

# BEYOND ALL LIMITS CONGRESS 2018

International Congress on Sustainability in  
Architecture, Planning, and Design

---

Proceedings Book of The Extended Abstracts



ÇANKAYA UNIVERSITY



Università  
degli Studi  
della Campania  
*Luigi Vanvitelli*



UNIVERSITY OF  
PLYMOUTH

October  
**17-18-19**  
Ankara, Turkey

Proceedings Book of Extended Abstracts

# **BEYOND ALL LIMITS / 2018**

International Congress on Sustainability

in Architecture, Planning, and Design

ÇANKAYA UNIVERSITY  
MAIN CAMPUS

October 17-18-19, 2018



ÇANKAYA UNIVERSITY



Università  
degli Studi  
della Campania  
*Luigi Vanvitelli*



UNIVERSITY OF  
PLYMOUTH

Publishing Board: Rabia Çiğdem ÇAVDAR  
Papaty Nur DÖKMECİ YÖRÜKOĞLU  
Leyla ETYEMEZ ÇIPLAK  
Timuçin HARPUTLUGİL  
Zerrin Ezgi KAHRAMAN  
Ezgi ORHAN  
Ayça ÖZMEN  
Şafak SAKÇAK  
Özge SÜZER

Cover Design: Çetin TÜNGER  
Printed in: October, 2018  
Printed by: Teknoart Digital Ofset Reklamcılık Matbaacılık İth. İhr. San. ve Tic. Ltd. Şti.  
Cevizlidere Mah. 1288 Sok. No:1/1  
Çankaya | Ankara | Turkey  
+90 312 473 92 97 | [info@printandsmile.com.tr](mailto:info@printandsmile.com.tr)

ISBN: 978-975-6734-20-9

Copyright © 2018 by Çankaya University Press. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by Çankaya University.

In any case regarding the extended abstract/manuscript, the publisher/Çankaya University will not be responsible for handling any claims relating to authorship. The author(s) will have full responsibility for the contents of their extended abstract.



ÇANKAYA UNIVERSITY

Main Campus : Yukarıyurtçu Mahallesi Mimar Sinan Caddesi

No:4 06790, Etimesgut/ANKARA, +90 312 233 10 00

Balgat Campus: Çukurambar Mah. Öğretmenler Cad.

No: 14, 06530 Çankaya/ANKARA +90 312 284 45 00

<http://www.cankaya.edu.tr/>



Università  
degli Studi  
della Campania  
*Luigi Vanvitelli*

Viale Abramo Lincoln n. 5, 81100 Caserta

P.IVA: 02044190615

[protocollo@pec.unicampania.it](mailto:protocollo@pec.unicampania.it)

<https://www.unicampania.it/>



UNIVERSITY OF  
PLYMOUTH

Drake Circus, Plymouth

Devon PL4 8AA, United Kingdom

+44 1752 600600

<https://www.plymouth.ac.uk/>



## COMMITTEES

### Honorary Committee

Sıtkı ALP

Founder of Çankaya University

Dr. Hamdi MOLLAMAHMUTOĞLU, Prof.

Rector at Çankaya University

Dr. Giuseppe PAOLISSO, Prof.

Rector at Università degli Studi della Campania “Luigi Vanvitelli”

Dr. Kenan TAŞ, Prof.

Vice Rector at Çankaya University

Dr. Hüseyin Selçuk GEÇİM, Prof.

Vice Rector at Çankaya University

Dr. G. Francesco NICOLETTI, Prof.

Vice Rector at Università degli Studi della Campania “Luigi Vanvitelli”

Dr. Mario SPASIANO, Prof.

Vice Rector at Università degli Studi della Campania “Luigi Vanvitelli”

## Scientific Committee

Dr. Yasemin AFACAN, Assoc. Prof.	Bilkent University
Dr. Saadet AKBAY YENİGÜL, Asst. Prof.	Çankaya University
Dr. Deniz ALTAY KAYA, Asst. Prof.	Çankaya University
Dr. Stefano ANDREANI, Lecturer	Harvard University
Dr. Shady ATTIA, Prof.	University of Liège
Dr. Alessandro AURIGI, Prof.	University of Plymouth
Dr. Gülşah BAŞOK	Çankaya University
Dr. Mehmet Harun BATIRBAYGİL, Prof.	Çankaya University
Dr. Çiğdem BERDİ GÖKHAN, Assoc. Prof.	Çankaya University
Dr. Lorenzo CAPOBIANCO, Assoc. Prof	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Flaviano CELASCHI, Prof.	Alma Mater Studiorum Università di Bologna
Dr. Chi Kwan CHAU, Assoc. Prof.	The Hong Kong Polytechnic University
Dr. Kalliopi CHOURMOUZIADOU, Lecturer	Hellenic Open University
Dr. Medardo CHIAPPONI, Prof.	Università IUAV di Venezia
Dr. Alessandra CIRAFCI, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Rabia Çiğdem ÇAVDAR	Çankaya University
Dr. Gülser ÇELEBİ, Prof.	Çankaya University
Dr. Arturo DELL’ACQUA BELLAVITIS, Prof.	Politecnico di Milano
Dr. Gianfranco DE MATTEIS, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Özgen Osman DEMİRBAŞ, Assoc. Prof.	İzmir University of Economics

