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WELCOME MESSAGE

The growing construction of footbridges as iconic structures, the importance of the correct integration in the landscape, satisfying functionality principles and offering simultaneously safety, comfort and fruition along the walking path, added by the reduced loads and scale that render these structures the ideal vehicles for experimentation and innovation, have contributed to significant progress in design and increased interest in footbridges, and to the recognition that these structures deserve a specific treatment in the context of Civil Engineering applications.

After two former editions, one in Paris, in November 2002, and a second one in Venice, in December 2005, it is now the opportunity to organise the Third International Conference Footbridge 2008 in Porto, a city with 1000 years of history, grown along the river and mouth of Douro. This demanding river has from the 19th century inspired the construction of outstanding bridges. The obvious need of pedestrian links between the two margins in the context of urban renewal and the current search of high expertise solutions to overcome the river Douro, provide therefore the motto for this third International Conference Footbridge 2008: Footbridges for Urban Renewal, organised by the Faculty of Engineering of the University of Porto (FEUP) and by the Technical Advisory Bureau for Steel Users (OTUA).

Preceded by a Workshop focusing on the Worldwide Experience in the Dynamic Design of Footbridges, Footbridge 2008 includes about 140 contributions from 23 different countries on the various topics related: Planning and Conceptual Design; Structural Analysis and Behaviour; Dynamics, Vibrations and Control; and New Materials and Innovations.

In order to promote as much as possible the interaction between authors and participants, the conference format shall comprise keynote lectures, plenary, parallel and poster sessions, and will finalise with a Round Table, in which a Panel will interact with the participants. In an effort to motivate contributions from young authors, FEUP and OTUA are promoting the Young Authors Prize.

The conference venue, located at the Campus of the Faculty of Engineering of the University of Porto (FEUP), will provide sufficient space for the conference activities, including the Technical Exhibition.

As part of the Social Program, we invite you to a Reception at the Alfândega, where the Footbridge Awards will be presented, and to the Banquet at the typical Porto wine cellars Ferreirinha, where we expect to offer you enjoyable moments.

We warmly welcome you to Porto, to FEUP and to Footbridge 2008, and expect this Conference will contribute to a fruitful exchange of experiences and to development of new projects.

Porto, July 2008

Elsa Caetano and Álvaro Cunha

ORGANISING COMMITTEE*Chair:* Elsa Caetano (FEUP, Portugal)*Co-Chair:* Álvaro Cunha (FEUP, Portugal)

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Joanne Crabb (DELSCAN, Canada)

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Jöel Raoul (SETRA, France)

Juan Sobrino (PEDELTA, Spain)

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Júlio Appleton (A2P Consult)

Luís Cância Martins (J. L. Cância Martins)

Tiago Abecasis (Tal Projecto)

Tiago Mendonça (Betar)

GENERAL INFORMATION

Venue

The conference will be held at the Campus of the Faculty of Engineering of the University of Porto (FEUP), located at R. Dr. Roberto Frias, in Porto.

Dates

The conference will take place in the period 2-4 July 2008 (Wednesday to Friday).

Secretariat

The registration and information desk will be open in the following periods:

Wednesday, July 2	8.00-19.00
Thursday, July 3	8.00-19.00
Friday, July 4	8.00-19.00

Internet

Access to Internet is provided at the Participants Living Room, called "Sala de Actos".

FEUP also provides wireless access to Internet, based on the Web Login system.

This service has no specific requirements of hardware or software, allowing the access to any equipment with wireless capacity and an Internet browser. The conference participants can connect to the SSID guest-e-U announced by FEUP, introducing the following credentials in a login page and accessing the Internet:

Login: frm00280 **Password:** feup08

Owing to the nature of this service, the Internet connection is restricted to http and https protocols.

Coffee-breaks

Coffee will be served daily, during the morning and afternoon breaks, at the Auditorium ground floor/ in front of Exhibition area.

Lunches

During the three days of conference, the lunch will be served at the Grill of FEUP Cantine.

