ID 078**  
Havana: urban configurations and heritage conservation  
**Jorge PEÑA DÍAZ, Joiselen CAZANAVE MACÍAS**
- P. 567**      **ID 079**  
The memory of change  
**Maria Ines PASCARIELLO**
- P. 576**      **ID 080**  
The Grand Tour, Rome, and the representation of architectural heritage  
**Piero BARLOZZINI**



- P. 584**      **ID 081**  
Collective identity: hats Cartage heritage as – if probordados: handmade embroidery Cartage Valle Colombia  
**Maria Fernanda Garcia BURBANO, Luis Eduardo RAMIRES**
- P. 594**      **ID 082**  
Lands of taste. 'Still-life' ways in Southern Italy from the Antiquity to the XVII Century  
**Valeria DI FRATTA**
- P. 604**      **ID 083**  
Classification of the graphic legacy of disappeared earl of Oliva's palace  
**Joaquín Ángel MARTÍNEZ MOYA**
- P. 614**      **ID 084**  
OFF-GRID::FARM. Multifunctional landscapes and sustainable systems for Mediterranean rural areas  
**Valentina ROCCA**
- P. 623**      **ID 085**  
Between sign and color. The restoration site of the church of the Virgin Mary Assumed of Carrù  
**Maria Paola MARABOTTO**
- P. 633**      **ID 088**  
Giuseppe Agnello "Historic Architecture". The protection and safeguard of cultural heritage in eastern Sicily  
**Iolanda DI NATALE**
- P. 643**      **ID 089**  
Design the Rural-Architectural Intensification as a strategy for sustainable growth of countryside  
**Tiziano CATTANEO, Alessandra SANDOLO, Roberto DE LOTTO, Giorgio Davide MANZONI**
- P. 653**      **ID 090**  
Preserving "time" in space and "space" in time: Cultural urban landscape of Nis, Serbia  
**Jelena RAKOCIJA**
- P. 662**      **ID 091**  
The Sarno river and its plain  
**Rejana LUCCI**
- P. 672**      **ID 093**  
ADA. A Bilderatlas of arts, bodies and cities  
**Malvina BORGHERINI**
- P. 682**      **ID 094**  
Subtracting the ornament from the fairytale Gino Coppedè architecture. The case of the Villa of the Fairies in Rome  
**Laura CARNEVALI, Mariella LA MANTIA**
- P. 689**      **ID 095**  
Vaison-la-Romaine: the historical legacy in the development strategies  
**Laura BLOTTO**
- P. 698**      **ID 096**  
Receiving from the past to communicate the future: the case of S. Maria delle Macchie in Marche region  
**Enrica PETRUCCI, Daniele ROSSI, Giacomo NASINI**

- P. 708**      **ID 098**  
Reflections on history and current operational safeguarding device in the Casbah of Algiers  
**Kamel RIGHI**
- P. 717**      **ID 100**  
Architectural analysis of archaeological context - hypothesis of restoration of the domus del Torello di Bronzo (reg. V, ins. 1, civ. 7) archeological site of Pompei  
**Raffaele MARTINELLI**
- P. 727**      **ID 101**  
Interpreting structure through critical regionalism  
**Iosif DAKORONIAS-MARINA**
- P. 744**      **ID 102**  
A comprehensive approach to the protection of Dougga Tunisia  
**Marc BARANESS**
- P. 756**      **ID 103**  
The importance of anthropological analysis in the comprehension of the cultural heritage. The study case of Rocca di Cambio (AQ)  
**Valeria AMORETTI**
- P. 763**      **ID 104**  
Traditional building technique of military architecture in Veracruz, Mexico and Cartagena de Indias, Colombia for conservation  
**Dolores Pineda CAMPOS**
- P. 771**      **ID 105**  
From antiquity to the present  
**Cinzia SCHIRALDI, Filippo M. MARTINES**
- P. 782**      **ID 106**  
Crossing the river. Urban design in Pompei and Scafati  
**Carlo Alessandro MANZO**
- P. 790**      **ID 107**  
Characters of rural architecture and industrial archeology in Calabria. Some typical cases  
**Brunella CANONACO**
- P. 799**      **ID 108**  
The modeling based on techniques advanced of takes of data for the study of the church of the Asunción in Vistabella del Maestrazgo 1604-24  
**María Jesús MÁÑEZ PITARCH, José Teodoro GARFELLA RUBIO**
- P. 807**      **ID 110**  
Effects of Alternate Load Paths in damage evolution and identification in architectural heritage  
**Valerio DE BIAGI, Bernardino M. CHIAIA**
- P. 815**      **ID 111**  
Non-destructive monitoring of an old masonry clock tower with forced and environmental actions  
**Mariella DIAFERIO, Dora FOTI, Nicola Ivan GIANNOCARO**
- P. 825**      **ID 112**  
The octagon, the hendecagon and the approximation of Pi: the geometric design of the clypei in the enclosure of Imperial cult in Tarraco  
**Josep Maria TOLDRÀ, Josep Maria MACIAS, Josep Maria PUCHE, Agustí COSTA, Pau SOLA-MORALES, Antoni ESPALLARGAS, Albert FERRE'**

