

ripam 8.5

Rencontres internationales du patrimoine
architectural méditerranéen

RECUEIL DES RÉSUMÉS



Villages et quartiers à risque d'abandon.
Stratégies pour la connaissance, la valorisation et la restauration.

INTERMEDIATE CONFERENCE - FIRENZE 2020
8.5th Intermediate total on line Edition Firenze 25/26 November 2020



UNIVERSITÀ
DEGLI STUDI
FIRENZE
DIDA
DIPARTIMENTO DI
ARCHITETTURA



Università degli Studi di Genova
Dipartimento Architettura e Design
Scuola Politecnica

con il patrocinio di

REGIONE
TOSCANA



spc ISTITUTO di SCIENZE DEL PATRIMONIO CULTURALE

ripam 8.5

Rencontres internationales du patrimoine
architectural méditerranéen

RECUEIL DES RÉSUMÉS

Villages et quartiers à risque d'abandon.

Stratégies pour la connaissance, la valorisation et la restauration.

INTERMEDIATE CONFERENCE - FIRENZE 2020

8.5th Intermediate total on line Edition Firenze 25/26 November 2020

*a cura di: Saverio Mecca, Susanna Caccia Gherardini,
Massimo Carta, Giuseppe De Luca, Fabio Fratini, Stefano Galassi,
Lamia Hadda, Giovanni Pancani, Daniela Pittaluga.*

En couverture: *une vue hivernale du village de montagne de Quota, dans le Casentino.*

Il volume è l'esito di un progetto di ricerca condotto dal Dipartimento di Architettura dell'Università degli Studi di Firenze.

La pubblicazione è stata oggetto di una procedura di accettazione e valutazione qualitativa basata sul giudizio tra pari affidata dal Comitato Scientifico del Dipartimento DIDA con il sistema di *blind review*.

Tutte le pubblicazioni del Dipartimento di Architettura DIDA sono *open access* sul web, favorendo una valutazione effettiva aperta a tutta la comunità scientifica internazionale.

progetto grafico

didacommunicationlab

Dipartimento di Architettura
Università degli Studi di Firenze

Giacomo Talozzi

Federica Giulivo



didapress

Dipartimento di Architettura
Università degli Studi di Firenze
via della Mattonaia, 8 Firenze 50121

© 2020

ISBN 9788833381237

President:

Saverio Mecca (DiDA, Università degli Studi di Firenze, Italy)

Members:

Susanna Caccia Gherardini (DiDA, Università degli Studi di Firenze, Italy)

Massimo Carta (DiDA, Università degli Studi di Firenze, Italy)

Giuseppe De Luca (DiDA, Università degli Studi di Firenze, Italy)

Fabio Fratini (CNR-Firenze, Italy)

Stefano Galassi (DiDA, Università degli Studi di Firenze, Italy)

Lamia Hadda (DiDA, Università degli Studi di Firenze, Italy)

Giovanni Pancani (DiDA, Università degli Studi di Firenze, Italy)

Daniela Pittaluga (DAD- Università degli Studi di Genova, Italy)

Web design, editorie:

Giacomo Talozzi (Università degli Studi di Firenze, Italy)

COMITÉ SCIENTIFIQUE

Tous les membres du Comité Permanent RIPAM sont également membres du Comité Scientifique.

Imane Bennani, (Université Internationale de Rabat, Morocco)

Iman Meriem Benkirane, (UEMF Université Euromed de Fès, Morocco)

Susanna Caccia Gerardini (DiDA, Università degli Studi di Firenze, Italy)

Massimo Carta (DiDA, Università degli Studi di Firenze, Italy)

Francesco Valerio Collotti (DiDA, Università degli Studi di Firenze, Italy)

Giuseppe De Luca (DiDA, Università degli Studi di Firenze, Italy)

Mario De Stefano (DiDA, Università degli Studi di Firenze, Italy)

Giovanna Franco (Università degli Studi di Genova, Italy)

Stefano Galassi (DiDA, Università degli Studi di Firenze, Italy)

Marco Gaiani (Università degli Studi di Bologna, Italy)

Carlo Alberto Gemignani (Università degli Studi di Parma, Italy)

