

EXHIBITION CATALOG

INTERNATIONAL ITINERANT EXHIBITION "RESEARCH IN BUILDING ENGINEERING EXCO'22"

INTERNATIONAL ITINERANT EXHIBITION EXCO 2022
ETS DE INGENIERÍA DE EDIFICACIÓN
UNIVERSITAT POLITÈCNICA DE VALÈNCIA
Camino de Vera S/N, 46022 Valencia – Spain

Location:

UNIVERSITÀ DEGLI STUDI DI SALERNO

Dipartimento di Ingegneria Civile- UNISA

From 5th to 16th December, 2022

Via Giovanni Paolo II, 132 - 84084 Fisciano (SA), Italia

Curators of Exhibition:

Dr. Giacomo DI RUOCCO (Local Curator)

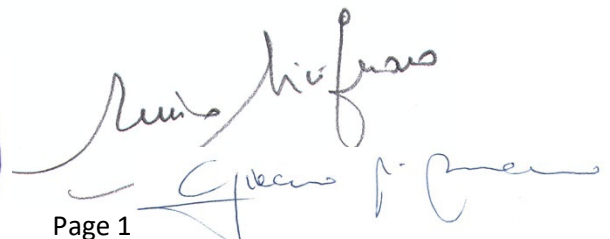

Dr. Enrico SICIGNANO (Local Curator)

Dr. José Ramón ALBIOL IBÁÑEZ (International Curator)

Exhibition

XXXVI INTERNATIONAL SHOWROOM OF CONSTRUCTION TECHNOLOGIES - EXCO 2022 ©

INTERNATIONAL ITINERANT EXHIBITION "Research in Building Engineering - EXCO'22"



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PROLOGO – EXCO UNISA 2022

È stato motivo di grande soddisfazione organizzare l'EXCO'22 International Exhibition, presso l'Università degli Studi di Salerno. L'evento ha fatto tappa presso la nostra università nel periodo 05-16 Dicembre 2022, mediante esposizione dei pannelli in modalità virtuale. Curatori dell'iniziativa: Proff. Giacomo Di Ruocco ed Enrico Sicignano, Segreteria Organizzativa: Ing. Roberta Melella, PhD student.

EXCO International Exhibition è ormai diventato un evento periodico per la nostra università, quale opportunità per ricercatori, docenti, dottorandi e studenti di conoscere ed apprezzare un interessante, ampio ed innovativo panorama di ricerca nel campo dell'industria delle costruzioni. Ciò è il risultato dei proficui rapporti accademici e di ricerca che da alcuni anni l'Università degli Studi di Salerno intrattiene con la UPV di Valencia. In primis corre l'obbligo di ringraziare il Direttore di EXCO, prof. dr. José Ramón Albiol-Ibáñez, personalità di eccezionale professionalità ed efficienza, il quale ci ha offerto l'opportunità di prendere visione dello stato dell'arte della ricerca condotta da colleghi di varie università, leader internazionali nel campo dell'ingegneria edile, nonché di presentare alcuni prodotti della ricerca del personale accademico (ricercatori, docenti, dottorandi) del Dipartimento di Ingegneria Civile dell'Università di Salerno.

Prof. Enrico Sicignano

Prof. Giacomo Di Ruocco

PROLOGUE - EXCO UNISA 2022

It was a great satisfaction to organize the EXCO'22 International Exhibition, at the University of Salerno. The event passed at our university in the period 05-16 December 2022, through exposure of the panels in virtual mode. Curators of the initiative Prof. Giacomo Di Ruocco and Enrico Sicignano, Organizing Secretariat Ing. Roberta Melella, PhD student.

EXCO International Exhibition has become a regular event for our university, as an opportunity for researchers, professors, PhD students and students to know and appreciate an interesting, wide and innovative research panorama in the field of construction industry. This is the result of the profitable academic and research relationships that the University of Salerno has had with the UPV of Valencia for several years. First of all, we must thank the Director of EXCO, Prof. Dr. José Ramón Albiol-Ibáñez, a personality of exceptional professionalism and efficiency, who offered us the opportunity to view the state of the art of research conducted by colleagues from various universities, international leaders in the field of construction engineering, as well as to present some research products of the academic staff (researchers, teachers, PhD students) of the Department of Civil Engineering of the University of Salerno.

