

# REHAB 2017

3<sup>rd</sup> International Conference  
on Preservation, Maintenance and Rehabilitation  
of Historical Buildings and Structures



**CONFERENCE PROGRAMME**

**14 - 16 June 2017  
BRAGA - PORTUGAL**



# Conference Programme

**14 - 16 June 2017**  
**BRAGA | PORTUGAL**

## Organising Committee

**Rogério Amoêda, Cristina Pinheiro & Sérgio Lira**  
*Green Lines Institute*



June 2017

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Av. Alcaides de Faria, 377 S.12  
4750-106 Barcelos Portugal  
T (+) 351 253 815 037  
F (+) 351 253 824 730

<http://greenlines-institute.org>  
[mail@greenlines-institute.org](mailto:mail@greenlines-institute.org)

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## *Scope*

**REHAB 2017 - 3rd International Conference on Preservation, Maintenance and Rehabilitation of Historical Buildings and Structures** aims to proceed with the discussion on built heritage and the preservation of its legacy, that was established in the previous editions of the event. The importance of conservation of historical constructions (built landscape, urban fabrics, buildings, and engineering works) are of utmost importance to preserve the cultural references of a community and was deeply discussed in March 2014, in Tomar, and July 2015, in Porto.

Under the main topics of discussion, subjects of preservation and rehabilitation methodologies and technologies, as well as the importance of the economic and social impacts of preservation practices are here covered as the main leading guidelines for the conference debate.

Furthermore, different communities' scales (local, regional, national or even worldwide) and authenticity interpretation raise different questions and approaches, and therefore different solutions that are worthy to study, to compare and to experience.

The sustainability approach is again covered, highlighting the importance of the commitment between heritage preservation and technical requirements related to its occupancy and use, such as energy efficiency or materials recovery.

Inclusivity is also an important aspect to be discussed as public historical sites and buildings need to be adapted to receive different kind of visitors (children, elderly or handicapped persons) and to establish an adequacy with the perceiving of the physical environment and information contents.

As a Special Chapter, Earthen Buildings are brought into a particular approach highlighting the complexity of their preservation, maintenance and rehabilitation. Earthen buildings techniques are in many cases of a great importance for local economies and access to housing.

Further, **REHAB 2017** welcomed papers and presentations on field work, case studies and theoretical approaches to historical buildings preservation and conservation.

## *Conference Topics*

- 01.** Technologies for inspection and monitoring of buildings performance and pathologies
- 02.** Seismic behaviour of historic buildings
- 03.** Preservation and rehabilitation of historic buildings and structures: case studies
- 04.** Preservation and rehabilitation of historic centres
- 05.** Authenticity and built heritage
- 06.** Inclusivity of historic sites and buildings
- 07.** New materials and products for the rehabilitation of historic buildings and structures
- 08.** Sustainability principles and practices in the rehabilitation of historic buildings and structures
- 09.** Special chapter: earthen buildings

## *Keynote Speaker*



**ARCH. MARIA FERNANDES**

Maria Fernandes has a PhD in Architecture, and has a Master Degree in Conservation of Landscape and Architectural Heritage. Since 2011 she is an architect at the General Directorate of Cultural Heritage (DGPC) in Portugal, where she is responsible for several interventions in Cultural Heritage, World Heritage Monuments and Museums. She is also researcher at the Centre of Archaeology, Arts and Heritage Sciences, University of Coimbra. Maria Fernandes is also member and board of director of ICOMOS-Portugal, member since 2010 and board of director since 2015 of ICOMOS-ISCEAH, International Scientific Committee on Earthen Architectural Heritage and member of PROTERRA, Iberian-American Network of Earthen Architecture and Construction.

Maria Fernandes has been also invited as professor at several graduate courses on heritage at the University of Coimbra, University of Lisbon, University of Porto and University of Évora.

Maria Fernandes is author of several papers and presentations on earth architecture heritage and member of several research projects on earth architecture.

### **KEYNOTE SPEECH**

#### **“Earth Architecture in Portugal”**

The Plenary Session will take place at the Monastery of Tibães on Friday 16th afternoon.