Lamia Hadda (DiDA, Università degli Studi di Firenze, Italy)

Fakher Kharrat (ENAU, Université de Carthage, Tunisie)

Faouzi Mahfoudh (INP, Institut National du Patrimoine de Tunis, Tunisia)

Saverio Mecca (DiDA, Università degli Studi di Firenze, Italy)

Costanza Miliani, (CNR ISPC - Firenze, Italy)

Camilla Mileto (Università di Valencia, Spain)

Giovanni Minutoli (DiDA, Università degli Studi di Firenze, Italy)

Stefano Francesco Musso (Università degli Studi di Genova, Italy)

Massimo Osanna (Parco archeologico di Pompei, Italy)

Annunziata Maria Oteri (Politecnico di Milano, Università di Milano, Italy)

Giovanni Pancani (DiDA, Università degli Studi di Firenze, Italy)

Julio Navarro Palazon, (Escuela de Estudios Arabes de Granada (CSIC), Spain)

Claudio Piferi (DiDA, Università degli Studi di Firenze, Italy)

Luisa Rovero (DiDA, Università degli Studi di Firenze, Italy)

Nicola Ruggieri (Soprintendenza di Cosenza, Italy)

Valentina Russo (Università degli Studi di Napoli "Federico II", Italy)

Ahmed Saadaoui (FLAHM, Université de la Manouba de Tunis, Tunisia)

Marco Tanganelli (DiDA, Università degli Studi di Firenze, Italy)

Giacomo Tempesta (DiDA, Università degli Studi di Firenze, Italy)

Fernando Vegas (Università di Valencia, Spain)

Armand Vokshi (Università Politecnico di Tirana, Albania)

Giuliano Volpe (Università degli Studi di Bari, Italy)

Giorgio Verdiani (DiDA, Università degli Studi di Firenze, Italy)

QUE EST-CE QUE RIPAM:

En 2005, des chercheurs, universitaires, historiens, scientifiques du patrimoine, architectes, conservateurs issus de pays et d'institutions du bassin méditerranéen ont souhaité établir des liens privilégiés autour des enjeux du patrimoine architectural. Ils ont ainsi initié des rencontres alternativement de chaque côté des rives de la Méditerranée, à Meknès (Maroc) en 2005, à Marrakech (Maroc) en 2007, à Lisbonne (Portugal) en 2009, à M'sila (Algérie) en 2012, à Marseille (France) en 2013, à Monastir (Tunisie) en 2015. Ces rencontres ont réaffirmé à chaque fois la volonté de les pérenniser, de partager des connaissances et de conforter la conservation du patrimoine bâti dans les politiques et consciences nationales. Leur succès avec plus d'une centaine de participants par édition a aussi montré le besoin de les structurer pour mieux faire connaître et accroître ce réseau de compétences et faire de cette heureuse initiative de près de 10 ans une rencontre incontournable pour le patrimoine architectural méditerranéen. Les RIPAM sont à la fois des rencontres et un réseau de personnes et d'institutions œuvrant à la connaissance et à la conservation du patrimoine architectural et urbain méditerranéen. La communauté RIPAM regroupe des universitaires, des responsables de biens patrimoniaux, des professionnels de la conservation et de la restauration, des scientifiques du patrimoine, des professionnels de l'architecture, des urbanistes... qui étudient, analysent et travaillent sur tous les types et composantes de ce patrimoine architectural: histoire, type architectural (urbain, rural, industriel, officiel, domestique, ...), archéomatériaux et conservation matérielle, techniques de construction et de conservation, structure urbaine et urbanisme, réalisation architecturale, méthodes d'analyse et d'investigations, documentation et archives d'architecture, législation et réglementation, gestion et valorisation, mesures de prévention...

Les RIPAM constituent un lien privilégié pour échanger et dialoguer sur ces sujets, présenter des travaux de recherches, de conservation ou de mise en valeur. Elles reposent sur les principes et objectifs suivants:

– Connaitre et faire connaître le patrimoine architectural et urbain méditerranéen afin de participer à sa conservation, sa transmission aux générations futures et sa valorisation, dans le cadre des études et politiques patrimoniales en lien étroit avec les enjeux du monde méditerranéen contemporain;

– D'assurer à cette connaissance et à sa diffusion une haute valeur scientifique, une diversité d'approches dans l'affirmation d'une communauté méditerranéenne et le respect des spécificités de chacun;

– De favoriser les échanges et le partage d'expériences entre les deux rives.