Conference Reception and Footbridge Awards

The Conference Reception will take place at Alfândega, on the 2nd July at 19h30.

Buses will depart from FEUP at 18h00-18h15 to Cais da Estiva, at Ribeira.

Departure from Cais da Estiva to Alfândega in boats named São Telmo and Via Douro between 18h30-18h45 for a small cruise in the river Douro and arrival at Alfândega at 19h30.

Address: Edifício da Alfândega
Rua Nova da Alfândega
4050-430 PORTO
Tel: +351 223403000

Conference Dinner

The Conference Dinner will be held at Caves Ferreirinha, on the 3rd July at 19h30.

Buses will depart from FEUP at 19h00.

Address: Caves Ferreirinha
Vila Nova de Gaia - Santa Marinha
Avenida Ramos Pinto 70, Vila N Gaia
4400-266 VILA NOVA DE GAIA

Identity Cards

The participants will receive identity cards, which must be always visible during the conference.

These cards refer the name, affiliation and country of each participant, and include also one of the following codes:

OC – Organising Committee
SC – Scientific Committee
SE – Secretariat
FR – Full Registration
ST – Student
SP – Sponsor
EX – Exhibitor
FE – FEUP student

TECHNICAL VISIT

A technical visit to Coimbra, to the Pedro and Inês footbridge will take place on Saturday, 5 July 2008. Registration is required.

The program includes an additional visit to the city and to Universidade de Coimbra and lunch.

Departure from Porto: 9h00; Arrival to Porto: 18h00

INFORMATION FOR AUTHORS

Oral Presentations Authors must deliver their powerpoint presentations to the technical staff of Footbridge 2008 present in each room (Auditorium, B035, B032), at least during the 30 minutes before the corresponding session.

The author that will present each paper must be at the room defined at the Technical Programme 15 minutes before the beginning of the session, in order to participate in a brief meeting with the session chairs.

Poster Presentations Authors must install their posters in their reserved panel in the morning of the scheduled day, in the period 8:30-9:00.

An introduction to the poster is presented at the end of the first morning, based on a one slide per poster supplied by the authors.

PROGRAMME ORGANISATION

Format

The Conference Programme comprises 7 Keynote Lectures, 9 Plenary Lectures, 6 Parallel Sessions, a Round Table and 3 Poster Sessions. There will be also Opening and Closing Sessions and a Final Lecture.