## *Conference Programme Overview*

### **14 June - Wednesday**

- 09:00 - Opening Reception Desk and Check-in
- 10:30 - Opening Session
- 11:00 - Plenary Session:
  - Dr. Miguel Bandeira, Councilor of Urban Regeneration and Heritage
  - Dr. Lúcia Dias, Councilor of Culture
- 12:30 - Lunch
- 14:00 - Working Sessions S01, S02 and S03
- 16:00 - Coffee break
- 16:30 - Technical visit to the historic centre
- 19:30 - Welcome Drink at City Hall


















### **15 June - Thursday**

- 08:30 - Opening Reception Desk
- 09:00 - Working Sessions S04, S05, S06 and S07
- 10:30 - Coffee break
- 11:00 - Working Sessions S08, S09, S10 and S11
- 12:30 - Lunch
- 14:00 - Group Photo at the entrance hall
- 14:30 - Working Sessions S12, S13, S14 and S15
- 16:00 - Coffee break
- 16:30 - Working Sessions S16, S17, S18 and S19

### **16 June - Friday**

- 08:30 - Opening Reception Desk
- 09:00 - Working Sessions S20, S21 and S22
- 10:30 - Coffee break
- 11:00 - Working Sessions S23, S24 and S25
- 12:30 - Lunch
- 14:00 - Departure to Monastery of Tibães
- 14:30 - Technical visit to the Monastery: "Places at the Monastery"
  - Workshop "Rever": "Indoor environment quality of vernacular buildings"
  - Prof. Ricardo Mateus & Arch. Jorge Fernandes, University of Minho, Portugal
- 16:00 - Coffee break
- 16:30 - Technical visit to the Monastery / Workshop "Rever"
- 18:00 - Plenary Session: "Earth Architecture in Portugal"
  - Arch. Maria Fernandes, Association Centro da Terra, Portugal
- 19:00 - Best papers awards and Closing Session
- 20:00 - Social Dinner at the Monastery

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 Preservation, Maintenance and Rehabilitation of Historical Buildings and Structures

	14 Wednesday	15 Thursday	16 Friday
08:30		Opening front desk	Opening front desk
09:00	Opening reception desk and check-in	<b>Working Sessions</b>	<b>Working Sessions</b>
09:30			
10:00	<b>Opening Session</b>	Coffee-break	Coffee-break
11:00	<b>Plenary Session</b>	<b>Working Sessions</b>	<b>Working Sessions</b>
11:30			
12:00	Lunch	Lunch	Lunch
12:30			
13:00			
13:30			
14:00	<b>Working Sessions</b>	Group photo	Shuttle
14:30		<b>Working Sessions</b>	<b>Visit / Workshop</b>
15:00			
15:30			
16:00	Coffee-break	Coffee-break	Coffee-break
16:30	<b>Technical Visit Historical Centre</b>	<b>Working Sessions</b>	<b>Workshop / Visit</b>
17:00			
17:30			
18:00			<b>Plenary Session</b>
18:30			
19:00			<b>Awards &amp; Closing Session</b>
19:30	Welcome Drink		
20:00			Social Dinner
20:30			
21:00			
21:30			
22:00			
22:30			Shuttle
23:00			

## Workshop

### “Indoor Environment Quality of Vernacular Buildings” Research Project “REVER”



**Coordinated by:**  
**Prof. Ricardo Mateus & Arch. Jorge Fernandes, University of Minho**

This workshop will focus on the following topics:

- Standards and equipments to assess the indoor environment quality of vernacular buildings;
- On site assessment of case studies (objective and subjective assessments);
- Building simulations to predict building's indoor quality and comparison with on site measurements;
- Thermal comfort assessment using adaptive models.

The workshop will take place at the Monastery of Tibães on Friday 16th afternoon.

## *Schedule of Working Sessions*

**14 June - Wednesday**

**14:00 - 16:00 Working Sessions**

### Session S01 (Room 1)

#### **Topic 3**

**A. M. T. Martins & J. S. Carlos**- Daylight in the Choirs of the Monastic Church of São Bento de Cástris in Évora and the research Project ORFEUS

**E. Mosquera & C. Mosquera** - Museums renewals: rehabilitations and urban interactions

**A. Cubero-Hernández & M. T. Pérez -Cano**- Reuse of historic buildings in the city of Seville for institutional purposes. A public proposal for heritage and urban regeneration

**I. Jiménez Caballero, L. M. Fernández-Salido, F. Alonso Pedrero, Y. Fernández Sangil & A. Urtasun Pineda**- Oteiza Museum Foundation, Alzuza, Navarra. A good practice's case in rehabilitation

**D. Navas-Carrillo, M. T. Pérez Cano & J. C. Gómez de Cózar** - Rafael Arévalo and the other scale: social housing neighbourhoods in medium-sized cities of Andalusia

### Session S02 (Room 2)

#### **Topic 4 & 5**

**A. Ciravoğlu, D. Erinsel Önder, A. Çiftçi, S. Erkenez, B. Mızrak Bilen & H. Taştan** - Developing awareness about industrial heritage: experiences from a Graduation Architectural Design Studio