COMITÉ PERMANENT RIPAM

José Alberto Alegria (*Università degli Studi Lusiana de Lisbonne, Portugal*)

Taoufik Belhareth (*ENAU- Université de Carthage, Tunisie*)

Philippe Bromblet (*CICRP- Marseille, France*)

Roberto Bugini (*CNR- Gino Bozza Milano, Italy*)

Younes El Rhaffari (*Faculty of Sciences Mohammed 5 University, Rabat, Maroc*)

Fabio Fratini (*CNR-Firenze, Italy*)

Filipe Gonzalez (*FAA, Faculdade de Arquitectura, Universidade Lusiana de Lisbonne, Portugal*)

Mustapha Haddad (*Fac, Des Sciences de Meknès, Maroc*)

Mounsif Ibnoussina (*Université Cadi Ayyad, Marrakech, Maroc*)

Said Kamel (*Faculté des Sciences de Meknès, Maroc*)

Boudjemaa Khalfallah (*IGTU- Université de M'sila, Algérie*)

Roland May (*CICRP- Marseille, France*)

Mohamed Mili (*IGTU- Université de M'sila, Algérie*)

Mohamed Nocairi (*Université Cadi Ayyad, Marrakech, Maroc*)

Daniela Pittaluga (*DAD- Università degli Studi di Genova, Italy*)

Abderrahim Samaouali (*Faculty of Sciences Mohammed 5 University, Rabat, Maroc*)

Abid Sebai (*ENAU- Université de Carthage, Tunisie*)

	<i>Session 1</i>	
Annunziata Maria OTERI, Nino SULFARO <i>Revitalization Strategies between Culture and Social Marginalisation. The Case of the Historic Centre of Cosenza.</i>	pag 16	
Giovanni Battista COCCO, Ester COIS, Caterina GIANNATTASIO, Andrea PINNA, Valentina PINTUS <i>The permanence of form. A methodological proposal for the re-signification of depopulated small towns of Sardinia.</i>	pag 18	
Camilla MILETO, Fernando VEGAS, Valentina CRISTINI, Lidia GARCIA <i>Examples of traditional spanish architecture “on the edge”: an analysis of social benchmarks related to conservation policies.</i>	pag 20	
Fatma-Zohra HARIDI, Ali BOULEMAREDJ, Ala Eddine LAOUIER, Amira OULED-DIAF, Amel SAIFI <i>Abandon de Ksour Sahariens entre indifférence et désintéressement.</i>	pag 22	
Andrea UGOLINI, Chiara MARIOTTI <i>Planning and managing the cultural reactivation of internal areas. The experience of Sextantio in Santo Stefano di Sessanio.</i>	pag 24	
Teresa M. CAMPISI <i>Knowledge and strategies for conservation of historic technologies.</i>	pag 26	
Caterina VALIANTE <i>Fragilities and resources of depopulated mountain villages: consequences of reactivation initiatives on the architectural heritage. The case of northern Belluno province.</i>	pag 28	
Sara ROCCO <i>Effects of abandonment in the city of Pula after Italian exodus.</i>	pag 30	
Valentina CINIERI, Alisia TOGNON <i>Mountainous abandoned areas and territorial fragilities. Cultural preservation, reuse, improvement strategies.</i>	pag 32	
Osama HAMDAN, Carla BENELLI, Luigi MARINO <i>With the key on the heart, between the pain of loss and future hope.</i>	pag 34	
Emanuele ROMEO <i>Les conflits religieux et sociaux comme cause de la transformation et de l’abandon récent de certains établissements byzantins en Asie Mineure.</i>	pag 36	
Caterina GARDELLA, Silvana VERNAZZA <i>Modernité, abandon des villages, hypothèses futures: des cas italiens en Ligurie.</i>	pag 38	
Riccardo RUDIERO <i>La communauté patrimoniale vaudoise, entre phénomènes de vivacité culturelle et dépeuplement.</i>	pag 40	
Deborah SANZARO, Maria Rosaria VITALE <i>Territoires en déclin: changements démographiques et crise des villages et des villes moyennes dans l’intérieur de la Sicile.</i>	pag 42	
Pierfrancesco FIORE, Emanuela D’ANDRIA <i>An innovative analysis tool for the small towns’ valorization: the Riccia municipality’s case study.</i>	pag 44	

