

ORGANIZING COMMITTEE

Chairs:

Carlo Pellegrino & Paolo Zampieri, University of Padua

Members:

Francesco Cannizzaro, University of Catania

Fabrizio Scozzese, University of Camerino

Nicola Cavalagli, University of Perugia

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LOCAL ORGANIZING COMMITTEE:

Laura Niero, University of Padua

Flora Faleschini, University of Padua

Riccardo Piazzon, University of Padua

Lorenzo Hofer, University of Padua

Davide Santinon, University of Padua

Mariano Angelo Zanini, University of Padua

SCIENTIFIC COMMITTEE:

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Matthew Gilbert, University of Sheffield

Paolo Zampieri, University of Padua

Lorenzo Macorini, Imperial College London

Katalin Bagi (Budapest University of Technology and Economics)

Gabriele Milani, Politecnico di Milano

Ivo Calìo, University of Catania

Daniel Oliveira, University of Minho

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PROFESSIONAL CREDITS:

L'evento patrocinato dal CNI da diritto all'ottenimento di un totale massimo di 9 cfp. L'evento è stato organizzato ai sensi dell'art 4.5.4. del TU Linee di indirizzo per l'aggiornamento della competenza professionale del CNI, con accumulo di cfp validi per un massimo di 9 cfp annui.

PATRONAGE



SPONSOR



GETTING HERE

BY PLANE

Venice Marco Polo airport (VCE) is about 40 km far from Padua (*Padova* in Italian) - the city centre can be easily reached by taxi or public transport

BY TRAIN

The railway station is close to the city centre. You can get to the Botanical Garden by bus or tram (leaving every 10 minutes from the railway station - stop n. 12-Santo)

BY CAR

There are parking facilities surrounding Prato della Valle. Other parking options nearby are:

- Piazza Rabin Car Park (entrance from via 58° Reggimento Fanteria Brigata Abruzzi): 1.00 €/hr
- On-street parking (delimited by blue lines): rates range from 1.10 €/hr to 1.70 €/hr

Free car parks are available outside the city centre. From there, you can reach the Botanical Garden by public transport:

- via Bembo Parking - from *Tangenziale Est* (beltway) take exit n. 11 (Via Bembo). Bus line 3
- via Piovese Parking - from *Tangenziale Est* (beltway) take exit n.12 (Via Piovese). Bus lines 16 or 5



SEPTEMBER 12-13, 2024

ORTO BOTANICO

Via Orto Botanico 15, (PD)
Padova (Italy)

1ST INTERNATIONAL WORKSHOP ON INSPECTION, TESTING, MONITORING, ASSESSMENT AND MAINTENANCE OF MASONRY ARCH BRIDGES

&

GIORNATA-STUDIO FABRE: VALUTAZIONE, GESTIONE,
MANUTENZIONE E MONITORAGGIO DEI PONTI IN MURATURA



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



INTRODUCTION

Masonry arch bridges still constitute a significant portion of European rail and road infrastructures. Although they are massive structures in service since many years, masonry bridges are now supporting higher traffic loads than those originally envisaged. Their mechanical response is significantly influenced by the inherent variation of their constituent materials, the deterioration caused by weathering processes and the development of other defects, which increase over the years. In addition, also due to climate change, these historic bridges are increasingly subjected to extreme actions and pushed to new limits. It is therefore necessary to plan some activities such as monitoring (through periodic inspections, diagnostic investigations, structural health monitoring, etc.), maintenance and strengthening interventions to keep their efficiency and safe conditions.

This workshop is designed to bring together practitioners, researchers and managers involved in the assessment, design, and management of masonry arch bridges. It is organized in collaboration with FABRE, a Research Consortium for the Evaluation and Monitoring of Bridges, Viaducts and Other Structures. FABRE promotes and coordinates the participation of Consortium Universities and Research Institutions in scientific activities in the fields of Civil Engineering and Architecture, with special reference to the evaluation of bridges, viaducts, and other structures.

The workshop is intended to provide an invaluable opportunity for participants to exchange knowledge and ideas on masonry arch bridge infrastructure. It also aims to support research in this area by promoting two prizes, which will be awarded at the Workshop dinner to:

- A Researcher who has contributed significantly to masonry bridge research over the past 10 years;
- A young Researcher who has completed a PhD dissertation on masonry arch bridges in the past 5 years.