Prof. Enrico Sicignano

Prof. Giacomo Di Ruocco

PROLOGUE DIRECTOR EXCO'22

The Faculty of Building Engineering of the UNIVERSITAT POLITÈCNICA DE VALÈNCIA - SPAIN, organized on June 13th to 17th, 2022, "The XXXVI Construction Technology Exhibition" EXCO'22 and the International Itinerant Exhibition "Research in Building Engineering" along year.

Conferences are scheduled in UNIVERSITAT POLITÈCNICA DE VALÈNCIA - SPAIN, the speakers are national and international of recognized prestige from Europe, Asia and America. These conferences are aimed at professionals and students of the UPV to broaden their knowledge and experiences.

EXCO'22 promotes the entrepreneurship of the young UPV generations, participation in conferences.

The International Itinerant Research Exhibition EXCO'22 has the collaboration of 63 Universities from America, Europe, Africa, Asia and Oceania. Promoting collaboration between institutions and professors at the international level.

It fosters interdisciplinary collaboration of the professor staff within the UPV with 63 International Universities; It has the participation of 9 departments and 8 research institutes of the UPV in EXCO'22.

The participating entities are:

Universities:

1. *Universitat Politècnica de València, España.*
2. *Politecnico di Milano, Italia.*
3. *Mimar Sinan Fines Arts University, Istanbul, Turkey.*
4. *Nottingham Business School, England.*
5. *Vilnius Gediminas Technical University, Vilnius, Lithuania.*
6. *Universidad de Costa Rica*
7. *Università degli Studi di Basilicata, Matera, Italia.*
8. *Universidad Tecnológica de La Habana José Antonio Echeverría, Cuba.*
9. *Università degli Studi Firenze, Italia*
10. *Università di Pavia, Italia.*
11. *Odessa State Academy of Civil Engineering & Architecture, Odessa, Ukraine*
12. *Università di Salerno, Italia.*
13. *Silesian University of Technology, Politechnika Śląska, Gliwice, Poland.*
14. *University of British Columbia, Vancouver, Canada.*
15. *Universidad de Alcalá de Henares, Madrid, España.*
16. *Florida A&M University, Florida, USA.*
17. *Universidad Mayor de San Andrés, La Paz, Bolivia.*
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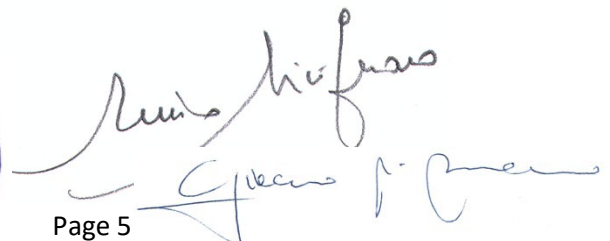

Thank you all for making EXCO possible. Best Regards

Dr. José R. Albiol-Ibáñez

**Vice Dean International Relations, Employment, Business Cathedra & Entrepreneurship
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CHAPTER 1 ECONOMY

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Alejandro Campillo Almajano / Alicia Llorca-Ponce / Andrés José Cózar Lizandra

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Pedro Gerardo Salinas Martínez

1.3.- METHODOLOGY FOR DESIGNING AN ENERGY COMMUNITY AND CHECKING ITS TECHNICAL AND ECONOMIC VIABILITY. APPLICATION IN THE MUNICIPALITY OF VINALESA

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M^a Emilia Casar Furió

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Fabiola Colmenero Fonseca / Francisco Javier Cárcel Carrasco / Graziella Bernardo / Luis Manuel Palmero Iglesias / Jorge Arturo Gutiérrez Camarena

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Joaquín Fuentes-del-Burgo / Elena Navarro-Astor

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C. Rivero-Camach / A. Martínez-Rocamora / M.D. Alba-Rodríguez / J. Solís-Gumán^{1,2,3}, M. Marrero

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Joaquín Fuentes-del-Burgo / Elena Navarro-Astor

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Henk Visscher

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Adrián Colomer Granero / Juan Luis Higuera-Trujillo / Valeriana Naranjo Ornedo / Carmen Llinares Millán

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