- P. 835**      **ID 113**  
The fragile heritage of the second half of the 20<sup>th</sup> century  
**Caterina PALESTINI**
- P. 841**      **ID 114**  
Redrawing Tarraco  
**Pau SOLA-MORALES, Josep Ma TOLDRÀ, Josep Ma PUCHE, Josep Ma MACIAS**
- P. 851**      **ID 116**  
Create “Urban•Ecological•Cultural” Symbiosis Space: conservation practice of historic riverfront in Turin and Shanghai  
**Liang ZHANG**
- P. 858**      **ID 118**  
The shrine of Pompeii. Packaging of the sacred and politics  
**Saverio CARILLO**
- P. 869**      **ID 119**  
Engaging visitors: developing presentation as a tool for site preservation at Pompeii  
**Alia WALLACE**
- P. 879**      **ID 120**  
From the pompeiana domus to the Early Christian Basilica  
**Maria Carolina CAMPONE**
- P. 889**      **ID 121**  
POMPEI URBAN CENTER: knowledge, regeneration, management  
**Maria Antonia GIANNINO**
- P. 899**      **ID 123**  
The atmosphere of industrial architecture: Experience and production  
**Kasper ALBREKTSEN, Mads Harder DANIELSEN**
- P. 909**      **ID 125**  
Conservation of cultural heritage. Risk analysis for protection and management  
**Sara Maria SERAFINI**
- P. 915**      **ID 126**  
Typological aspects of Caserio, a traditional basque rural building  
**Luigi MOLLO, Rosa AGLIATA**
- P. 921**      **ID 127**  
POMPEI: from Town to City  
**Ferdinando ORABONA**
- P. 930**      **ID 128**  
The walled city of Nicosia today - The challenge of managing heritage conservation in a living divided city  
**Athina PAPADOPOULOU**
- P. 938**      **ID 129**  
Roofing structures in archaeological sites: Pompeii insula of the Centenary [IX 8]  
**Alberto CUSTODI, Giovanni CASTELLAZZI, Stefano de MIRANDA, Francesco UBERTINI**