**D. Diano** - The protection of historic centers. The analysis of the perturbation pressure system to mitigate wear and failure phenomena

**B. Podhalański & Z. Orłowska** - The quality of social environment in the centers of historic towns in the context of the stability of families living in them (outline of a research problem)

**C. Fallanca** - Integrated planning of urban "common" heritage: objectives and enhancement strategies

**A. B. F. Serrano Candela & C. C. J. C. Salcedo Hernández** - Scattered architectonic heritage in the Municipality of Cáceres

### Session S03 (Room 3)

#### **Topic 5**

**G. Lameira, L. Rocha & M. Cruz** - Affordable 20th century housing in Porto. The transformation processes under scope

**V. P. Matos** - Collective dwelling of cooperative promotion, defining authenticity criteria

**J. M. Silva** - The ruin and the creative scenography of the urban heritage

**A. Tomás García & B. F. J. Montero Fernández** - Explorations of the hidden space. A new place to look at the heritage. Wanderings in Seville's Cathedral

**S. J. Lee & S. H. Stone** - Teaching continuity: new modes for developing architectural design in historic settlements

## 15 June -Thursday

### 09:00 - 10:30 Working Sessions

#### Session S04 (Room 1)

##### **Topic 3**

**M. G.-A. B. Tacıroğlu, F. Hıçaylmaz & S. T. Yeke** - Muradiye tombs restoration process

**E. Tsangouri** - Case study: the application of Khorasan mortar in Tsakonia region, Greece

**N. Varouchaki & D. Theodossopoulos** - Community engagement; emerging players in monuments' rescue

**I. Vit Suzan** - The conservation of the Seven Dolls Temple at Dzibilchaltún: a multifactorial challenge

#### Session S05 (Room 2)

##### **Topic 7**

**I. Fonseca & J. S. Machado** - Rehabilitation of "tabique" walls using a sustainable solution

**F. Monni, E. Quagliarini, M. Vaccarini & S. Lenci** - Experimental investigation of masonry columns strengthening using basalt fibres ropes: first results

**V. Pracchi, E. Rosina, A. L'Erario, C. Monticelli, S. Aliprandi & A. Zanelli** - From arazzo to textile based innovative system for energy efficiency of listed buildings

**Y. Zhong, Y. Liu, S. Dai** - The assessment of soft capping as a new material and approach for ruin wall protection by experiment on two test walls in Shanghai, China

#### Session S06 (Room 3)

##### **Topic 8**

**N. Boyd** - Operational energy advantages

**A. Cruz, V. Coffey & T. H. T. Chan** - Maintenance-focused conservation plan of modern heritage buildings, an Australian overview

**C. Marchionni, M. Rotilio & P. De Berardinis** - Sustainable strategies applied to built heritage rehabilitation

**M. Ulu & Z. D. Arsan** - State of the Art survey for energy-efficient retrofit of historic residential buildings in both the EU and Turkey

#### Session S07 (Room 4)

##### **Topic 4 & 9**

**F. G. Branco, L. Belgas, J. M. Mascarenhas & A. Valente** - Traditional construction techniques in northern Mozambique

**G. De Francisci** - Build and re-build with earth, a building material paradigm of sustainability's culture

**J. Fernandes, R. Mateus, E. Dobjani & H. Gervásio** - Climate-responsive strategies of vernacular architecture in Albania and Portugal

**X. Zang, B. van Gorp & J. Renes** - Visible or not? A comparison of historic areas conservations in colonial Chinese cities

**11:00 - 12:30 Working Sessions**

Session S08 (Room 1)

**Topic 1**

**J. Gonçalves, R. Mateus, J. D. Silvestre & G. Vasconcelos** - Survey to architects: challenges to inspection and diagnosis in historical residential buildings

**J. M. Macias Solé, J. M. Puche Fontanilles, P. Solà-Morales, J. M. Toldrà Domingo & I. Fernández Pino** - Mobile Mapping and laser scanner to interrelate the city and its heritage: the Roman Circus of Tarragona

**P. Solà-Morales, J. M. Puche Fontanilles, J. M. Macias Solé, I. Fernández Pino & J. M. Toldrà Domingo** - Automatic recognition of materials from laser-scanner survey data by the reflectance method

**V. Cinieri & E. Zamperini** - Lifecycle approach for widespread built heritage: potentialities and criticalities

Session S09 (Room 2)

**Topic 2**

**A. Philippou & D. Theodossopoulos** - Seismic behaviour of historic masonry structures: the case of the neoclassical city of Patras, Greece