Silvia FINESCHI, Domenico DEBENEDICTIS, Laura BURZAGLI, Miguel Reimão COSTA, Christian DEGRI-GNY, Silvia RESCIC, Maria Dolores ROBADOR, Cristiano RIMINESI <i>Toward sustainable regeneration of historic endangered towns: strategies for increasing resilience.</i>	pag 46
Daniela PITTALUGA <i>Quartiers semi-abandonnés: stratégies partagées de valorisation du patrimoine immatériel pour la conservation du patrimoine matériel.</i>	pag 48
	<i>Session 2</i>
Gianfranco PERTOT <i>Permanence in absence. Can the current fortunate preservation of historic and environmental heritage of Val Cervo (Piedmont, Italy), despite economic crises and dramatic depopulation, be considered a legacy of the idea of a different use of territory of Ermenegildo Zegna and Adriano Olivetti?</i>	pag 50
Rossella MASPOLI <i>Modern and industrial: the new abandonment. The case of the canavese area.</i>	pag 52
Manuela MATTONE, Elena VIGLIOCCO <i>New proximity tourism opportunities. Hydroelectric heritage: a new alliance between owners and tourist/citizens.</i>	pag 54
Laura MARCHIONNE, Elisa PARRINI <i>The “Canto di Stampace” – a case study for the requalification and urban reconnection of the City of Pisa through the ancient defensive structures.</i>	pag 56
Pierpaolo FREDIANI <i>Contemporary architecture in historic villages? The case of Uglianfreddo.</i>	pag 58
Michele COPPOLA, Letizia DIPASQUALE <i>Traditional masonry buildings on the Tuscan Apennine Mountains. The abandoned villages around Firenzuola.</i>	pag 60
Sara GARUGLIERI, Valentina PUGLISI <i>The S. Appiano Pieve in Barberino Val d’Elsa (Tuscany, Italy): restoration and enhancement for a sustainable reuse.</i>	pag 62
Elena VITAGLIANO <i>Archipelago Campania. Abandoned villages and conservation strategies for needs of post-pandemia tourism.</i>	pag 64
Benedetta SILVA <i>Return to the Inner Area sin the post covid: rehabilitate the wide spread building between challenges and potential conflicts.</i>	pag 66
Barbara TETTI <i>The Village of Monterano: Identity Features and Restoration.</i>	pag 68

Renata PICONE, Luigi VERONESE, Mariarosaria VILLANI pag 70
Beyond earthquake. Knowledge for restoration. The case-study of Cornillo Vecchio (Amatrice, Italy).

Lorenza COMINO, Simona G. LANZA pag 72
Landscape and cultural identity - some cases of western Liguria.

Nadia FRULLO pag 74
Les processus d'abandon et de resignification des lieux après le tremblement de terre: deux études de cas siciliennes en comparaison.

Daniela PITTALUGA pag 76
Traces of history in the semi-abandoned villages hit by the earthquake: elements for a conscious restoration.

Gianfilippo VALENTINI pag 78
The Castle of Sant'Apollinare in Marsciano (PG), survey, documentation and proposal to enhance the culture of the olive tree in a medieval village at risk of abandonment after seismic events.

Session 3

Barbara PAOLETTI, Marco TANGANELLI pag 80
Multilevel analysis for the protection of the architectural heritage of small villages.

Enrica PETRUCCI, Lucia BARCHETTA, Diana LAPUCCI pag 82
Vulnerability of historical centers: the case of Camerino (Marche Region).

Giorgia PREDARI, Cristiana BARTOLOMEI, Cecilia MAZZOLI, Caterina MORGANTI, Giovanni MOCHI pag 84
Knowledge methods for the protection of minor historical centres affected by earthquakes.

