

Paola De Joanna, Dora Francese, Antonio Passaro  
(Edited by)

Proceedings of the  
1st International SMC – CITTAM Conference

## **Sustainable Mediterranean Construction**

**Sustainable environment in the Mediterranean  
region: from housing to city and land scale  
Construction**

Ricerche di tecnologia dell'architettura  
**FRANCOANGELI**

## Table of contents

<b>Preface, D. Francese</b>	pag.	13
<hr/>		
<i>Keynote</i>		
<b>Sustainable environment in the Mediterranean region: from housing to urban and land scale construction, D. Francese</b>	»	15
<b>Traditional answers to bioclimatic habitat in Mediterranean countries, P. Casalonga</b>	»	31
<b>Lightweight constructions for the Mediterranean climate, N. Tsinikas</b>	»	35
<b>Sustainable conservation in Egypt: paradigm and issues, D. El Kerdany</b>	»	41
<hr/>		
<i>Papers</i>		
Topic 1		
Ancient technologies of the material culture in the Mediterranean area		
<b>Sardinia's historic districts renovation manuals, C. Atzeni</b>	»	51
<b>The living project in the Etruscan culture, G. Ausiello</b>	»	60
<b>The vernacular architecture of the Tunisian oasis-cities: element of a specific cultural landscape, F. Ben Ali</b>	»	72
<b>Local identity and sustainability of middle age Italian towns, G. Duca</b>	»	81
<b>“Vale Dos Vinhedos” - Landscape and cultural heritage. Wood architecture created by Italian immigrants in the South of Brazil, M. R. Escorteganya Laner, M. Fumo, J. Bayon, A. Gonçalves Santiago</b>	»	91
<b>Rediscovering old truths, G. Mitrache</b>	»	102
<b>The wall, an element of identity and a structuring component of the Mediterranean architecture, B. Pau</b>	»	112

<b>Historic heritage: a model of sustainable development, E. Petroncelli</b>	pag.	121
<b>Traditional wooden buildings in Portugal. The Avieira house, M. Silva, P. Mendonça, J. Branco</b>	»	129

**Topic 2**  
**Innovation within sustainable housing in the Mediterranean culture**

<b>The Galeb of southern tunisia: from tradition to innovation, F. Ben Ali, F. Iucolano, D. Piscopo, M. Fumo, D. Caputo</b>	»	141
<b>Approach to classification and evaluation of naturally cooled buildings and analysis of what impact passive cooling systems have on architectural design, G. Cadoni</b>	»	149
<b>Adaptive thermal comfort in mediterranean buildings, G. Desogus</b>	»	160
<b>Thermal performance of reflective insulation in mediterranean climate, E. Di Giuseppe, M. D'Orazio, C. Di Perna</b>	»	169
<b>Strategies for energy recovery in respect of quality: an example of rural architecture in Molise, G. La Fianza, D. Fornaro</b>	»	181
<b>Building technologies and eco-efficiency for urban retrofit, M. Losasso</b>	»	190
<b>The building envelope between process and product innovation, M.T. Lucarelli, M. Mandaglio, D. Pennestrì</b>	»	196
<b>Longlife Design. Integrated design for sustainable buildings, K. Rückert, M. I. Kiefel, S. Michel</b>	»	207
<b>“Abitare mediterraneo” database: an open system, M. Sala, L. Boganini</b>	»	212
<b>Technologies aimed at eco efficiency in the experimentation of mediterranean social housing, F. Tucci</b>	»	219
<b>Mediterranean architecture and building materials in modern Greece, F. Vavili, M. Karantaki</b>	»	230

Topic 3  
Sustainable urban design for the  
Mediterranean city

<b>The environmental quality of open spaces in the mediterranean area,</b> <i>M. I. Amirante, M. Cannaviello, R. Franchino, C. Frettoloso, F. Muzzillo, A. Violano</i>	pag.	245
<b>Cultural sustainability and urban quality, N. Carrà</b>	»	258
<b>Mediterranean vision for continental urban space,</b> <i>A. M. Constantin</i>	»	265
<b>Soft mobility in the consolidated city, G. Critelli, A. Taccone</b>	»	275
<b>A new eco-district in Barcelona,</b> <i>J. M. de Botton y Halfon, F. Cocirio</i>	»	285
<b>City as leaf nervation, C. Fallanca De Blasio, M. Umbro</b>	»	290
<b>Arezzo case study: the new model of industrial settlement in Tuscany,</b> <i>P. Gallo, V. Gianfrate</i>	»	301
<b>Urban form and city environment. a proposed methodology to understand sustainability,</b> <i>M. Rigillo, M. Clemente, G. Esposito De Vita, S. Gilchrist</i>	»	312
<b>What sloterdijk's foam city has to do with “open source” urbanism, and further, with the Mediter- ranean city? G. Scripcariu-Ochiai</b>	»	325