**E. Quagliarini, G. Bernardini, S. Santarelli & M. D’Orazio** - Earthquakes and historic masonry buildings: an experimentally based algorithm for debris formation prediction

**M. P. Urrutia & P. M. Millán** - The relative value of the architectural heritage in seismic hazardous countries: the Severín library (Valparaíso, Chile)

Session S10 (Room 3)

**Topic 3**

**F. F. Soares, A. Sabrosa & L. M. S. A. Costa** - Moinho Fluminense: an experience of rehabilitation of a historic centre in Rio de Janeiro

**J. Lluís i Ginovart, A. Costa-Jover, S. Coll-Pla, M. López-Piquer & J. Urbano Lorente** - The deformations of the Valle de Aran’s vaults in Spain. The formation of anti-funicular arches

**A. Abbas** - Erbil Citadel revitalization and the presence of its emergence history

**J. Saumell & N. M. Trejo** - The Palacio de las Cigüeñas façade through five centuries of historical documents analysis

Session S11(Room 4)

**Topic 5**

**A. Csizmadý & B. Csurgó** - Consumption and authenticity: relationships between built heritage and local society

**G. Favaretto & L. Signorelli** - Which authenticity for Fascist regime architecture? The case of the Santarelli Kindergarten in Forlì

**S. S. Foud** - Urban typology and sense of place: Port Said’s heritage authenticity between challenges and protection

**A. Juana** - Urbicide, an approach to the birth of a contemporary concept

**14:30 - 16:00 Working Sessions**

Session S12 (Room 1)

**Topic 3**

**P. Leverton & H. Russell** - Conservation as the careful management of change to the historic urban fabric: implementing the transition from vision to reality

**B. Plevoets** - Retail-reuse of historic buildings: an inquiry into opportunities and threats

**C. Agosti, E. Mussinelli & D. Cerati** - Preservation and rehabilitation of the former Hoffman ceramic urban factory, in the UNESCO city of Mantua (Italy)

**B. Asiliskender & N. Baturayoğlu Yöney** - Restoration and adaptive reuse of Modern Architectural Heritage – case study: Great Warehouse of the Kayseri Sümerbank Textile Factory

Session S13 (Room 2)

**Topic 4**

**G. Bernardini, S. Santarelli, E. Quagliarini & M. D’Orazio** - Earthquake safety in historic city centres: how to plan evacuation routes by considering environmental and behavioural factors

**N. Carrà** - The re-design of the urban connective: historic towns accessible

**H. Gallo, M. R. S. Oliveira & C. L. Ferreira** - Urban upgrading policies for the historical center of Campinas/Brasil

**D. Heidtmann, D. Feger, M. Moreira, V. Gonzaga & L. M. Costa** - The use of GIS in the preservation of a historic center of a town in southern Brazil

Session S14 (Room 3)

**Topic 5**

**S. Jayasinghe** - Sylvestro-Benedictine Churches in Sri Lanka: as an alternative tropical model

**K. Connolly, Y. Megahed & A. Sharr** - On value conflicts: negotiating difference in the renovation of historic buildings

**S. Giannakopoulou & A. Arvanitis** - Registration and rehabilitation of abandoned municipal property in mountain regions. A key for a local culture - oriented development

**M. M. Grisoni** - Contemporary architecture in ancient buildings. About authenticity

Session S15 (Room 4)

**Topic 6**

**A. Greco** - An elevator for an historical college: how to improve accessibility respecting the existing building

**G. K. Heinz** - How many (hi)stories can we save? Piccini in Vienna

**M. Rotilio & P. De Berardinis** - Environmental design in historic sites

**D. L. Viana** - Historic sites and its memories: a multi-operative approach to inclusivity

**16:30 - 18:30 Working Sessions**

Session S16 (Room 1)

**Topic 3**

**A. Greco & C. Bonora** - From student to student: a new project for Golgi College in Pavia

**S. Y. Mehr, S. Wilkinson, H. Hassanpour, H. Skates & G. Holden** - Adaptive reuse of civic buildings

**P. Miano & F. Coppolino** - The Incurables Hospital complex in the Ancient Center of Naples: a project between layers

**E. Zamperini, M. Morandotti, V. Cinieri & S. Lucenti** - From knowledge to management. Methods and tools for the planned conservation of university built heritage. A case study

**R. Putzolu** - Abandoned mining Heritage in Southwest Sardinia, a valuable site to be preserved: the Delaunay Hospital in Monteponi mine

Session S17 (Room 2)

**Topic 4**

**M. Raposo, S. Eloy, M. S. Dias & M. Lopes** - Revisiting the city, augmented with digital technologies: the SeeARch tool