Dr. Halime DEMİRKAN, Prof.	Bilkent University
Dr. Pınar DİNÇ KALAYCI, Prof.	Gazi University
Dr. Papatya Nur DÖKMECİ YÖRÜKOĞLU, Asst. Prof.	Çankaya University
Dr. Hossam Eldin ELBOROMBOLY, Prof.	Ain Shams University
Dr. Cüneyt ELKER, Prof.	Çankaya University
Dr. Alpay ER, Prof.	Ozyegin University
Dr. Leyla ETYEMEZ ÇIPLAK	Çankaya University
Dr. Fabiana FORTE, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Rossella FRANCHINO, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Adriana GALDERISI, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Claudio GAMBARDELLA, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Claudio GERMAK, Prof.	Politecnico di Torino
Dr. Luigi GUERRIERO, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Arzuhan Burcu GÜLTEKİN, Assoc. Prof.	Ankara University
Dr. Timuçin HARPUTLUGİL, Asst. Prof.	Çankaya University
Dr. Jan HENSEN, Prof.	Eindhoven University of Technology
Dr. Zerrin Ezgi KAHRAMAN, Assoc. Prof.	Çankaya University
Dr. Jian KANG, Prof.	University College London
Dr. Ceren KATİPOĞLU, Asst. Prof.	Çankaya University
Dr. Kıvanç KİTAPÇI	Çankaya University
Dr. Gül KOÇLAR URAL, Prof.	İstanbul Technical University
Dr. Satish Basavapatna KUMURA	University of Plymouth

Dr. Cüneyt KURTAY, Prof.	Gazi University
Dr. Shuli LIU, Prof.	Coventry University
Dr. Luigi MAFFEI, Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Elena MANZO, Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. İpek MEMİKOĞLU, Asst. Prof.	Çankaya University
Dr. Francesca MUZZILLO, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Gülru MUTLU TUNCA, Asst. Prof.	Çankaya University
Dr. Ezgi ORHAN, Asst. Prof	Çankaya University
Dr. Mustafa ÖNGE, Asst. Prof.	Çankaya University
Dr. Zühal ÖZCAN, Prof.	Çankaya University
Dr. Simge ÖZDAL OKTAY	Çankaya University
Dr. Suna Senem ÖZDEMİR, Asst. Prof.	Çankaya University
Dr. Ayça ÖZMEN	Çankaya University
Dr. Cengiz ÖZMEN, Assoc. Prof.	Çankaya University
Dr. Fatma Gül ÖZTÜRK, Assoc. Prof	Çankaya University
Dr. Nicola PISACANE, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Daniela PISCITELLI, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Matthijs PRINS, Assoc. Prof.	Delft University of Technology
Dr. Patrizia RANZO, Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Ahmed RASHED, Prof.	British University in Egypt
Dr. Antonio ROSATO, Assoc. Prof.	Università degli Studi della Campania “Luigi Vanvitelli”

Dr. Silvana SEGAPOLI, Assoc. Prof.	Ecole Nationale Supérieure d'Architecture de Saint Etienne
Dr. Sergio SIBILIO, Prof.	Università degli Studi della Campania “Luigi Vanvitelli”
Dr. Ashish SHUKLA	Coventry University
Dr. Benedetta SPADOLINI, Prof.	Università degli Studi di Genova
Dr. Özge SÜZER, Asst. Prof.	Çankaya University
Dr. Mehmet TUNÇER, Prof.	Çankaya University
Dr. Ali TÜREL, Prof.	Çankaya University
Dr. Gülsu ULUKAVAK HARPUTLUGİL, Assoc. Prof.	Çankaya University
Dr. Zeynep UYSAL ÜREY, Asst. Prof	Çankaya University
Dr. Shaonong WEI, Prof.	East China Normal University
Dr. Pieter de WILDE, Prof.	University of Plymouth
Dr. Ornella ZERLENGA, Prof.	Università degli Studi della Campania “Luigi Vanvitelli”

## Organizing Committee

Dr. Alessandro AURIGI, Prof.	Congress President
Dr. Mehmet Harun BATIRBAYGİL, Prof.	Congress President
Dr. Luigi MAFFEI, Prof.	Congress President
Dr. Claudio GAMBARDELLA, Assoc. Prof.	Congress Chair
Dr. Timuçin HARPUTLUGİL, Asst. Prof.	Congress Chair
Dr. Pieter de WILDE, Prof.	Congress Chair
Dr. Pasquale ARGENZIANO, Researcher	
Dr. Alessandra AVELLA, Researcher	
Dr. Francesca CASTANÒ, Assoc. Prof.	
Dr. Rabia Çiğdem ÇAVDAR	
Dr. Claudia CENNAMO, Researcher	
Dr. Gianluca CIOFFI, Contract Professor	
Dr. Ornella CIRILLO, Researcher	
Dr. Claudia DE BIASE, Resarcher	
Dr. Marina D'APRILE, Researcher	
Dr. Papatya Nur DÖKMECİ YÖRÜKOĞLU, Asst. Prof.	
Dr. Leyla ETYEMEZ ÇIPLAK	
Dr. Caterina FIORENTINO, Researcher	
Dr. Caterina FRETTOLOSO, Researcher	

Dr. Zerrin Ezgi KAHRAMAN, Assoc. Prof.

