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REHABEND 2024

Euro-American Congress

CONSTRUCTION
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TECHNOLOGY AND
HERITAGE MANAGEMENT

Gijón (Spain) - May 7th - 10th, 2024

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REHABEND 2024

**CONSTRUCTION PATHOLOGY, REHABILITATION TECHNOLOGY AND
HERITAGE MANAGEMENT**

(10th REHABEND Congress)

Gijón (Spain), May 7th-10th, 2024

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**10TH EURO-AMERICAN CONGRESS ON CONSTRUCTION PATHOLOGY,
REHABILITATION TECHNOLOGY AND HERITAGE MANAGEMENT
REHABEND 2024**

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Introduction.....	3
Previous Congresses.....	4
Sponsor & Collaborating Entities.....	5
International Scientific Committee.....	9
Topics.....	15
Abstracts of the Congress.....	17
Keynote Lectures.....	37
1.- Previous Studies.....	41
1.1.- Multidisciplinary studies (historical, archaeological, etc.).....	43
1.2.- Heritage and territory.....	58
1.3.- Urban regeneration.....	70
1.5.- Social participation processes and socio-cultural aspects in rehabilitation projects	81
1.6.- Construction pathology.....	83
1.7.- Diagnostic techniques and structural assessment.....	98
1.8.- Vulnerability studies and risk management.....	135
1.9.- Guides and regulations.....	142
2.- Project.....	145
2.1.- Theoretical criteria of the intervention project.....	147
2.2.- Traditional materials and construction methods.....	152
2.3.- Novelty products applicable and new technologies.....	174
2.4.- Sustainable design and energy efficiency.....	196
3.- Building Intervention.....	225
3.1.- Intervention plans.....	227
3.2.- Rehabilitation and durability.....	230
3.3.- Reinforcement technologies.....	242
3.5.- Conservation of industrial heritage.....	252
3.6.- Examples of intervention.....	255
4.- Maintenance.....	267
4.1.- Construction maintenance and infrastructures	269
4.2.- Preventive conservation of built heritage.....	279
5.- Diffusion and Promotion.....	293
5.1.- Heritage and cultural tourism.....	295
5.2.- Teaching and training.....	308
5.3.- New technologies applied to the heritage diffusion.....	310
5.4.- Accessibility to cultural heritage.....	321
5.5.- Built heritage management	325

The **Euro-American Congress REHABEND 2024 on Construction Pathology, Rehabilitation Technology and Heritage Management** was held in **Gijón (Spain)**, in **May 2024**. The event was co-chaired by the **University of Cantabria** and the **University of Oviedo**.

REHABEND 2024 **continued the series of the nine previous REHABEND international events**, which had been held **since 2006 in different Spanish cities**. The previous one, in **2022**, took place in **Granada, Spain**. In 2022 edition, approximately **280 papers** from around **30 countries** were presented, making it a conference of great interest to those who attended.

Construction Pathology, Rehabilitation Technology and Heritage Management currently hold significant importance in the construction sector. This prompted the organizers to propose a **technical event on these topics in Gijón**. The event aimed to collect the **advances obtained in the last two years** in the **theoretical knowledge** and **practical realizations** carried out on the referred topics. The Congress met around **275 technical contributions** coming from professionals, academics and specialists from more than **30 countries**.

Based on previous experiences, the Congress **was once again proposed within the Euro-American cultural space**. The **official languages** were **English, Italian, Portuguese and Spanish**. Organizers understand that technical articles and oral presentations, with the support of graphic material and schemes, would be understood by participants, as evidenced by previous editions of REHABEND.

Under these premises and the success of previous editions, the Congress was sponsored by the **Government of Spain, the Regional Government of Asturias, the Municipality of Gijón, Laboral Ciudad de la Cultura, Gijón Convention Bureau, Grupo Puma, Mapei, Sika, Tecnalía, the University of Cantabria and the University of Oviedo**. Additionally, several universities, technical and professional associations, institutes, foundations and companies pledged their collaboration to ensure the success of this initiative.

The organizers of REHABEND 2024 extend their gratitude to the **sponsors and collaborating entities**; the **Scientific Committee members** for their diligent review of technical contributions to ensure the required level of quality for an international event, to the **keynote speakers**, to the different **speakers** for their valuable contributions, and **all attendees** for their confidence in the event. Sincerely, many thanks to all.

A blue ink signature of Dr. Ignacio Lombillo, consisting of a stylized 'I' and 'L' intertwined.

Dr. Ignacio Lombillo

Chairman of the REHABEND 2024 Congress
Associate Professor
University of Cantabria

A blue ink signature of Dr. Alfonso Lozano, featuring a large, flowing 'A' and 'L'.

Dr. Alfonso Lozano

Chairman of the REHABEND 2024 Congress
Associate Professor
University of Oviedo

The University of Cantabria, through its Building Technology R&D Group (GTED-UC), was the promoter of the REHABEND Congresses on Construction Pathology, Rehabilitation Technology and Heritage Management.

The 1st REHABEND Congress was set in motion in Santander, Spain, in November 2006. It became established in the 2nd (Santander, 2007), 3rd (Valencia, 2008), 4th (Bilbao, 2009), 5th (Santander, 2014), 6th (Burgos, 2016) and 7th Congress (Caceres, 2018), all of them carried out in Spanish cities. The 2020 edition was to be held in person in Granada in March 2020, but due to the global health emergency resulting from Covid-19, it had to be held online in September 2020. The 9th edition (REHABEND 2022) took place in Granada, featuring a hybrid format combining in-person presentations with other asynchronous online sessions.