- P. 948**      **ID 130**  
Renovating the existing to redevelop the territory. Restoration and reuse project of an eighteen century country house in Casalvecchio Siculo (Messina - Sicily) and realization of a farm holiday center  
**Alessandra MANIACI, Gianfranco Salemi SCARCELLA**
- P. 958**      **ID 131**  
Memory vs oblivion. Best practices for the constitution of the museum of Reggio Calabria  
**Francesca FATTA, Livio DE LUCA**
- P. 966**      **ID 132**  
Building information modeling for structures  
**Ingrid TITOMANLIO**
- P. 973**      **ID 133**  
B.I.M. and structural modeling: application on cultural heritage  
**Ingrid TITOMANLIO, Giuseppe FAELLA**
- P. 980**      **ID 134**  
Urban forms and architecture in the hydrographic landscape of the Sarno's valley  
**Andrea SANTACROCE**
- P. 989**      **ID 135**  
Save what we can: experimentally validated design of strengthening interventions to reduce the seismic vulnerability of a bell-tower  
**Rosario CERAVOLO, Giuseppa NOVELLO, Marica Leonarda PECORELLI, Giuseppe PISTONE**
- P. 998**      **ID 136**  
CULTIVARS: cultivating culture in art  
**Sabina MARTUSCIELLO, Maria Dolores MORELLI**
- P. 1007**      **ID 137**  
From the management plan to a protection management system of mosaic decorations in 'Arab-Norman Palermo and the cathedral churches of Cefalù and Monreale' itinerary  
**Valeria MEGNA, Clara SPALLINO**
- P. 1018**      **ID 139**  
HERITAGE AND TERROIR: the Revival of ancient Pompei Vineyards  
**Francesca MUZZILLO, Fosca TORTORELLI**
- P. 1025**      **ID 141**  
Promotion and conservation of cultural heritage through the institution of touristic districts in Campania  
**Antonella MARCIANO**
- P. 1033**      **ID 142**  
The Trgovski Dom in Gorizia by Max Fabiani. Survey and simulation of the Petrarca Hall  
**Alberto SDEGNO, Giovanni FRAZIANO, Silvia MASSERANO, Dimitrij POZAR**
- P. 1041**      **ID 143**  
From point cloud to archaeology: the case study of Villa dei Misteri in Pompeii  
**Marco CANCIANI, Corrado FALCOLINI, Giovanna SPADAFORA, Mauro SACCONE**
- P. 1049**      **ID 145**  
Cultural heritage. Best practice and a new proposal  
**Emanuela LANZARA, Roberta MONTELLA**

- P. 1059**      **ID 146**  
 Pompeii: urban regeneration for cultural heritage  
**Agrippino GRANIERO**
- P. 1066**      **ID 147**  
 Technological hybridization for the fruition of cultural heritage. Architectural perspectives of Andrea Pozzo at St. Ignatius in Rome  
**Graziano Mario VALENTI, Jessica ROMOR**
- P. 1074**      **ID 148**  
 Environmental degradation and urban design: nature as starting point for regeneration  
**Gaspere OLIVA**
- P. 1084**      **ID 152**  
 How to manage a urban color plan which takes in account the supporting materials and the conservation state of the buildings  
**Maria Paola BORGARINO, Stefania BOSSI, Anna PIANAZZA**
- P. 1093**      **ID 154**  
 Survey of 'liberty' in Milan, 3D printing for the restoration of decorations  
**Maria PIGNATARO**
- P. 1103**      **ID 155**  
 Armenian experiences in consolidation of ancient buildings: the study cases of Anberd, Tatev, Arudj and Ani  
**Lorenzo JURINA, Edoardo O. RADAELLI**
- P. 1113**      **ID 156**  
 Dynamic identities for the cultural heritage  
**Francesco E. GUIDA**
- P. 1121**      **ID 157**  
 The Arab-Norman influence in the architecture of Campania in the 11th and 12th centuries  
**Lamia HADDA**
- P. 1129**      **ID 158**  
 Art and nature in a lost garden: the Park of the Caracciolo Prices in Avellino  
**Francesco ZECCHINO**
- P. 1139**      **ID 160**  
 History and topicality of the historic earthquake-resistant timber frames: the Ischia's examples  
**Marina D'APRILE, Margaret BICCO**
- P. 1149**      **ID 161**  
 The ideological approach to the study of italian rural architecture in first half XX century  
**Emanuele ZAMPERINI, Valentina CINIERI**
- P. 1159**      **ID 162**  
 Design Tools and methods for the enhancement of cultural itineraries and thematic cross-border pathways  
**Roberto DE PAOLIS**
- P. 1169**      **ID 163**  
 Overview of the waterfronts features: a perceptual approach  
**Virginia PUYANA ROMERO, Maria DI GABRIELE, Daniel FERNÁNDEZ ÁLVAREZ, Luigi MAFFEI**