Dr. Ceren KATİPOĞLU, Asst. Prof.

Dr. Satish Basavapatna KUMURA

Dr. Massimiliano MASULLO, Assoc. Prof.

Dr. İpek MEMİKOĞLU, Asst. Prof.

Dr. Ezgi ORHAN, Asst. Prof.

Dr. Ayça ÖZMEN

Dr. Cengiz ÖZMEN, Assoc. Prof.

Dr. Fatma Gül ÖZTÜRK, Assoc. Prof.

Dr. Özge SÜZER, Asst. Prof.

Dr. Antonella VIOLANO, Assoc. Prof.

Çetin TÜNGER, Full Time Instr.

Webmaster

Elif AKSEL, Res. Asst.

Organizing Secretary

Feride Nazda GÜNGÖRDÜ, Res. Asst.

Organizing Secretary



## FOREWORD

It is our great pleasure to welcome you to BEYOND ALL LIMITS 2018 - International Congress on Sustainability in Architecture, Planning, and Design, a joint collaboration of Çankaya University (Ankara-Turkey), Università degli Studi della Campania “Luigi Vanvitelli” (Caserta-Italy) and University of Plymouth (Plymouth-United Kingdom). The congress takes place in the Congress Hall of Çankaya University, Ankara, Turkey, on October 17-18-19, 2018 and supported by SID “Società Italiana Design”, SITdA “Società Italiana della Tecnologia dell'Architettura”, LeNS “The Learning Network on Sustainability” and GRID “Architecture, Planning and Design Journal”.

The congress aims to discuss and redefine the term sustainability with its all dimensions such as environmental, economic and sociocultural in various disciplines including architecture, planning and design, to extend the term's boundaries through fulfilling it with scientific, genuine, innovative and inspiring studies and to foster cooperation within and between different disciplines at international level. Besides, workshops and special sessions are organized.

The scientific program consists of keynote speeches, plenary and parallel sessions of presentations and workshops. The 3-day congress has more than 200 contributing academicians, experts, researchers and professionals attending from several countries of the world. More than 100 presentations are planned in 28 sessions in 2 days. The third day is devoted to workshops which are organized by 8 different groups of academicians and professionals from related various fields. In addition to the contributed presentations and workshops, two invited keynote speeches are given: by Prof. Dr. Susan ROAF, Heriot Watt University's Emeritus Professor of Architectural Engineering and Prof. Dr. Birol KILKIŞ, Başkent University's Professor of Energy Engineering.

This proceedings book of extended abstracts comprises written contributions of the presentations, keynote speeches and workshops contents. Before the congress, all participants were expected to submit extended abstracts of their presentations in a format formed by a short abstract with keywords, introduction, methods, findings and discussion, conclusion and references, not exceeding 1500 words. All submitted extended abstracts were blind peer reviewed and accepted ones now take part in this book.

**BEYOND ALL LIMITS 2018:** International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey

As being Congress Organization Committee, we would like to express our gratitude to all contributing members of Çankaya University, Università degli Studi della Campania “Luigi Vanvitelli” and the University of Plymouth for their superior efforts and enormous support. Furthermore, we would like to thank all participants of the congress for their outstanding contributions for sharing their knowledge, expertise and vision.

Congress Organization Committee

## TABLE OF CONTENTS

<b>COMMITTEES</b>	1
Honorary Committee	1
Scientific Committee	2
Organizing Committee	6
<b>FOREWORD</b>	9
<b>KEYNOTE SPEAKERS</b>	21
How to Design a Comfortable Building <i>Susan Roaf</i>	22
'Sustainable' Systems and Equipment in Green Buildings-How Sustainable Are They? An Exergy Perspective <i>Birol Kılış</i>	38
<b>EXTENDED ABSTRACTS</b>	41
The Use of Multi-Criteria Assessment Techniques in Defining Sustainable Transport Systems for Different Sized Cities Ankara and Rize Example <i>Furkan Akdemir, Hayri Ulvi, Aslınur Ekiz, Saime Yılmaz</i>	43
Courtyards thermal efficiency during hot regions' typical winter <i>Omar Al-Hafith, Satish B. K., Pieter de Wilde</i>	50
Resilience planning from theory to practice <i>Deniz Altay Kaya</i>	55
Why in-between spaces are important to everyday architecture? <i>Susana Alves</i>	59
Meaning in Cultural Sustainability <i>Gökçe Atakan, Saadet Akbay</i>	64
An Assessment of the Energy Performance Evaluation within the Form Conception Process <i>Cem Ataman, İpek Gürsel Dino</i>	70
The Computation of Performative Architecture within Integrated Design <i>Cem Ataman, İpek Gürsel Dino</i>	76
The Evaluation of Urban Mobility In Terms of Space and Equality, Case Study of Yozgat <i>İlker Atmaca, Seçil Gül Meydan Yıldız, Hazal Ilgın Bahçeci</i>	81
Remote sensing and sustainability. Case studies in Campania <i>Alessandra Avella, Pasquale Argenziano, Nicola Pisacane</i>	91