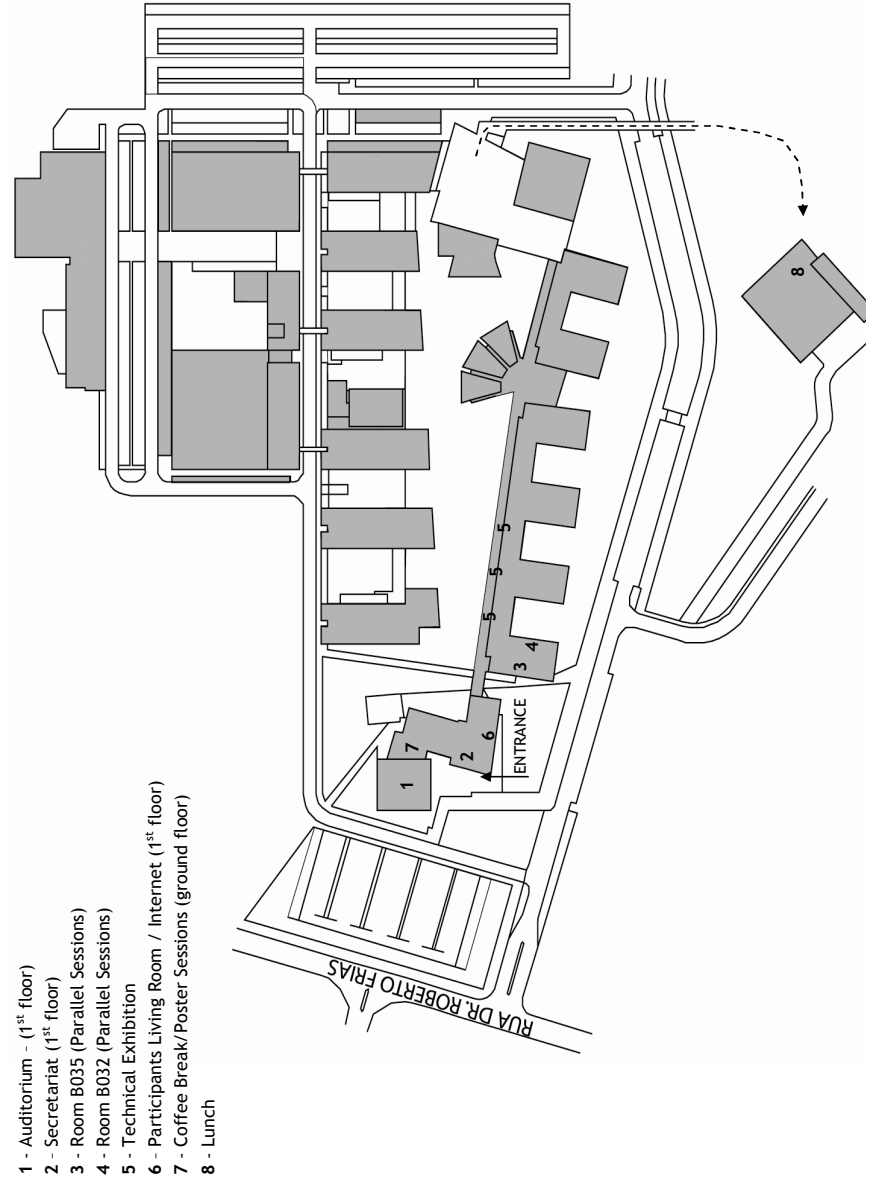
The Opening and Closing Sessions, the Keynote and the Plenary Sessions will take place in the Auditorium, whereas the Parallel Sessions will be developed simultaneously in three rooms: Auditorium, Room B032 and Room B035. Posters will be introduced in the morning Plenary/ Keynote Sessions and will be displayed and discussed in the Coffee Break Area during the corresponding periods.

Day 1				2 nd July
	Auditorium	Room B032	Room B035	
08:00 - Registration				
09:00-09:30	Opening Cerimony	---	---	
09:30-10:00	Keynote 1	---	---	
10:00-10:30	Keynote 2	---	---	
10:30-10:35	Introduction of Posters	---	---	
10:35-11:00	Poster Presentation and Coffee-break			
11:00-13:00	Parallel session A.1 Large Projects	Parallel session B.1 New materials and innovations	Parallel session C.1 Dynamics- models	
13:00-14:30	Lunch			
14:30-15:00	Keynote 3	---	---	
15:00-16:00	Plenary session P.1	---	---	
16:00-16:30	Coffee-break			
16:30-18:00	Parallel session A.2 Conceptual Design	Parallel session B.2 Truss and continuous footbridges	Parallel session C.2 Dynamics- control of vibrations	
18:00-18:15	Bus – Cocktail			
18:30-21:00	Cocktail and Footbridge Awards			

Day 2		3 rd July	
	Auditorium	Room B032	Room B035
09:00-09:30	Keynote 4	---	---
09:30-10:30	Plenary session P.2	---	---
10:30-10:35	Introduction of Posters	---	---
10:35-11:00	Poster Presentation and Coffee-break		
11:00-13:00	Parallel session A.3 Dynamics- general aspects	Parallel session B.3 Structural analysis and behaviour	Parallel session C.3 Cable-stayed and suspension footbridges
13:00-14:30	Lunch		
14:30-15:00	Keynote 5	---	---
15:00-16:00	Parallel session A.4 Conceptual design	Parallel session B.4 Dynamics- design rules	Parallel session C.4 Continuous footbridges
16:00-16:30	Coffee-break		
16:30-18:00	Parallel session A.5 Arch footbridges	Parallel session B.5 Design- various projects	Parallel session C.5 Dynamics- models
18:00-18:30	Sponsors intervention	---	---
19:00	Bus – Banquet		
19:30-23:00	Conference Banquet		