For more information check the website www.womab.com

LOCATION

The Orto Botanico di Padova is a botanical garden in Padua, in the northeastern part of Italy. Founded in 1545 by the Venetian Republic, it is the world's oldest academic botanical garden that is still in its original location. The garden, affiliated with the University of Padua, currently covers roughly 22,000 square meters and is known for its special collections and historical design. Since September 2014, following the acquisition of a new area in the south of the ancient Botanical Garden, a tourist destination of great attraction, the new greenhouses of the Biodiversity Garden are open to the public: a symbolic microcosm that allows the visitor to experience the different climatic conditions and vegetation present on the Earth.

WORKSHOP PROGRAM

SEPTEMBER 12th

09:00 **Registration**

09:30 **Event welcome & Workshop introduction.**

Carlo Pellegrino & Paolo Zampieri (*University of Padova*)

WORKSHOP SESSION 1: "TESTING AND MONITORING"

Plenary lectures:

10:00 **Non-Destructive testing and monitoring of masonry arch bridges.**

Carmelo Gentile (*Politecnico di Milano*)

10:30 **Risk assessment and monitoring of masonry bridges exposed to scour.**

Enrico Tubaldi (*University of Strathclyde*)

11:00 **Break**

11:30 **Laboratory testing of a full-scale masonry arch bridge.** Vasilis Sahrosis (*University of Leeds*)

12:00 **Session lectures and discussion**
(*To be defined*)

13:00 **Lunch**

WORKSHOP SESSION 2: "ASSESSMENT AND ANALYSIS"

Plenary lectures

14:00 **"Practical analysis and assessment of masonry arch bridges".** Matthew Gilbert (*University of Sheffield*)

14:30 **A 3D discrete-macro-element-method for the structural assessment of masonry bridges.**
Ivo Calìo (*University of Catania*)

15:00 **Multi-level assessment of masonry arch bridges.**
Lorenzo Macorini (*Imperial College London*)

15:30 **FE limit analysis modelling of masonry arch bridges interacting with the backfill: suitability and open challenges.** Gabriele Milani/ Yiwei Hua (*Politecnico di Milano*)

16:00 **Virtual experiments on masonry arches and barrels with the help of the discrete element method.**

Katalin Bagi (*Budapest University of Technology and Economics*)

16:30 **Break**

17:00 **Session lectures and discussion**
(*To be defined*)

18:00 **Closing Session lectures and discussion**

20:00 **Social dinner - Awards ceremony**

SEPTEMBER 13th

WORKSHOP SESSION 3: "STRENGTHENING AND MAINTENANCE"

Plenary lectures:

09:30 **Discussion on the different strengthening techniques for masonry bridges.** Paolo Zampieri (*University of Padova*)

10:00 **Masonry arch bridges: from visual inspection to structural assessment.** Gianfranco De Matteis (*University of Campania "Luigi Vanvitelli"*)

10:30 **Masonry arch bridges: from non-destructive techniques and numerical models to repair.**
Daniel Oliveira (*University of Minho*)

11:00 **Break**

11:30 **Session lectures and discussion**
(*To be defined*)

12:30 **Workshop Closing Ceremony**

GIORNATA-STUDIO FABRE: VALUTAZIONE, GESTIONE, MANUTENZIONE E MONITORAGGIO DEI PONTI IN MURATURA

REGISTRATION METHOD AND FEES

	In-person	Online*
WOMAB & FABRE fee (<i>with social dinner</i>)	200 €	-
WOMAB & FABRE fee	120 €	120 €
WOMAB fee (<i>with social dinner</i>)	190 €	-
WOMAB fee	100 €	100 €
FABRE fee (<i>with social dinner</i>)	130 €	-
FABRE fee	30 €	30 €

*The online mode will be activated only after the number of in-person seats at the Botanical Garden have been filled.

Registration fees are inclusive of VAT.

To register press [here](#).

For any information contact e-mail address: womab@dicea.unipd.it.

Terms and Conditions

To best organize the event, participants must register by July 31, 2024. Payment confirmation notifications will be sent to your e-mail address once payment has been successfully processed. For online payments, please print the bank confirmation. No other confirmations will be sent.

Refund Policy

There is no refund of the conference registration fee.