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

Bibliographic Evaluation of the Concept of Sustainability in the Postgraduate Theses of Architecture in Turkey <i>Özlem Aydın</i>	99
Analysis of Kızılcaşar Village in terms of Vernacular Architecture <i>Filiz Bal Koçyiğit, Nazlı Nazende Yıldırım, Papatya Nur Dökmeci Yörükoğlu</i>	105
Dimensions of War Destruction in the City of Benghazi <i>Abdelhamed Barani, Zerrin Ezgi Kahraman</i>	111
The Evaluation of Early Republican Industrial Buildings in Antalya in the Context of Cultural Sustainability <i>Emine Barbaros Akay, Yaren Şekerci, Hilal Tuğba Örmecioğlu</i>	118
Evaluation of Sustainability of Housing Transformations in Copenhagen <i>Nezih Burak Bican</i>	123
Sustainability Beyond Architecture: Beyond Concepts, Beyond Scale and Beyond Time <i>Ebru Bingöl</i>	133
The Role of Participation in Identification and Sustainability of Heritage; the case of the Windmill of Heybeliada <i>Burcu Büken Cantimur, A. Binnur Kırar, Gülce G. Okyay</i>	137
Importance of the Sustainable Planning in Campus Settlement – A Negative Example: Aleaddin Keykubat Campus - Turkey <i>Süheyla Büyüksahin Sıramkaya, Dicle Aydın, Esra Yıldız</i>	142
Sustainable methodologies for stability assessment of masonry vaulted structures <i>Daniela Cacace, Claudia Cennamo, Concetta Cusano, Gianfranco De Matteis</i>	148
Designed sustainability in Neapolitan Cultural Heritage. Some examples of argot design <i>Saverio Carillo, Pasquale Argenziano, Carolina Campone</i>	153
Libya, colonial architecture and tourist propaganda in the fascist rhetoric <i>Marco Carusone, Michela Russo, Roberta Bellucci</i>	161
Campania Felix from rural landscapes to smart lands <i>Francesca Castanò</i>	167
Adaptive reuse in sustainable development: the case study of Ercolano (Italy) <i>Francesca Ciampa, Martina Bosone</i>	174
Weaving the contemporary, Actuality in the use of raw materials in the production chain of the fashion industry <i>Elisabetta Cianfanelli, Renato Stasi, Margherita Tufarelli</i>	180
Towards an Idea of Countryside <i>Gianluca Cioffi</i>	184

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

Design as a critical interpretation of the world <i>Alessandra Cirafici, Fabrizia Ippolito, Caterina Fiorentino</i>	190
Social & cultural sustainability: Street Art In Italy <i>Vincenzo Cirillo</i>	195
Continuity and discontinuity in the drawing for the protection of religious heritage in the Balkans <i>Luigi Corniello, Andrea Maliqari, Carla Mottola, Enrico Mirra</i>	201
In terms of structure and expression. The possibilities of re-composition project <i>Francesco Costanzo</i>	207
Design research models for territories: local resources for social inclusion <i>Vincenzo Cristallo, Ivo Caruso</i>	215
Impacts of Recently Developed Squatter Settlements Transformation Projects on Urban Heat Islands: A Comparative Study in the City of Ankara <i>Ayşem Berrin, Funda Baş Büttiner</i>	220
An investigation on indoor soundscape in high school environment <i>Sıla Çankaya Topak</i>	226
From Badlands of Plastics to “Up-cycled” Objects: “Tertium Non Data” <i>Rabia Çiğdem Çavdar</i>	232
The Energy Effectiveness and Daylight Performance of Office Venetian Blinds <i>N. Mine Çelebi Yazıcıoğlu</i>	236
The Functional Continuity of Historic Cumhuriyet Square – Ayaş <i>Gülşah Çelik Başok</i>	247
Multiple Configurations of a Kinetic Shading System to Test Daylight Illuminance and Uniformity <i>Ashhan Çevik Tuğçe Kazanasmaz</i>	253
Evaluating the Adaptation of Historic Buildings to New Functions in Terms of Sustainability: Afyonkarahisar Mihrioğlu Mansion <i>Gamze Çoban Pınar Dinç Kalaycı</i>	260
Sustainability and Built Heritage Conservation in today’s Italy: an appraisal between theory, method and practice <i>Marina D’Aprile</i>	269
The challenge of preserving heritage: A Neighbourhood case in Ardabil, Iran <i>Yousef Daneshvar Rouyandozagh, Ece Kumkale Acikgoz</i>	275
Urban Sustainable Innovative Actions: The I.Re.Ne. Project <i>Claudia De Biase, Michela Monaco, Maria Antonietta Sbordone</i>	282
The ecological and social role of open spaces in urban regeneration processes <i>Raffaella De Martino, Barbara di Vico</i>	287