Day 3		4 th July	
	Auditorium	Room B032	Room B035
09:00-09:30	Keynote 6	---	---
09:30-10:30	Plenary session P.3	---	---
10:30-10:35	Introduction of Posters	---	---
10:35-11:00	Poster Presentation and Coffee-break		
11:00-13:00	Parallel session A.6 New materials and innovations	Parallel session B.6 Dynamics- measurements	Parallel session C.6 Structural analysis and behaviour
13:00-14:30	Lunch		
14:30-15:00	Keynote 7	---	---
15:00-16:00	Round Table	---	---
16:00-16:30	Coffee-break		
16:30-18:00	Closing ceremony: Young authors Prize Final Lecture Footbridge 2011	---	---

Plan of FEUP



TECHNICAL PROGRAMME**WEDNESDAY, 2 JULY – MORNING****9:00-9:30 Opening Ceremony (Auditorium)**

Mayor of Porto City Council,	Rui Rio
FEUP Dean,	Carlos Costa
Head of Civil Eng. Dept. FEUP,	Ferreira Lemos
Chair of the Organising Committee,	Elsa Caetano
Co-Chair of the Organising Committee,	Álvaro Cunha
Chair of the Scientific Committee,	António Adão da Fonseca
OTUA Representative,	Valérie Dusséqué
IABSE Representative,	Fernando Branco

9:30-10:30 Keynote Lectures (Auditorium)

Chairs: Álvaro Cunha, Wasoodev Hoorpah

Footbridges in Portugal

António Adão da Fonseca

Design of footbridges - are there limits?

Andreas Keil

11:00-13:00 Parallel Session A.1 (Auditorium)

Chairs: António Adão da Fonseca, Jiri Strasky

Non-iconic footbridges

Poul Ove Jensen

Balcony to the sea - The curved suspension bridge in Saßnitz, Germany

Mike Schlaich; Andreas Keil; Knut Stockhusen & Sebastian Linden

Ypsilon - Footbridge over river Drammen

Arne Eggen; Nanna Meidell & Knut Gjerding-Smith

Macintosh Island pedestrian bridge, Gold Coast Australia

Matt Carter; Peter Burton ; Rob Mowat & Kevin o'Donnell

Forthside Bridge, Stirling, Scotland

Keith Brownlie; Peter Curran & Steve Thompson

Holyhead pedestrian link

Andrew Paul Marginson & Arwel Rees Roberts

11:00-13:00 Parallel Session B.1 (Room B032)

Chairs: Fernando Branco, Urs Meier

Design and construction of New Zealand's first UHPC footbridges

Gavin Wight & Mark Rebentrost

Composite bridges and vacuum infusion- a 44m footbridge for Delft

Liesbeth Tromp

Design of a pedestrian bridge made with pultruded profiles of fibreglass-reinforced plastics in Prato

Alessandro Adilardi & Lorenzo Frasconi

Pedestrian steel arch bridge with composite polymer deck

Bartłomiej Grotte; Wojciech Karwowski; Przemysław Mossakowski;

Marcin Wróbel; Henryk Zobel & Piotr Żółtowski

Viana do Castelo moving footbridge (Portugal) – Construction methods

Ricardo Barbosa

Design of modular steel footbridge for small and medium spans

Monica Bresciani

11:00-13:00 Parallel Session C.1 (Room B035)