Farida SEHILI pag 86
The social and biophysical vulnerabilities and the modelling of boumerdes seismic disaster in 2003 (Algeria).

Simona TALENTI, Annarita TEODOSIO pag 88
Wounded places: from devastation to warning.

Alessandra ANGELONI, Andrea GIANNANTONI, Michele PARADISO pag 90
The church of s.Giovanni battista decollato at mensano (siena): an assessment of the structural condition of the church and adjacent buildings.

Giovanni MINUTOLI, Andrea ARRIGHETTI pag 92
Documentation and enhancement of the historical town center of Brolo.

Stefano GALASSI, Eloisa FAZZI, Giacomo TEMPESTA, Ugo TONIETTI, Luisa ROVERO, Giorgio VERDIANI, Maria Luisa SATTA, Giovanni DI MAIO, Rossella PACE, Nicola RUGGIERI pag 94
Seismic Risk Assessment of Ruins in Pompeii's Archaeological Site through the reference case study of the Stabian Baths.

Session 4

Fatima-Zahra BOUGHANEM, Etienne WOLFF pag 96
A la mémoire de Sainte Crispina; Etude de la basilique paléochrétienne de Theveste.

Sana SMADAH pag 98
La cité minière de Djerissa, un patrimoine industriel en abandon.

Hazar SOUISSI BEN HAMAD pag 100
De l'abandon à la valorisation: Le noyau historique de Testour entre dynamique et dysfonctionnement. conservation du patrimoine matériel.

Faiza MATRI pag 102
Quelles stratégies pour la conservation et la mise en valeur des ksours du Sud-est de la Tunisie: cas de Béni-Khédache.

Giovanni COPPOLA pag 104
Earthquakes, abandonments and identities through some case studies in Irpinia.

Francesco PISANI pag 106
L'activité de restauration de Piero Sanpaolesi au Moyen-Orient, quelques exemples pour mieux comprendre et protéger l'architecture méditerranéenne.

Joe ZAATAR pag 108
A modern neighborhood for prosperity. The case of the International and Permanent Fair of Lebanon in Tripoli by Oscar Niemeyer.

Anna Chiara BENEDETTI, Giorgia PREDARI, Riccardo GULLI, Felice MONACO pag 110
Enhancement strategies for historic towns. A proposal for the village of San Giovanni Lipion.

Wassila OUAAR pag 112
Tourism Marketing in the Mediterranean Arab Countries: a Strategy to Restore Internal Regions at Risk of Abandonment.

Pilar MIGUEL-SIN MONGE, Gema RAMÍREZ PACHECO pag 114
New tourism models as a mechanism for the conservation of cultural heritage: the case of Cádiz.

Lamia HADDA pag 116
L'architecture traditionnelle des villages perchés du centre-nord tunisien: le cas de Zriba el-Alia.

Session 5

Maria Luisa GERMANA' pag 118
Holistic Approach to the Mediterranean Architectural Heritage at risk of abandonment: the case study of Montalbano Elicona (Italy).

Cheima AZIL, Luisa ROVERO, Boualem DJEBRI, Fabio FRATINI, Giulia MISSERI, Ugo TONIETTI pag 120
Vernacular architecture of the Souf region (Algeria): urban morphology, architectural features and constructive technique.

Vidal GOMEZ MARTINEZ, Blanca del ESPINO HIDALGO, María Teresa PEREZ CANO pag 122
Beyond the no name house. New studies: Utrera.

Saša MIHAJLOV, Marina PAVLOVIC', Andjelija MILASINOVIC' pag 124
Reuse as a model for the preservation of rural architecture.

Session 6

Karima MAZIRH, Mounsi IBNOUSSINA, Rachida KASIMI, Omar WITAM, Mohamed NOCAIRI, pag 126
 Oksana YBAK-TURCHANINA
Réinvestir le patrimoine abandonné pour faire face à l'urgence du COVID 19: cas du village AZRO (Haut Atlas de Marrakech, Maroc).

Fabio FRATINI, Oana Adriana CUZMAN, Silvia RESCIC pag 128
Montecastelli Pisano and Cerbaiola: virtuous surviving examples of two small old villages.