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

Conservation state and structural deficiencies of typical Italian bridges <i>Gianfranco De Matteis, Mattia Zizi, Antonino Del Prete</i>	292
Influence of structural typologies on architectural style of high-rise steel buildings <i>Gianfranco De Matteis, Valentina Corlito, Graziella Soleti</i>	298
Beyond the limits of Building Performance Analysis <i>Pieter de Wilde</i>	306
Wind energy: differentiating perspectives <i>Başak Demir</i>	310
Adaptive Re-Use, Sustainability and the Modern Movement <i>Huriye Armağan Doğan</i>	315
Authenticity and Sustainability <i>Rui Duarte</i>	319
An Ecotourism-oriented Proposal in the Context of Sustainability: The Case of Rize Küşüve Village <i>Derya Elmalı Şen, Evşen Yetim, Elif Öztürk</i>	324
Effects of Architectural and Behavioural Factors on Indoor Air Quality in Residential Apartments <i>Ehab Ali Eshtiwi, Papatya Nur Dokmeci Yorukoglu</i>	331
Assessing the Sustainability of Historical Continuity in Multi-Layared Historic Towns: The Case of Amasya, Turkey <i>Leyla Etyemez Çıplak</i>	336
Room Impulse Response in Game Engines <i>Hasan Baran Fırat, Massimiliano Masullo, Luigi Maffei</i>	344
The influence of early Christian basilicas in the Byzantine East <i>Raffaella Fiorillo</i>	349
Large-scale ecosystems regeneration: enabling the transition to a circular economy in the Vesuvius coastal area <i>Rossella Franchino, Serena Viola</i>	356
BIM Technology and Material Innovation: From Efficiency to Environmental Compatibility <i>Rossella Franchino, Caterina Frettoloso, Nicola Pisacane</i>	362
Cities seek resilience: a network for a revalue urban identity <i>Caterina Frettoloso, Paola Gallo</i>	367
Energy Efficiencies of Cultural Heritage Through Recovery of Damages by Natural Event: The Case of The Gallery of Nations Inside the Church of Michelucci In Florence <i>Paola Gallo, Leonardo Boganini</i>	372
A museum system of design/craft for sustainable development in southern Italy <i>Claudio Gambardella, Dario Russo</i>	379

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

The Charterhouses in Campania: San Martino, a case to be reconsidered <i>Maria Fernanda, Garcia Marino</i>	384
Sensory spatial appraisal of the Child Medical Unit of Mustapha Pacha hospital in Algiers <i>Nassila Ghida, K. Boussora</i>	390
Cultural Routes in South Italy: methods and projects <i>Anna Gianetti, Elena Manzo</i>	398
Giovan Battista Piranesi: the drawing of the vernacular in the representation of the solidity of the eighteenth century <i>Paolo Giordano</i>	403
Determining the Attitude-Behavior Gap Towards Sustainable Communities <i>Can Gölgelioğlu, Simge Özdal Oktay</i>	408
Spolia Reconsidered in Terms of Sustainability <i>Hale Gönül</i>	417
Bell towers: Structural types and seismic safety <i>Mariateresa Guadagnuolo, Marianna Aurilio, Anna Tafuro, Giuseppe Faella</i>	423
Integrated approaches and strategies for enhancing sustainable development of Italian small villages in the South of Italy <i>Giuseppe Guida, Claudia de Biase, Fabiana Forte, Adriana Galderisi</i>	428
Accommodation strategies of Syrians in Turkey <i>Dilşa Günaydın Temel, Z. Ezgi Haliloğlu Kahraman</i>	433
Built environment heritage as political negotiation in Famagusta, Cyprus <i>Ceren Hamiloğlu</i>	439
Conceptual framework for developing next generation of Energy Performance Certification (EPC) systems <i>Timuçin Harputlugil</i>	443
Triconch chapels in the early Christian and Byzantine architectural tradition <i>Danila Jacazzi</i>	449
Comparison of Design Criteria about Energy in Healthcare Building According to BREEAM and LEED Certification Systems <i>Sevil Jahed, Cüneyt Kurtay</i>	456
Sustaining Cultural Heritage Sites through Interpretation and Presentation Methods: The Case of Magnesia on the Meander <i>Başak Kalfa Ataklı, Nimet Özgönül</i>	463
Sustainability of Architectural Cultural Heritage in the Roman Imperial Period <i>Aygün Kalınbayrak Ercan</i>	469

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

Green Design; An Environmental Concern or An Aesthetic Approach <i>Aliye Rahşan Karabetça</i>	474
Occupants' Behaviour for Sense of Security and Well Being Concerns in Their Residences: 100. Yıl Case <i>Özge Karaman</i>	479
Using Spolia in Ottoman Architecture: Searching for Continuity on an Architectural Symbol of Power through Re-use of Materials <i>Ceren Katipoğlu Özmen</i>	485
Analysis of Building Stock and Development of Building Typologies in Turkey <i>N. Cihan Kayaçetin, Gülsu Ulukavak Harputlugil, A. M. Husaunndee, M. S. Dizdaroğlu</i>	489
From Design to construction in Architecture A critical phase that redefines the role of the architect in the profession <i>Karen Boujaoudeh Khoury</i>	496
The room acoustic analysis of TED high school main lecture hall <i>Kivanc Kitapci</i>	502
Application of a multiple regression model for estimating the performance of a prismatic panel in varying room and window sizes <i>Büşra Köse, Tuğçe Kazanasmaz</i>	510
Hybrid biomimetic design for sustainable development through multiple perspectives <i>Carla Langella, Valentina Perricone</i>	515
Fashion eco design lab: capsule collections bio <i>Roberto Liberti, Patrizia Ranzo</i>	520
Historical thermal baths in Europe: a research methodology for restoration and preservation <i>Elena Manzo, Ilaria Pontillo</i>	525
The design from autarky to the circular economy <i>Angela Pecorario Martucci</i>	529
Medical retrofitting design <i>Sabina Martusciello, Massimiliano Masullo, Geremia Nappo, Alessandro Tessitore, Rosa De Micco, Antonio De Mase, Antonio Garofalo, Antonio Cennamo</i>	534
Wayfinding as an Aspect of Social Sustainability <i>İpek Memikoğlu, Hetham F. Layas</i>	538
Achieving Socially Sustainable Environments through Empathic Modelling <i>İpek Memikoğlu</i>	543
How can we make sustainable design? <i>Maria Dolores Morelli</i>	548