Chairs: Chris Barker, James Brownjohn

Pedestrian dynamics and footbridges

Miroš Pirner & Shota Urushadze

Exploratory data analysis of human-induced dynamic load in structures

Renata G. Faisca; Diane P. Coutinho ; Carlos Magluta & Ney Roitman

A running pedestrian dynamic load model for footbridges

Antonio Occhiuzzi & Mariacristina Spizzuoco

Vertical footbridge vibrations: The response spectrum methodology

Christos T. Georgakis & Einar Thór Ingólfsson

Vertical footbridge vibrations: Details regarding and experimental validation of the response spectrum methodology

Einar Thór Ingólfsson; Christos T. Georgakis & Martin Nymann Svendsen

Vibration serviceability of footbridges: a closed-form solution

Federica Tubino & Giuseppe Piccardo

WEDNESDAY, 2 JULY – AFTERNOON**14:30-15:00 Keynote Lecture** (Auditorium)

Chairs: Enzo Siviero, Mike Schlaich

Pursuit of bridge aesthetics in China - a personal experience
Man-Chung Tang

15:00-16:00 Plenary Session P.1 (Auditorium)

Stress-ribbon pedestrian bridges supported or suspended on arches
Jiri Strasky

Aesthetic aspect of some footbridge designs
Youssef Ghali

Suspension bridges in urban context – Paris v Krakow (design competitions)
Cezary M Bednarski

16:30-18:00 Parallel Session A.2 (Auditorium)

Chairs: Enzo Siviero, Mike Schlaich

Lessons from design competitions Henderson Colloquium 2007
Keith Brownlie

On bridge design
Luis Cândia Martins

Architecture of footbridges 4 projects by Hugh Dutton Associates
Hugh Dutton

Design with and without Architects – two footbridges at Guadalajara
Peter Tanner & Juan Luis Bellod

New design philosophy of footbridge
Takahiro Kishimoto; Yoshiaki Kubota & Masashi Kawasaki

16:30-18:00 Parallel Session B.2 (Room B032)

Chairs: Graeme Dundas, Jan Bien

Cherry Street Footbridge: Innovative design through integrated solution of the site constraints
Andrew Luong; Craig Gibbons & Paul Tsang

Steel footbridge over Tordera river, Tordera (Barcelona, Spain): "Pont de Ferro" (Iron Bridge)
Blai Serena; Juan Ramón Dueso & Daniel Pallàs

Lisbon Oceanarium access bridge
António Póvoas

Repair and recycle of a metallic bridge in Tui
Antonio González Serrano

Castelló d'Empúries Footbridge
Manuel Reventós & Guillem Collell

Structural continuity and relativity for footbridge designs
Yoshiaki Kubota & Takahiro Kishimoto

16:30-18:00 Parallel Session C.2 (Room B035)

Chairs: Benedikt Weber, Carlos Moutinho

Examination of own human comfort criteria for footbridges in case of wind-induced vibrations
Andrew Flaga; Mark Pařtak & Thomas Michałowski

Dynamic amplification factors for footbridges – Experimental approach
Sylvia Adamcewicz; Jan Bien; Pawel Rawa & Jaroslaw Zwolski

Multiple tuned mass damper controlling vibrations of a footbridge
Daniel Gomes; Suzana Avila & Graciela Doz

Modular tuned mass dampers for pedestrian footbridges
Philippe Duflot & Doug Taylor

Effect of a tuned mass damper in footbridge design
Caspar Breman; Bert Snijder; Herke Stuit & Monique Bakker

Poster Session Pt1 (Coffee-break area)

Footbridge: tools for a sustainable urban environment
Fabrizia Zorzenon

Footbridge in the Campus of the University of Aveiro - Conception, design and construction
António Adão da Fonseca

Carpinteira Footbridge, at Covilha - Conception, design and construction
António Adão da Fonseca; Carlos Quinaz; Renato Bastos & Miguel Pereira

Footbridge over the new west by-pass motorway in Sabadell
Manuel Reventós Rovira; Jordi Pascual Gilibert & Guillem Collell Mundet

Joan Camps Footbridge over the River Congost in Granollers (Spain)
Xavier Font; Lee Bowker & John Hawkins