Marco ABBO, Francesca Luisa BUCCAFURRI pag 130
Dialogue around abandonment.

Session 7

Matteo BIGONGIARI pag 132
The digital documentation of the mountain village of Rocca Ricciarda: between medieval and modern archeology.

Marta ZERBINI pag 134
L'architecture des villages ruraux en Arménie centrale : relevés et interventions pour une stratégie de développement durable.

Giovanni PANCANI, Gianfilippo VALENTINI pag 136
Castel Focognano, survey and documentation of a central Apennine borough which has fallen from the provincial capital to a peripheral hamlet, now at risk of abandonment.

Marco RICCIARINI, Adelaide TREMORI pag 138
Garfagnana, a project for the rebirth.

Alessio CARDACI, Antonella VERSACI, Luca Renato FAUZIA, Michele RUSSO pag 140
Explorer les villes abandonnées, préserver la mémoire des lieux: le cas d'étude de Santa Margherita dans la vallée du Belice en Sicile.

Paola PUMA pag 142
The identity survey for the sustainable enhancement of the historical contexts, small towns, and villages.

Giovanni PANCANI, Giacomo TALOZZI pag 144
The village of Strumi near Poppi, searching the remains of the ancient Abbey of San Fedele in Strumi.

Carlo COSTANTINO, Angelo MASSAFRA, Davide PRATI, Simone GARAGNANI, Giovanni MOCHI pag 146
The safeguard of built heritage in archeological sites, an interdisciplinary approach based on light-weight uav photogrammetry and terrestrial laser scanning survey.

Antonio BENAVIDES LÓPEZ, Emma VERDELLI, Giorgio VERDIANI pag 148
Abandoned villages in the area of Granada. The forgotten heritage of Tablate.

Laura AIELLO pag 150
Le musée diffuse: stratégie pour valoriser les villages à risque d'abandon. L'étude de cas de Pitigliano entre patrimoine matériel et immatériel.

Giovanni PANCANI pag 152
Quota, a struggle of a mountain village to assert its survival.

Session 8

Massimo CARTA pag 154
Places of value, abandonment and transformation: the importance of a greater integration of disciplinary tools.

Angela PARISI pag 156
Territorial Capital: a source for the revival in inner areas.

Domenico D'UVA Chiara RAVAGNAN, Chiara AMATO, Giulia BEVILACQUA pag 158
Slow mobility as a connection driver for fragile territories between coastline and inner areas.

Mariacristina GIAMBRUNO, Sonia PISTIDDA pag 160
Critical issues and prospects for a post-Covid re-appropriation of built heritage in the marginal internal areas in Lombardy.

Adriana GHERSI pag 162
Autour des villages historiques abandonnés: valorisation, mise en réseau des ressources et stratégies communes de gestion du paysage.

Marco ROSSITTI, Francesca VIGOTTI pag 164
Community engagement for the enhancement of rural heritage systems: Pantelleria as case study.

Roberto BOBBIO, Paolo ROSASCO pag 166
Recovery and enhancement strategies for the villages of the Ligurian hinterland. The case study of the Fontanabuona valley.

Giampiero LOMBARDINI pag 168
Agriindustrial dynamics and settlement heritage at risk. The case of the Albenga sub-region.

Carlo A. GEMIGNANI, Luisa ROSSI pag 170
Villas, bâtiments ruraux et architectures militaires entre abandon et récupération: l'habitat historique rural dispersé de l'île Palmaria (La Spezia - Italie).

Amina HAUCHE pag 172
L'abandon progressif des héritiers des habitations des quartiers d'origine coloniale. Cas de la cité tlijene (ex cité Levy) setif.

Joli MITROJORGJI pag 174
Towards a multidisciplinary approach for conservation of cultural settlements in Albania .

Elisa MIHO, Joana LAMAJ pag 176
Dhoksat, architecture through centuries.

Giulia PETTOELLO pag 178
A 'filter building in the Cabanyal Quarter on Valencia.

Claudia CAVALLO, Caterina LISINI pag 180
Paysage sans paysans: lectures de projet.

Enrico BASCHERINI pag 182
Recompose the minor places, the value of the dictionary logic of architecture.