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

Design Strategies for Natural Ventilation <i>Francesca Muzzillo</i>	553
Blockchain technology: opportunities for sustainability of construction sector <i>Nadia Netti, Monica Cannaviello</i>	558
The actuality of MAT-Building or the deployed hub in the suburban contemporary territory <i>Gaspard Oliva</i>	563
Business continuity of lodging industry in the face of disasters: A case study from Turkey <i>Ezgi Orhan</i>	572
Sustainability of Heritage Conservation Council System in Turkey <i>Mustafa Önge</i>	576
Vernacular Techniques as Key to Sustainable Vernacular Architecture: The Case of Wattle and Daub Construction in Mediterranean Region <i>Hilal Tuğba Örmecioglu</i>	581
A step towards understanding industrial hemp: From hidden industry to a material in architecture <i>Esen Gökçe Özdamar</i>	587
Eco-industrial Parks and Sustainability: A Case of Green Organized Industrial Zone from Turkey <i>Suna S. Özdemir</i>	593
Environmental Problems and Policy in Australia <i>H. Nur Özkan Öztürk</i>	600
Defining Cittaslow requirements in the context of sustainability <i>Ayça Özmen</i>	605
Creating a start point for continuity of new educational approach by using design <i>Ahsen Öztürk</i>	612
Prediction of heat cost indicator in a home office using artificial neural network and genetic algorithm models <i>Yasemin Öztürk, Tuğçe Kazanasmaz, Gökmen Tayfur</i>	617
Comparison of material alternatives in a classroom in terms of daylight distribution and visual comfort survey <i>Yasemin Öztürk, Tuğçe Kazanasmaz, Arzu Cilasun Kunduracı</i>	623
“Reconstructing” Traditional Settlements in Cappadocia: Questions of Sustainability <i>Fatma Gül Öztürk Büke</i>	629
Sustainable Architectural Rehabilitation: the Palm tree Manor in Portugal <i>Ana Paula Pinheiro</i>	634

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

Energy, environmental and economic performance of an innovative solar heating network serving a small-scale Italian district <i>Antonio Rosato, Antonio Ciervo, Giovanni Ciampi, Michelangelo Scorpio, Sergio Sibilio, Luigi Maffei</i>	640
Sustainable Innovation: Design and New Technologies <i>Valentina Sapia</i>	648
The Change of Cultural Memory on an Iconic Historic Structure: Narmanlı Han <i>Sedef Sav</i>	652
The value of the scrap objects in design: which actions to promote it? <i>Francesca La Rocca, Chiara Scarpitti</i>	660
Suggestions for Refurbishment of Existing K-12 Schools in The Light of Sustainable Criteria <i>Hafize Nur Silay Emir</i>	668
Opaque and transparent innovative systems for a smart second skin building envelope <i>Sergio Sibilio, Antonio Rosato, Michelangelo Scorpio, Giovanni Ciampi, Giuseppina Iuliano, Yorgos Spanodimitriou</i>	678
Sustainable Urban Planning: Analysis of Open Public Spaces in Post-Soviet Districts of Lithuanian Cities <i>Jolita Sinkienė, Kęstutis Zaleckis, Indrė Gražulevičiūtė-Vileniškė, Jurga Vitkuvienė, Brigita Tranavičiūtė, Huriye Armağan Doğan, Tomas Grunskis</i>	686
An analysis on mixed-use high-rise residential complexes in Istanbul as to their prioritization of evaluation categories in LEED <i>Özge Süzer, Meltem Yılmaz</i>	690
A Conservation Process of Cultural Heritage: Ankara Saraçoğlu Quarter <i>Gülşah Şenocak</i>	698
Learning from Cohousing: Social Contact Design Patterns for Cohesion and Sustainability <i>Şule Taşlı Pektaş</i>	703
Urban transformation in Turkey; which aims disaster preventive and sustainable development or else? <i>Binali Tercan</i>	707
The sound as factor of reuse of Cultural Heritage in a modern key <i>Roxana Adina Toma, Massimiliano Masullo, Luigi Maffei</i>	710
Urban Conservation in Ankara is Sustainable ? Implementations in Ulus and Hacı Bayram Mosque Environs Since 30 Years <i>Mehmet Tunçer</i>	715
Sustainable Conservation of Cultural Landscape and Changing Values Around Hacıbayram Mosque and Augustus Temple <i>Mehmet Tunçer, Öznur Aytekin</i>	721

**BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey**

Evaluation of environmental factors in office environments with green intent in terms of user satisfaction: indoor air quality <i>Çetin Tünger, Zeynep Öktem, Ayça Turgay</i>	728
Environmental sustainability of being the leading building producer in Europe: developing valuable agricultural land for building construction in Turkey <i>Ali Türel</i>	735
The Social Role of Architectural Types: Cultural Sustainability in Architecture and the Possibility of Convention <i>Zeynep Çiğdem Uysal Ürey</i>	742
User Perception and Orientation in the Museum Designed by Re-Functioning: Erimtan Archeology and Art Museum Example <i>Şükran Büşra Ümütlü</i>	747
Collaborative and participative actions in design practices <i>Rosanna Veneziano</i>	751
Crisis of creative class: Hamburg and Naples right to the creative city <i>Federica Vingelli, Giuseppe Guida</i>	755
A bio-based grown material for living buildings <i>Antonella Violano, Salvatore Del Prete</i>	762
Ideology of Sustainable Architecture: A Critique <i>Onur Lami Yalman</i>	769
Sustainability of Rural Identity: Learning from Kıyıkışlacık's Self-Generated Experience <i>Damla Yeşilbağ</i>	773
Use-share service cases from Turkey: The impact of cultural traits <i>Can Uçkan Yüksel, Cigdem Kaya Pazarbasi</i>	780
Social & cultural sustainability: street art in Naples <i>Ornella Zerlenga</i>	785
<b>WORKSHOPS</b>	791
Workshop 1. Academic Research Design in Planning Studies: Migration and Sustainable Communities	792
Workshop 2. Building Performance Simulation: How Useful is It?	793
Workshop 3. Future Search Conference	794
Workshop 4. Resilient Building Design	795
Workshop 5. Sustainability and Resilience: how do we relate these concepts in planning debate and practices?	796
Workshop 6. Multisensorial Perception and Cultural Heritage Sites	797
Workshop 7. Urban art as Social & Cultural Sustainability	798
Workshop 8. Building with Earth	799

**BEYOND ALL LIMITS 2018:** International Congress on Sustainability in Architecture,  
Planning, and Design, 17-19 October 2018, Ankara, Turkey

<b>SUPPORTING ORGANIZATIONS</b>	801
GRID “Architecture, Planning and Design Journal”	802
SID “Società Italiana Design”,	803
SITdA “Società Italiana della Tecnologia dell'Architettura”	804
LeNS “The Learning Network On Sustainability”; A New “Design Hope”: The Open And Distributed Lens, The Learning Network On Sustainability <i>Carlo Vezzoli, Cenk Basbolat</i>	805
<b>INDEX</b>	811

## **A museum system of design/craft for sustainable development in southern Italy**

Claudio Gambardella<sup>1\*</sup>, Dario Russo<sup>2</sup>

<sup>1\*</sup> *Department of Architecture and Industrial Design, Università degli Studi della Campania  
"Luigi Vanvitelli", Aversa, Italy, claudio.gambardella@unicampania.it*

<sup>2</sup> *Department of Architecture, Università degli Studi di Palermo, Palermo, Italy,  
dario.russo18@unipa.it*

**Abstract:** In this extended abstract we are going to explain an academic project entitled "THE SYSTEM OF TERRITORIAL DESIGN SYSTEMS. *Cultural tourism, craftsmanship and design for the local development of the production enterprises of excellence in Southern Italy and Made in Italy*". It is based on the cooperation among designers and artisans in order to encourage the development of local craft-based production, by creating a REGIONAL MUSEUM SYSTEM OF DESIGN AND APPLIED ARTS in the five regions of Southern Italy. Then, the "SYSTEM OF THE SYSTEMS" is constituted of the five specific museum systems to be created in each region; these systems - especially in Campania and Sicily - can then represent an ambitious and strategic project of sustainable development in Southern Italy. The final aim is to allow companies of Southern Italy to take part in the "Made in Italy" process, so spreading the Italian Handmade as the Design of Italy.

**Keywords:** social sustainability; crafts; artidesign; handmade in Italy; museum systems.

### **Introduction**

Wolfgang Sachs tells that sustainability's essence is situated in the "particular relation" between people rather than people and nature. According to the German scholar, this notion represents the basis for a new ethic approach, which extends the principal of equity to the human community in a temporal perspective that invests present and future (Sachs 2001, 2001a). This approach has a particular meaning concerning the difference between countries from the North and the South of the world: social justice's imperative on global scale, cannot just think about the impact that the economical development has on the environment and on next generation's conditions.

If we then refer social sustainability within a territorial system, we can exalt subjects' capability to efficaciously cooperate together, because of the same project's perception, encouraged by a concertation between the different institutional levels. Implicit social aspects' importance in sustainable development concern business' world.

## Methods

Craftwork, which in about one hundred and thirty years had a varying role in the dialectic relationship with the Culture of Project, from Arts and Crafts Movement to Bauhaus School, and now it has been reconsidered by well-known scholars as Richard Sennett, in Italy can to aim becoming an underlying element for a “Design of Countries”. This sort of “new design” could play a key role for the “renaissance” of “Made in Italy”.

The idea moves from the project of Seconda Università di Napoli, regarding the Regional Museum System of Design and Applied Arts and developed in 2003 for the Campania Region Department of Productive Activities. It considers to realize a System of Regional Museum Systems, each one provided with a “museum of companies”, to be located in areas with high touristic, working as a connector for participant museums and companies.