Design for charity bridges in comparative conception
Lisha Ren; Tobia Zordan; Enzo Siviero & Zhengsheng Yin

THURSDAY, 3 JULY – MORNING**9:00-9:30 Keynote Lecture** (Auditorium)

Chairs: Wasoodev Hoopah, Zlatko Savor

Codes of practice for lively footbridges: State-of-the-art and required measures
Christiane Butz

9:30-10:30 Plenary Session P.2 (Auditorium)

Conclusions from the Workshop
David Mackenzie

Vibration performance of footbridges under pedestrian traffic
Stana Živanović; James Brownjohn & Aleksandar Pavić

Lessons from the practical implementation of a passive control system at the new Coimbra Footbridge
Elsa Caetano; Álvaro Cunha; Carlos Moutinho & Filipe Magalhães

11:00-13:00 Parallel Session A.3 (Auditorium)

Chairs: Angus Low, Elsa Caetano

Pedestrian on footbridges, vertical loads and response
Krzysztof Zoltowski

Soft issues in the design of long span footbridges and cycle bridges
Angus Low

Arched footbridge – architectural elegance and engineering challenges
Max Baagøe Rasmussen; Mogens Saberi; Jens Døssing & Christian von Scholten

The Serravalle footbridge in the Republic of San Marino
Odine Manfroni & Sergio Casadei

Dynamic analysis and vibration control of the twin deck curved suspension foot/cycle bridge “Ponte del Mare”
Alessio Bonelli; Manuele Bonora; Oreste Bursi; Stefano Santini; Leonardo Vulcan & Alberto Zasso

Nonlinear cable-deck interaction in cable-stayed footbridges
Benedikt Weber & Patricia Hamm

Wind fences on footbridge: A compromise between structural performance and pedestrian comfort
Lorenzo Procino; Gianni Bartoli; Alessandra Borsani & Claudio Borri

11:00-13:00 Parallel Session B.3 (Room B032)

Chairs: Andreas Keil, Luís Cândia Martins

The Lake Hodges stress ribbon bridge, San Diego, California

Tony Sanchez; Joe Tognoli & Jiri Strasky

Erection design and testing of the IVth Bridge over the Grand Canal in Venice

Bruno Briseghella; Enzo Siviero & Tobia Zordan

Technical challenges in recent winning projects in architect footbridges competitions in Norway

Svein E. Jakobsen; Liv R. Eltvik & Dag I. Ytreberg

Two suspended footbridges in Madrid stiffened with negative stays

Leonardo Fernández Troyano; Moisés Escolá Triola; José Cuervo Fernández; Guillermo Ayuso Calle & Celso Iglesias Pérez

A self anchored suspension pedestrian bridge over Harbor Drive in San Diego

Daniel J. Fitzwilliam & Joe Tognoli

A cable-stayed footbridge in Bormio (Italy)

Matteo Moratti; Dario Compagnoni & Gian Michele Calvi

A new stone stress ribbon pedestrian bridge in Verona

Fulvio Busatta; Carlo Pellegrino; Manuel Grendene & Claudio Modena

11:00-13:00 Parallel Session C.3 (Room B035)

Chairs: Joanne Crabb, João Fonseca

Structural design and research of a double-deck cable-stayed footbridge connecting the Customhouses of Shenzhen and Hongkong

Xu Gongyi; Du Hongliang & Gao Mangmang

A metallic stayed footbridge "Agro" in Arteixo (Corunna) Spain

Antonio González Serrano

Cable-stayed footbridge at Weil der Stadt, Germany

Nils Svensson; Hans-Peter Andrä & Uwe Häberle

Cable stayed footbridge over Sile River in Treviso, Italy

Diego Lodoli

"Ponte del Mare": A cable stayed footbridge in Pescara

Enzo Siviero; Mario de Miranda; Vitalba D'Aguanno; Alberto Zanchettin; Luciano di Biase & Pierpaolo Pescara