Unlike the numerous studies on historical centres which have been deeply addressed, the seismic risk of archaeological sites is a topic not much discussed in the scientific literature. It represents a complex assessment aimed at mitigating the vulnerability ancient artefacts to earthquakes and, therefore, to reduce the loss of inestimable historic and artistic heritage.

The archaeological site of Pompeii - and in general of the Vesuvius centres - since the discovery in the Eighteenth century has been, and it is still today, the field of a battle, which attempts to ensure the survival of artefacts characterized by "fatigued" materials, without roof structures and therefore lacking in constraints, exposed to the strongly aggressive atmospheric pollution of the cities of the 21st century and located in areas where the expected ground acceleration values are of medium degree. Moreover, the methods necessarily of "integral" conservation aimed at preserving both the material and the original configuration allow "soft interventions" that moderately improve the response of ruins to the stresses deriving from gravitational loads and, in particular, from seismic actions.

This paper describes the research project *Analysis, interpretation and evaluation of the seismic vulnerability of the construction elements constituting the archaeological apparatus of the Pompeii site*, signed in March 2018 between the Department of Architecture of the University of Florence and the Parco Archeologico di Pompei. The purpose of the study is the definition of a thematic reference map based on the definition of the values of the site risk indices.

The research consists of several phases. Preliminarily, the developed methodology includes investigations on the seismic behaviour of the single construction elements - arches, vaults, colonnades, free walls and walls with various types of constraints, non-structural elements etc. - in their variability of geometry, masonry organization and material characteristics, crack and deformation pattern, considering

the evolutionary aspect of the construction, with particular regard to the strategies put in place by the ancient Romans to repair or reinforce the damaged buildings. Such a detected potential level of damage, in terms of limit states, is obtained through calculation codes (some of them have also been developed by the authors) selected to predict the behaviour of ancient artefacts. Subsequently, the achieved data are related and implemented considering the occurrences of single construction elements in the archaeological site, the interactions with contiguous buildings as well as possible site-effects, thus creating a seismic risk map for each individual insula.

Aimed at extending the methodology proposed herein to other insulae of the archaeological site in future studies, its effectiveness and validity are assessed by analysing the reference case study of the Stabian Baths, a block whose seismic vulnerability has already been analysed by the authors in a previous paper.

Francesco Alberti	Università di Firenze	Giovanni Pancani	Università di Firenze
Stefano Bertocci	Università di Firenze	Elena Pecchioni	Università di Firenze
Anna Boato	Università di Genova	Andrea Marcel Pidalà	Università di Firenze
Enrica Campus	Architetto e Urbanista, libero professionista	Alberto Pireddu	Università di Firenze
Emma Cantisani	CNR ISPC	Carlo Pisano	Università di Firenze
Alessio Cardaci	Università di Bergamo	Daniela Pittaluga	Università di Genova
Nicola Cavalagli	Università di Perugia	Paola Puma	Università di Firenze
Giovanni Coppola	Università di Napoli “Suor Orsola Benincasa”	Nicola Ruggieri	Soprintendenza Archeologica, Belle arti e Paesaggio per le province di Catanzaro, Cosenza e Crotone
Fabio Fratini	CNR ISPC		
Cecilia Fumagalli	Università di Napoli	Emanuele Romeo	Politecnico di Torino
Marco Gaiani	Università di Bologna	Maddalena Rossi	Università di Firenze
Stefano Galassi	Università di Firenze	Valentina Russo	Università Federico II, Napoli
Maria Rita Gisotti	Università di Firenze	Elena Tarsi	Università di Firenze
Lamia Hadda	Università di Firenze	Marco Tanganelli	Università di Firenze
Manuela Mattone	Politecnico di Torino	Francesco Tioli	Università di Firenze
Saverio Mecca	Università di Firenze	Andrea Ugolini	Università di Bologna
Giovanni Minutoli	Università di Firenze	Giorgio Verdiani	Università di Firenze
Francesco Monacci	Università di Pisa	Roberto Vezzosi	Architetto e Urbanista, libero professionista
Lucina Napoleone	Università di Genova	Stefania Viti	Università di Firenze
Annunziata Maria Oteri	Politecnico di Milano	Paolo Zampieri	Università di Padova