- P. 1178**      **ID 164**  
The acoustics of underground places in Campania  
**Francesco SORRENTINO, Amelia TREMATERRA, Gino IANNACE**
- P. 1184**      **ID 165**  
The eco-oriented redevelopment of the open spaces: the case of Juazeiro in Brazil  
**Raffaella DE MARTINO, Rossella FRANCHINO, Caterina FRETTOLOSO, Matteo NIGRO**
- P. 1192**      **ID 167**  
Living landscape in the archaeological site: "La Bastida de les Alcuses"  
**Marina PUYUELO, Mónica VAL, Lola MERINO, Jaime VIVES-FERRÁNDIZ**
- P. 1201**      **ID 168**  
*Anima valens in corpore aegro*: Paths of the Spirit in the Places of Health-Care  
**Anna MAROTTA**
- P. 1211**      **ID 169**  
The Valencia Region La Luz de las Imágenes Foundation: a specific way of managing heritage  
**Camén D. QUINTERO**
- P. 1219**      **ID 170**  
The restoration of the church-fortress of Vinaròs  
**Carles BOIGUES, Eladia BALLESTERO, Xevi LLUCH, Andrea GIMENO, Lluís JUAN, Santiago TORMO**
- P. 1227**      **ID 171**  
Conception, design and installation of the Luz de las Imágenes exhibition: 'Pulchra Magistri. The splendour of the Maestrazgo in Castellón'  
**Santiago TORMO, Xevi LLUCH, Andrea GIMENO, Lluís JUAN**
- P. 1235**      **ID 172**  
Benefits of a global project about movable heritage  
**José Luis NAVARRO, Carmen D. QUINTERO**
- P. 1242**      **ID 173**  
From Daunii Archaeological Park to the Faragola domus romana: the new treasures of the old Ausculum  
**Mauro CAPRIOLI, Francesco MAZZONE, Mario SCARANO, Rosamaria TRIZZINO**
- P. 1250**      **ID 175**  
The Barco Chigi in Ariccia  
**Mario PISANI**
- P. 1256**      **ID 176**  
International researchworks about energy efficiency of historical heritage  
**Concetta GIULIANO**
- P. 1264**      **ID 177**  
Castra of Benedictine origin in territory of Cassino and in the upper Volturno valley  
**Camilla DI FALCO**
- P. 1272**      **ID 179**  
Ancient Pompeii sightseeing: intangible immersive technology and emotional maps  
**Marco BORRELLI**

- P. 1280**      **ID 181**  
 Palenque: the Maya Pompeii  
**Giada LUISO**
- P. 1287**      **ID 182**  
 Physical consistency and “immaterial life” of an architecture. The Amphitheatre of Pompeii: an exemplary case of historiography  
**Giovanni MENNA**
- P. 1297**      **ID 183**  
 Ordinary and emergency: a possible new order through productive poles. The case of Piana del Sarno  
**Francesco COSTANZO**
- P. 1302**      **ID 184**  
 Identification of the modal properties of a medieval tower next to a landslide  
**Dora FOTI**
- P. 1312**      **ID 185**  
 Heritage discretize: the regional park of Matese  
**Luigi CORNIELLO**
- P. 1324**      **ID 187**  
 The diffusion of churches with triconch in the mediterranean world  
**Danila JACAZZI**
- P. 1335**      **ID 188**  
 A multidisciplinary cognitive approach aimed at the safeguard of the ruins of Mongialino's tower in Mineo (Sicily)  
**Mariateresa GALIZIA, Alessandro LO FARO, Mariagrazia SALERNO, Cettina SANTAGATI**
- P. 1345**      **ID 189**  
 Use of new technique of image based aimed to perspective return  
**Laura INZERILLO**
- P. 1353**      **ID 190**  
 Multi criterion decisions in fuzzy logic environment  
**Maria Cristina MIGLIONICO**
- P. 1360**      **ID 191**  
 The historical drawing as a system of identity of a territory. The Vomero in the expansion project of the nineteenth century town  
**Maria MARTONE**
- P. 1370**      **ID 192**  
 The “diaeta” in the roman home  
**Rossella BICCO**
- P. 1375**      **ID 193**  
 Life and knowledge by glottology and graphics: disclosures of the ancient gamma greek letter  
**Andrea BUONDONNO, Alessandra CIRAFICI, Pasqualina LUONGO**
- P. 1384**      **ID 194**  
 The design of the architecture, of the sculpture and of the botanical in the “Villa Comunale” in Naples  
**Paolo GIORDANO**