Suspension footbridge with slender concrete deck over the San River in Sanok

Marek Salamak

Design of a pedestrian bridge in a historical spot

António Braga; Hugo Pinto; Joana Teixeira & Alvaro Azevedo

THURSDAY, 3 JULY – AFTERNOON**14:30-15:00 Keynote Lecture** (Auditorium)

Chairs: Hussein Abbas, Krzysztof Zoltowski

Study on pedestrian-induced vibration of footbridge
Limin Sun & Xubin Yuan

15:00-16:00 Parallel Session A.4 (Auditorium)

Arch and cable-supported hybrid pedestrian bridges
Shao-Zhen Chen; Yan Zhang; Yao-Jun Ge; Chun-Kai Li & Li-Ping Xu

Bowstring footbridges in the cycling ring road in Madrid
Francisco Millanes Mato; Luis Matute Rubio & Jorge Nebreda Sánchez

Conceptual design of moving footbridges
John Cutlack

14:30-16:00 Parallel Session B.4 (Room B032)

Chairs: Allan Larsen, Ney Roitman

Design methodology for pedestrian induced footbridge vibrations
Chris Barker & David Mackenzie

Vibrations on the "La Ralentie" footbridge. An application to an existing footbridge of the French guidelines
Pascal Charles

Serviceability assessment of three lively footbridges in Reykjavik
Gudmundur V. Gudmundsson; Einar Thór Ingólfsson ; Baldvin Einarsson & Bjarni Bessason

14:30-16:00 Parallel Session C.4 (Room B035)

Chairs: Mário de Miranda, Rebecca Nixon

Vallvidrera footbridge
Manuel Reventós Rovira & Jordi Pascual Gilabert

Footbridge over the River Cardener in Callús (Barcelona, Spain)
Xavier Font; Lee Bowker & John Hawkins

Conceptual design of a footbridge in the historical part of Wrocław
Jan Biliszczuk; Wojciech Barcik; Mariusz Sulkowski; Paweł Hawryszków; Tomasz Boniecki & Joanna Styrylska

16:30-18:00 Parallel Session A.5 (Auditorium)

Chairs: Eduardo Gomes, Ian Firth

The Pedro and Ines footbridge at Coimbra- conception, design and construction
António Adão da Fonseca

Footbridge near School C+S in Guarda, Portugal
Tiago Mendonça

New footbridge over the Historic Rideau Canal in the heart of Canada's Capital
Sylvain Montminy & Ron Jack

Footbridge over the Sec River
Manuel Reventós; Albert Mas & Marius Quintana

A stress ribbon footbridge as the tie of an arch bridge
Michele Fabio Granata & Marcello Arici

16:30-18:00 Parallel Session B.5 (Room B032)

Chairs: Joël Raoul, Renato Bastos

The design of five recent landmark footbridges in Western Australia
Graeme Dundas

Pedestrian bridges in Benavente, Cacém and Viseu, Portugal
Luis Câncio Martins

Four pedestrian bridges in Bulgaria – design and construction
Encho Dulevski

Footbridges in Wroclaw, Poland
Jan Biliszczuk; Jozef Rabięga & Janusz Tadla

Designs of the four pedestrian bridges in Podgorica
Zeljka Radovanovic

16:30-18:00 Parallel Session C.5 (Room B035)

Chairs: Christos Georgakis, Pierre Argoul

A probabilistic engineering load model for pedestrian streams
Christiane Butz

Crowd-structure synchronization: coupling between Eulerian flow modeling and Kuramoto phase equation
Joanna Bodgi; Silvano Erlicher; Pierre Argoul; Olivier Flamand & Frédéric Danbon

A new load model of the pedestrians lateral action

Fiammetta Venuti & Luca Bruno

Synchronous lateral excitation on lively footbridges: modelling and application to the T Bridge in Japan

Fiammetta Venuti & Luca Bruno

A discrete-time model for the phenomenon of synchronous lateral excitation due to pedestrians motion on footbridges