In other words, a museum for contemporary design, conceived principally as exceptional place where present new Handmade in Italy products, originated by design and craftsmanship working together. This System should assign to Universities, Local Governments and professional organizations gathered in territorial tasks the role of steering committee, aiming to enhance the relations between communities and places, to restore the proto-industrial business viability that characterised the Southern regions in the pre-Unification period; finally, to promote local development thanks also to tourism industry and sustaining new business start-ups and employment of young grad students, giving them an alternative to flee abroad.

In these perspective, South Italy reveals an extraordinary material culture. If we look back on our past and we do make as a strength point the tradition of the meridional industry of The Kingdom of the Two Sicilies, this culture of materials could be part of Handmade in Italy, a conceptual extension of the term *artidesign*, of which Filippo Alison and Renato De Fusco have already analysed in 1991. *Artidesign*, or third genre between design and craftsmanship, is a specific activity which produces objects intended to last a long time, completely adaptable, of huge value, far away from disposable objects of low industrial profile. Moreover, “History as kingdom of long duration suits *artidesign* better than industry. While the crafted object, like a work of art, has possibly no expiry date, on the contrary its value becomes bigger day by day; different is the industrial product which is destined to end, to be consumed, making place to a new series of objects” (De Fusco & Rinaldi, 2015, p. 186).

Furthermore, the “less advanced” South should not need to travel through again progress’ steps to get in the line with emerging countries because – metaphorically speaking –

could catch the development-progress train at the last stop without taking it at the terminus. The train of the 3rd Industrial Revolution Phase 2.0 (someone talks about the 4th Phase) is the 3D printer. “More than other factors useful to South development, the makers phenomenon seems to be the best solution. Their technology is made up of crossing digital and analogical and their icon tool is the 3D printer” (De Fusco et al., 2015, pp. 188-189).

3D printer is known for its handcrafted dimension, and it is widely participatory and open-source, easy to use, and it has low production costs (if we consider the costs big industries deal with) they are advanced characteristic for a developing South. “This new technology is capable of bringing back the productive/handcrafted activity to a local dimension which is no longer global, because delivery and distribution costs will be higher than productive ones. It is not who does not see the incredible opportunity for the regions of the South in the return to the location of the productive activity” (De Fusco et al., 2015, p. 190). If we come back on the metaphor of the development-progress train, “it seems that makers issue can be considered as one of the most important station of this itinerary (De Fusco et al., 2015, p. 191). [...] we have another question: besides its consumer role, will the South still be a producer of that kind of objects in the next future? These opportunities seem must not be underestimated and we should not miss out them” (De Fusco et al., 2015, p. 193).

We can understand how the consequence of all this is not only a complete change in “doing” business, targeting more and more on the possibility of a ubiquitous governance of the production processes; but also in “making” design, with unexpected implications regarding economy, labour and its managing, the concept of factory, as well as more strictly cultural aspects, like the harmonisation of technology and craftwork.

Briefly we list all the general aims of the project:

- Creation of an advanced network composed of companies, designers, creatives and innovators
- Promotion of excellent territorial crafts
- Awareness-building among local communities about knowledge of material culture, for establishing a new feeling of rootedness and belonging to their sites
- Economic growth of local craft enterprises
- Reorganisation of productive chains by means of design
- Integration of ancient manufacturing and new technologies
- Enhancement of ancient and contemporary manufactures of excellence in Southern Italy and strategic promotion of Handmade in Italy culture internationally
- Support of employment of young graduates.

## **Conclusion**

The System can then represent an ambitious and strategic project of sustainable development in Southern Italy.

Economical growth, employment of young graduates, development of local handcrafted activities, betting at the same time on tradition and innovation, developing of social cohesion belonging to territory's community, all these become the ingredients of a sustainable development made up of a big museum system in Southern Italy. This is a project which guides the sustainable development of a huge portion of the country converting its weaknesses (absence of industries while quite the opposite happens in Northern Italy) in new opportunities, this happens because it has its roots into a virtuous interaction between design and craftsmanship. In this context, smallest companies of artisans become connective cells which regenerate a whole territory promoting Made in Italy's rebirth linked to places of great handcrafted vocation and new business models will be promoted in the new scenery of Handmade in Italy.

## References

- Alison F., De Fusco R. (1991). *L'Artidesign*. Napoli: Electa.
- Bodei R. (2010). *La vita delle cose*. Roma-Bari: Editori Laterza.
- De Fusco R., Rusciano R.R. (2015). *Design e Mezzogiorno tra storia e metafora*. Bari: Progedit.
- Granelli A. (2010). *Artigiani del digitale. Come creare valore con le nuove tecnologie*. Bologna: Luca Sossella Editore.
- La Pietra, U. (2015). *Abitare con Arte. Ricerche e opere nelle arti applicate e nel design*. Mantova: Corraini.
- Manzini, E. (2015). *Design, When Everybody Designs: An Introduction to Design for Social Innovation*. Cambridge: The Mit Press.
- Morace F., Santoro B. (2014). *Italian factor. Moltiplicare il valore di un Paese*. Milano: Egea.
- Spadolini M. B. (2015). Università, design e nuovo artigianato. In Tosi, F., Lotti, G., Follesa, S., Rinaldi, A. (cur.). *Artigianato Design Innovazione. Le nuove prospettive del saper fare*. Firenze: DIDA.