- P. 1397**      **ID 196**  
The “agri+cultural” heritage” of “two Sicilies” Borbone house. The vineyard of “San Silvestro” farm in San Leucio (Caserta, Italy)  
**Andrea BUONDONNO, Gian Franco CAPRA, Eleonora GRILLI, Rosaria PARENTE, Nicola PISACANE, Pierclaudio ODIERNA, Riccardo SERRAGLIO**
- P. 1406**      **ID 199**  
Durability of reinforced concrete and cultural heritage: the pompeian domus as emblematic cases  
**Claudia CENNAMO, Michela MONACO, Maria Teresa SAVINO, Salvatore SORBO**
- P. 1415**      **ID 200**  
Designing the country in infrastructure areas. Area highway exit Candela, Foggia  
**Efisio PIZALIS**
- P. 1422**      **ID 201**  
Davide Pacanowski a significant interpreter of modern architecture in the twentieth century  
**Riccardo SERRAGLIO**
- P. 1432**      **ID 202**  
Around the Royal Palace of Caserta: the school building “Edmondo De Amicis”  
**Luciana ABATE**
- P. 1442**      **ID 203**  
The practice of cult inside the Royal Palace of Caserta: the Palatine Chapel, the Santa Maria dei Sette Angeli Chapel in the Schiavi Battezzati district, the Santa Filomena Chapel in the Flora garden  
**Maria Chiara DE MARCO**
- P. 1451**      **ID 204**  
Around the Royal Palace of Caserta: the new market square  
**Pasquale VAIANO**
- P. 1461**      **ID 205**  
Rural Campania: from the Pantano of Sessa Aurunca to Centore village  
**Giuseppe Mario INFANTE**
- P. 1471**      **ID 206**  
Subsidiarity and sustainability as a widespread cross-cutting approach to different anthropocentric events and aggregations  
**Flaviano TESSITORE**
- P. 1477**      **ID 207**  
Waterways. From the past a resource for the future  
**Francesco MAIOLINO**
- P. 1486**      **ID 208**  
Risk Management Planning. Phlegrean area and the case study of Bacoli  
**Giuseppe GUIDA, Giovanni BELLO**
- P. 1493**      **ID 209**  
Design and representation of landscape of “Terra di Lavoro”  
**Vincenzo POLLINI**
- P. 1503**      **ID 210**  
Seismic safety of the “Corpus Domini” bell tower  
**Mariateresa GUADAGNUOLO, Mariano NUZZO, Giuseppe FAELLA**