**R. Rambla Moliner & J. A. García-Esparza** - From intangible to tangible. Urban evolution in two Mediterranean villages through popular traditions

**A. M. Trallero Sanz** - Recovery of historical center of Guadalajara

**S. Viola** - A diagnostic process to involve users in built environment maintenance. The Metrics Project for the historic center of Naples

Session S18 (Room 3)

**Topic 4 & 5**

**P. Porretta** - Landscapes of ruins: authenticity and invention. A case study of the restorations of the Banditaccia necropolis of Cerveteri, initiating from the World Heritage evaluation

**E. Pozzi & M. Pretelli** - The relationship between authenticity and worship space

**R. Vanacore, M. Antoniciello & F. Silva** - The archaeological landscape as common good. Knowledge, preservation, enhancement and fruition

**W. Johnson** - The Rocks, Sydney: conservation and interpretation of the site of Australia's initial European settlement

**A. Taccone** - Soft mobility in city planning

Session S19 (Room 4)

**Topic 3 & 4**

**J. Rice** - Eveleigh Carriageworks adaptive reuse

**C. Verazzo** - Architecture and landscape. Studies for preservation and enhancement of the mills' valley in Gragnano (Na)

**P. Tennakoon** - Colonial revival comparison

**H. Benacer** - Urban revitalization of historical centres: through cultural and heritage assets 'case of historical medina of Algiers'

**16 June - Friday**

**09:00 - 10:30 Working Sessions**

Session S20 (Room 1)

**Topic 3**

- A. Barontini & P. B. Lourenço** - Seismic assessment of hotel El Comercio, Peru
- C. Atzeni, G. Monni & A. Sanna** - The single miners' dwelling by Gustavo Pulitzer Finali. Recovery and reuse
- D. Besana** - God is moving house: Churches on sale
- B. Billeci & M. Dessì** - Historic heritage in ruins in Sardinia (Italy). Between schemes of collapse and consolidation measures

Session S21 (Room 2)

**Topic 4 & 5**

- J. V. Valdenebro-García & F. N. Gimena-Ramos** - Urban utility tunnels as a key tool in the sustainable revitalization of historic centres: the case study of Pamplona
- H. Gallo** - Transforming to Preserve: the dimension of time and materiality in cultural heritage
- A. G. García de León** - The value of the vernacular architecture: the cases of the wine and tequila route in México
- A. Cremin** - The Concelho de Vinhais as an historic centre

Session S22 (Room 3)

**Topic 6 & 7**

- İ. Aytar** - After conservation: let building tell its own story
- G. Di Ruocco, F. Primicerio & E. Sicignano** - The modern approach in designing the inclusivity of historic sites and buildings
- A. H. Al-Saidy, A. W. Hago & S. El-Gamal** - Textile reinforced mortars for strengthening of historical stone buildings in Oman
- P. F. Biancamano** - Maintenance and recovery of plasters: a decision-making process for the selection of compatible products and technologies

**11:00 - 12:30 Working Sessions**

Session S23 (Room 1)

**Topic 3**

**F. De Guglielmo & G. Miccio** - Talking walls and authenticities to be preserved in the rehabilitation of the abandoned parish complex of San Giovanni Battista in Carpineto (Fisciano, Salerno, Italy)

**A. Diceglie & N. D'Amico** - The Restoration site of an house in Monopoli, Largo Castello, N. 5

**D. Đukanović** - Dialog between contemporary perspectives and conservation principles

**T. C. Ferreira** - Contributions for the implementation of preventive conservation and maintenance strategies in the Faculty of Architecture of the University of Porto

Session S24 (Room 2)

**Topic 4 & 5**

**E. Ranjbar & S. Afsari Bajestani** - A cultural evaluation of the contemporary experiences of urban space regeneration in historic cities of Iran

**S. A. Hassan** - Effect of Colonial British Architecture in the Iraqi Modern Architecture

**E. Stachura** - Infill development and heritage: the case of Raciborz old town, Poland

**M. Verbist, J. M. Branco, E. Poletti, P. B. Lourenço & T. Descamps** - Single and Double Step Joints Design: overview of European standard approaches compared to experimentation

Session S25 (Room 3)

**Topic 5**

**J. H. N. Amar & L. Armitage** - The Crichton Estate: a cultural built heritage perspective

**D. Besana & F. Scalzone** - New Co<sup>+</sup>: new sustainable life for summer camps

**L. Brumă** - Bucharest, the little Paris?

**C. Mariotti & A. Zampini** - Reconstructing bridges. A cultural operation

## *Notes*



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