Topic 4  
Surveys and configuration in  
Mediterranean architecture

<b>Memory of an ephemeral architecture, A. Davico, P. Mendonça</b>	»	335
<b>Borgo-clima: energetic and environmental retrofitting of the historic fabric, P. Davoli</b>	»	345
<b>Interpretation of language decoded by pre-existing, G. Foti, D. Iacono</b>	»	352

<b>Interior partition walls in mediterranean climates: lightweight versus heavyweight, P. Mendonça, M. Macieira</b>	pag.	363
<b>About urban insertions and space discontinuities, M. Mihaila</b>	»	371
<b>New acquisitions on palazzo Marzano in Carinola, F. Miraglia</b>	»	377
<b>Living, relationships, forms e types, S. Mocci</b>	»	383
<b>Contemporary evolution of the local built-up areas in the Mediterranean, F. Oggiano</b>	»	395

**Topic 5**  
**Sustainable materials, products and building processes in the Mediterranean area**

<b>Bioclimatic approach in urban open space retrofit intervention: the case of Prati area in Rome, A. Battisti, L. Martinelli</b>	»	405
<b>Strategies for sustainable development in romanian coastal zone of the black sea in use of renewable energies, A. Florescu, G. Bandoc, M. Degeratu</b>	»	414
<b>New dynamic building envelope systems for mediterranean area, P. Gallo, R. Romano, M. Villalta</b>	»	422
<b>Caractérisation mécanique in situ et au laboratoire d'un pisé d'âge saadien, N. Gamrani, K. Rkha Chaham., F. Fratini, L. Rovero, U. Tonieti</b>	»	434
<b>New sustainable building solutions in Sardinia, A. Meloni</b>	»	438
<b>Sustainability and architectural bio-compatibility, A. Mitrache</b>	»	445
<b>Converting a large scale brick plant to alternative/renewable fuels in an industrializing country, F. Moedinger, F. Ast</b>	»	455
<b>Improving buildings refurbishment through operative conditions evaluation, S. Monteiro da Silva, P. Silva, M. Almeida, L. Bragança</b>	»	462
<b>Support tools for building thermal rehabilitation, A. Novais, M. Almeida</b>	»	472

<b>Les remparts de Marrakech (Maroc): caractérisation géotechnique et minéralogique, <i>K. Rkha Chaham, N. Gamarani</i></b>	pag.	482
-------------------------------------------------------------------------------------------------------------------------------------	------	-----

**Topic 6**  
**Mediterranean sites: archaeological  
areas and settlements**

<b>Compatible use and environmental vivibility in the Acerra Castle, Naples,</b>	»	489
<i>C. Filagrossi Ambrosino, C. Balestra, L. Maglio, D. Petrone</i>		
<b>The urban park of aragon's wall in Naples,</b>	»	500
<i>C. Grimellini, B. Marenga</i>		
<b>Interactions between ancient herculaneum and modern Ercolano, L. Mollo, P. Pesaresi, C. Biggi</b>	»	511
<b>Heat islands and urban structure, M. Stanganelli, M. Soravia, F. P. Migliaccio</b>	»	524
<b>Design and technologies for integration of archeological resources in environmental design. the strategic plan of Marsala, A. Tartaglia, R. Riva, S. Chirico</b>	»	535

**Topic 7**  
**Mediterranean landscape: paths works and  
water management**

<b>Identity of rural landscape. traditional constructions and hydraulic works in Cilento area, P. De Joanna, A. Passaro</b>	»	549
<b>From historical rural landscape to new urbanity in Sardinia, A. Dessì</b>	»	570
<b>Improving daylight quality in offices using fixed shading devices in hot climate region, A. A. Y Freewan</b>	»	578
<b>The cultural landscape of italian immigrant in rural historic sites, V. Gomes de Luca, A. Gonçalves Santiago</b>	»	590

<b>Study and proposal for the development of guidelines for areas subject to landscape bond (Molise) in view of energy conservation and improvement, G. La Fianza, D. Fornaro</b>	pag.	597
<b>Villages in the Interior of Portugal. The case of the Algarve, C. Rodrigues</b>	»	606