The ability to convene of the nine performed editions was prominent, gathering an appreciable number of experts in the topics of the Congress. As a reference, in REHABEND 2022 Congress took part approximately 280 speakers from around 30 countries worldwide.

The covers and ISBN of some the books of papers corresponding to the previous congresses are attached below. The ISSN of the series of REHABEND books is 2386-8198. In addition, since REHABEND 2014, the papers presented at the congress have been indexed in Scopus.



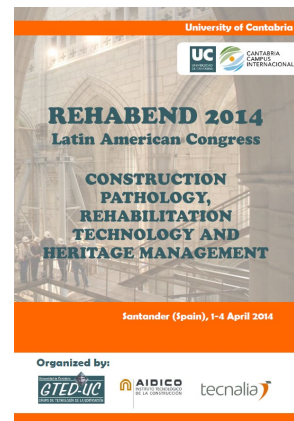
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The Collaborating Entities have been presented grouped in countries, following an alphabetical order. As Collaborating Entities have been considered to all that have contributed at least with two accepted articles in the Congress, or that some of its members formed part of the International Scientific Committee of the Congress / keynote speakers. Finally, in each country, the Collaborating Entities have been ordered according to the number of accepted articles.

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<p style="text-align: center;">1.- PREVIOUS STUDIES</p>	<p>1.1.- Multidisciplinary studies (historical, archaeological, etc.).</p> <p>1.2.- Heritage and territory.</p> <p>1.3.- Urban regeneration.</p> <p>1.4.- Economical and financial policies.</p> <p>1.5.- Social participation processes and socio-cultural aspects in rehabilitation projects.</p> <p>1.6.- Construction pathology.</p> <p>1.7.- Diagnostic techniques and structural assessment.</p> <p>1.8.- Vulnerability studies and risk management.</p> <p>1.9.- Guides and regulations.</p>
<p style="text-align: center;">2.- PROJECT</p>	<p>2.1.- Theoretical criteria of the intervention project.</p> <p>2.2.- Traditional materials and construction methods.</p> <p>2.3.- Novelty products applicable and new technologies.</p> <p>2.4.- Sustainable design and energy efficiency.</p>
<p style="text-align: center;">3.- BUILDING INTERVENTION</p>	<p>3.1.- Intervention plans.</p> <p>3.2.- Rehabilitation and durability.</p> <p>3.3.- Reinforcement technologies.</p> <p>3.4.- Restoration of artworks.</p> <p>3.5.- Conservation of industrial heritage.</p> <p>3.6.- Examples of intervention.</p>
<p style="text-align: center;">4.- MAINTENANCE</p>	<p>4.1.- Construction maintenance and infrastructures.</p> <p>4.2.- Preventive conservation of built heritage.</p>
<p style="text-align: center;">5.- DIFFUSION AND PROMOTION</p>	<p>5.1.- Heritage and cultural tourism.</p> <p>5.2.- Teaching and training.</p> <p>5.3.- New technologies applied to the heritage diffusion.</p> <p>5.4.- Accessibility to cultural heritage.</p> <p>5.5.- Built heritage management.</p>

CODE 63**THE NEW REHABILITATION STRATEGIES OF ARCHITECTURE: THE BUILDING OF THE NEW UNIVERSITY OF MESSINA****Arena, Adriana¹; Savoca, Ludovica Maria Sofia²**

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KEYWORDS: New workspaces; Health and wellness; Archival documentation; Architecture of the '900; Architectural survey.

ABSTRACT

The city and its buildings are an expression of the history and the socio-cultural context shaping their forms and interior meanings. The archival documentation allows to walk backwards along the milestones influencing the design process, giving the possibility of understanding all the motivations driving its continuous development. The system of buildings forming the original nucleus of the New University of Messina, built immediately after the 1908 earthquake and, in particular, one of the buildings in question, represents the research object of this contribution. The comparative reading of the original project with the recent surveys has become an opportunity to set up a strategy aiming to improve the level of comfort of its environments by adapting the building to the new standards. Indeed, by applying such exegetical process we will try to investigate the construction methodologies putting them in relation to the needs of main users; the building under investigation had in fact to fulfill the "specialist" function of the headquarter of university institutes integrating among the other functions of laboratory type. After having analyzed the transformations that have occurred over time and the relative adaptation to new uses, the objective of the research is to formulate design hypotheses aimed at the "rehabilitation" of the building through the combined application of the tools of representation (survey, graphic analysis and 3D modeling) which will allow, in the first phase of the work, to formulate hypotheses for the re-functionalization of the environments. Subsequently, the remodulation of the spaces analyzed according to the new comfort needs will be foreseen, applying innovative technologies in the field of environmental improvement, optimization of the dimensions and furnishings in relation to the work activities that take place there. All this invokes the civil role of architecture in response to great contemporary needs, where the redesign of workspaces, through the use of some fundamental steps, allows for the creation of a simple, comfortable, dynamic, multifunctional, technological and compliant workplace and productivity. The perception of the work space, single or shared, is gradually changing also due to a series of dynamics that involve our lives: the advancement of technology, the emergence of more flexible forms of work, growing attention to sustainability and greater interest in the health of users.

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