- P. 1511**      **ID 211**  
Paper's Title Rural design and territorial development  
**Caterina BELARDO**
- P. 1519**      **ID 212**  
Sorrina Nova (VT): traces of an intangible city. The contribution of aerial archaeology  
**Davide MASTROIANNI**
- P. 1528**      **ID 213**  
Knowledge and representation as instruments for evaluation of retrofitting in the historic cities.  
The jewish Ghetto in Rome  
**Gerardo Maria CENNAMO**
- P. 1539**      **ID 214**  
Traditional materials, innovative performance  
**Antonella VIOLANO, Monica CANNAVIELLO, Luigi DE SIMONE**
- P. 1545**      **ID 215**  
Smart as intelligent  
**Francesca VERDE**
- P. 1552**      **ID 216**  
Eco-friendly materials and technologies: the added value of urban transformation  
**Antonella VIOLANO, Lucia MELCHIORRE**
- P. 1560**      **ID 217**  
"Local" in the Space of Reconstruction of Meanings. Ingushetia as a Phenomenon of "the North  
Caucasus Identity"  
**Elena SHLIENKOVA, Zarema KALIMATOVA**
- P. 1568**      **ID 218**  
The role of sustainable technologies in the design  
**Antonio BOSCO, Giuseppe CACCIAPUOTI**
- P. 1575**      **ID 219**  
Earthen Architecture in the Draa Valley  
**Paola RAFFA**
- P. 1583**      **ID 220**  
Nisida, the memory of a myth  
**Claudia CENNAMO, Ornella ZERLENGA**
- P. 1593**      **ID 221**  
The tie rods in historical handbooks  
**Luigi MOLLO**
- P. 1602**      **ID 222**  
The observation of Michelangelo's Moses monumental complex at the Church of St. Peter in  
Chains and in virtual reality  
**Cesare CUNDARI, Fabio BABILONI, Gian Maria BAGORDO, Giancarlo CUNDARI,  
Maria Rosaria CUNDARI**

- P. 1608**      **ID 223**  
From Pompeii to Çanakkale: the Official museumed project proceeds his way  
**Claudio GAMBARDELLA**
- P. 1615**      **ID 224**  
The complex and multidimensional representation of the landscape on the Volturno river between Capua and Castel Volturno  
**Alessandro CIAMBRONE**
- P. 1625**      **ID 225**  
Places of identity in Campania; Traces represent the area between reason, regions and existing buildings  
**Ludovico MASCIA**
- P. 1632**      **ID 226**  
Staircases as a representative space of architecture  
**Ornella ZERLENGA**
- P. 1642**      **ID 227**  
Casagiove, Santa Maria Capua Vetere: a periphery and a road on centuries of Ancient Capua  
**Massimiliano RENDINA, Giuseppe MASCOLO**
- P. 1650**      **ID 228**  
Complexity and landscape: interactions and analogies  
**Giuseppe D'ANGELO**
- P. 1659**      **ID 229**  
Heritage, Development and Equality: a proposal of indicators to measure the contribution to gender equality in international projects of cooperation for development based on architectural heritage interventions  
**Isabel TORT AUSINA, Jaume MONFORT I SIGNES**
- P. 1665**      **ID 230**  
Route 66: analysis of a famed cultural corridor in the United States and implications for heritage tourism  
**David LISTOKIN**
- P. 1675**      **ID 232**  
Macro reality of complex territorial identity. Pompeii among sign, track and history  
**Rossella BICCO, Ludovico MASCIA, Pasquale VAIANO**
- P. 1685**      **ID 233**  
Archipelago city: an inhabited desert?  
**Silvana SEGAPOLI**
- P. 1692**      **ID 234**  
Technical and scientific protocol for the multitemporal airborne surveying  
**Carmine GAMBARDELLA, Nicola PISACANE, Pasquale ARGENZIANO, Alessandra AVELLA, Stefano BASTONI, Giuseppe CASBARRA**

- P. 1716**      **ID 235**  
Technological evolution of the survey: a methodological approach to the Mobile Mapping Systems  
**Lina ABATEGIOVANNI**
- P. 1726**      **ID 236**  
Reading the territory. Signs graphics and remote sensing images  
**Rosaria PARENTE**
- P. 1730**      **ID 237**  
Regeneration of Carditello  
**Gilda EMANUELE**
- P. 1736**      **ID 238**  
Recovery plan and redevelopment of an area in 'Salice'( Foggia)  
**Gianluca CIOFFI**
- P. 1744**      **ID 239**  
The Sanfelician portal in neapolitan architecture of XVIII century  
**Vincenzo CIRILLO**