Preface

This volume is a collection of edited scientific papers presented at the International Conference on *Mechanics of Masonry Structures Strengthened with Composites Materials* (**MuRiCo7**) held online (November 24-26, 2021).

The previous Conferences, organised by AICO (Italian Association of Composites in Constructions, established in 1996), were held at the University IUAV of Venice (years 2000, 2004, 2009) and University of Bologna, a campus of Ravenna (2014) and a campus of Bologna (2017, 2019).

This International Conference, MuRiCo7, was organized by AICO under the patronage of DICAM Department of University of Bologna, DA Department of University of Bologna, and RILEM (International Union of Laboratories and Experts in Construction Materials, Systems and Structures).

The Conference represented a forum to promote and exchange the latest theoretical, computational, and experimental research works finalised to the design of structural strengthening of historic masonry constructions.

The MuRiCo7 covers a wide range of general topics:

- Mechanics of historical masonry: testing and modeling
- Performance of strengthened masonry with composites (FRP, FRCM, TRM, SRG)
- Performance in masonry/composites coupling: bond, special connections, fracture, fatigue, fire, durability
- Appropriate composites techniques evolution for historical construction strengthening
- First aid and provisional devices in historical structures with collapse risk after seismic shock
- Criticism on existing guidelines, standards, and praxis in masonry/composites coupling
- Sustainability, circular economy, life-cycle assessment, and recycling.

The Editors would like to thank the members of the Scientific Committee and the organizers of the special mini symposiums for their support that contributed to the success of the Conference. Furthermore, we express our gratitude to AICO, promoting and organizing the Conference.

The Editors

G. Castellazzi, C. Gentilini and A. Di Tommaso

ALMA MATER STUDIORUM University of Bologna, November 2021

Committees

Local Organizing Committee

Angelo DI TOMMASO (AICO President)

Giovanni CASTELLAZZI (University of Bologna & AICO Vice President)

Cristina GENTILINI (University of Bologna & AICO)

Scientific Committee

Maria Antonietta AIELLO (University of Salento, Italy)
Maurizio ANGELILLO (University of Salerno, Italy)
Luigi ASCIONE (University of Salerno, Italy)

Daniele BARALDI (IUAV Venice, Italy)

Alessandro BARATTA (University of Naples, Italy)

Lukasz BEDNARZ (Wrocław University of Science and Technology, Poland)

Elisa BERTOLESI (Brunel University London, UK)
Michele BETTI (University of Florence, Italy)
Carlo Blasi (University of Parma, Italy)

Antonio BORRI (Università degli Studi di Perugia, Italy)

Matteo BRUGGI (Politecnico di Milano, Italy)

Christian CARLONI (Case Western Reserve University, USA)

Alberto CARPINTERI (Politecnico di Torino, Italy)
Giovanni CASTELLAZZI (University of Bologna, Italy)
Serena CATTARI (University of Genova, Italy)

Antonella CECCHI (IUAV Venice, Italy)

Francesco CLEMENTI (Università Politecnica delle Marche, Italy)

Eva COISSON (University of Parma, Italy)
Pierluigi COLOMBI (Politecnico di Milano, Italy)

Mario COMO (Tor Vergata, University of Rome, Italy)

Marco CORRADI (Northumbria University, UK)

Manfred CURBACH (TU Dresden, Germany)

Antonio Maria D'ALTRI (University of Bologna, Italy)
Tommaso D'ANTINO (Politecnico di Milano, Italy)
Gianmarco DE FELICE (University of Roma 3, Italy)
Stefano DE MIRANDA (University of Bologna, Italy)

Matthew DeJONG (University California, Berkeley, USA)

Angelo DI TOMMASO (University of Bologna, Italy)
Mario FAGONE (University of Florence, Italy)

Nicholas FANTUZZI (University of Bologna, Italy)
Francesco FOCACCI (University eCampus, Italy)
Fernando FRATERNALI (University of Salerno, Italy)
Carmelo GENTILE (Politecnico di Milano, Italy)
Cristina GENTILINI (University of Bologna, Italy)
Bahman GHIASSI (University of Nottingham, UK)

Ernesto GRANDE (Guglielmo Marconi University, Italy)

Riccardo GULLI (University of Bologna, Italy)

Jerzy JASIENKO (Wrocław University of Science and Technology, Poland)

Marcin KONIORCZYK (University of Lodz, Poland)
Lidia LA MENDOLA (University of Palermo, Italy)
Giuseppe LACIDOGNA (Politecnico di Torino, Italy)
Sergio LAGOMARSINO (University of Genova, Italy)

Stefano LENCI (Università Politecnica delle Marche, Italy)

Gian Piero LIGNOLA (University of Naples, Italy)
Paulo LOURENCO (University of Minho, Portugal)
Massimiliano LUCCHESI (University of Florence, Italy)
Federico MAZZOLANI (University of Naples, Italy)
Claudio MAZZOTTI (University of Bologna, Italy)

Walter MERA (Universidad Catolica de Guayaquil, Ecuador)

Francesco MICELLI (University of Salento, Italy)
Gabriele MILANI (Politecnico di Milano, Italy)
Luisa MOLARI (University of Bologna, Italy)

Marius MOSOARCA (Poithnica Univesity Timisoara, Romania)

Antonio NANNI (University of Miami, USA)
Daniel OLIVEIRA (University of Minho, Portugal)
Renato Sante OLIVITO (University of Calabria, Italy)
Luciano OMBRES (University of Calabria, Italy)

Maria Rosaria PECCE (Università degli Studi del Sannio, Italy)

Carlo PELLEGRINO (University of Padua, Italy)

Vincent PLACET (University Bourgogne Franche-Comté, France)

Carlo POGGI (Politecnico di Milano, Italy)
Andrea PROTA (University of Naples, Italy)
Giovanna RANOCCHIAI (University of Florence, Italy)

Pere ROCA (Universitat Politècnica de Catalunya, Spain)

Jan Rots (TU Delft, Nederland)
Salvatore RUSSO (IUAV Venice, Italy)

Elio SACCO (University of Naples, Italy)
Marco SAVOIA (University of Bologna, Italy)

Francesca SCIARRETTA (IUAV Venice, Italy)

Kolluru V.L. SUBRAMANIAM (Indian Institute of Technology, Hyderabad, India)

Sabino Nicola TARQUE RUIZ (Pontifical Catholic University of Peru, Peru)

Dimitris THEODOSSOPOULOS (The University of Edinburgh, UK)

Antonio TRALLI (University of Ferrara, Italy)
Filippo UBERTINI (University of Perugia, Italy)
Francesco UBERTINI (University of Bologna, Italy)
Maria Rosa VALLUZZI (University of Padua, Italy)
Humberto VARUM (University of Porto, Portugal)

Sponsors

MuRiCo7 Patronages











MuRiCo7 Technical Partners

