Stefano Lenci & Laura Marcheggiani

Poster Session Pt2 (Coffee-break area)

The pedestrian speed – density relation: modelling and application

Luca Bruno & Fiammetta Venuti

Vibration comfort criteria for pedestrians on footbridges

Andrew Flaga & Mark Paňtak

Increase of the structural damping due to the application of tuned mass dampers TMD subject to the footbridge construction

Christian Meinhardt; Oliver Dressen & Frank Dalmer

Effectiveness of horizontal tuned mass dampers exemplified at the footbridge in Coimbra

Christiane Butz; Johann Distl & Peter Huber

Fluid viscous dampers: an effective way to suppress pedestrian-induced motions in footbridges

Philippe Duflot & Doug Taylor

FRIDAY, 4 JULY – MORNING**9:00-9:30 Keynote Lecture** (Auditorium)

Chairs: Henrik Jensen, Juan Sobrino

Advanced composite materials for footbridges
Urs Meier

10:00-11:00 Plenary Session P.3 (Auditorium)

Spatial footbridges. Some proposals
Javier Manterola Armisen; M. Ángel Astiz Suárez; M. Ángel Gil Ginés; Antonio Martínez Cutillas & Javier Muñoz-Rojas Fdez.

Footbridges – Gesamtkunstwerk and test-bed for all bridges
Ursula Baus & Mike Schlaich

Five pedestrian bridges in New York City – process and design
Rebecca Nixon & Guy Nordenson

11:00-13:00 Parallel Session A.6 (Auditorium)

Chairs: Antonio Cutillas, Júlio Appleton

Three pedestrian steel bridges in Spain
Juan A. Sobrino

Engineering the Sackler crossing
Simon Fryer

Duplex stainless steel - a material for both the functional footbridge and the spectacular landmark
Anders Finnås & Béla Leffler

Pedestrian bridges combining stainless steel and glass-fiber reinforced polymers as structural members
Daia Zwicky & Juan A. Sobrino Almunia

Composite 'Delta Deck' of innovative snap-fit connection for new and rehabilitated footbridges
Sung Woo Lee; Kee Jeung Hong & Jaap Ketel

Design for buckling and vibration of glass FRP pultruded footbridges
Fabio Minghini; Nerio Tullini & Ferdinando Laudiero

Inflatable pedestrian bridge
Marco Peroni

11:00-13:00 Parallel Session B.6 (Room B032)

Chairs: Filipe Magalhães, Guido De Roeck

Experimental identification of the dynamic properties of three different footbridge structures
Marek Salamak & Piotr Lazinski

Experimental and numerical analysis of the pedestrian-induced vibrations of a footbridge
Peter Van den Broeck; Guido de Roeck; Edwin Reynders & Daan Degrauwe

Dynamic tests and continuous monitoring of a moveable cable-stayed bridge
Filipe Magalhães; Elsa Caetano & Álvaro Cunha

Experimental tests on the Guarda footbridge
Hugo Pimenta; Carlos Rebelo & Constança Rigueiro

Operational modal analysis and updating of a footbridge
Daan Degrauwe; Edwin Reynders; Guido de Roeck & Peter Van den Broeck

Forced vibration tests carried out on a laminated timber footbridge: comparisons five years apart
Pier Paolo Diotallevi; Odine Manfroni & Claudia Belmonte

Role of non-metallic components on the dynamic behaviour of composite footbridges
Andrea Brasiliano; Graciela Doz; José Luís V. Brito & Roberto Pimentel

11:00-13:00 Parallel Session C.6 (Room B035)

Chairs: Carlos Magluta, Tiago Mendonça

A moveable footbridge at Viana do Castelo – Portugal
Jorge Delgado; Raimundo Delgado; Mafalda Lopes; Tiago Gonçalves & Gonçalo Lopes

Cable-stayed footbridge made of glued-laminated wood erected in Sromowce Nizne, Poland
Jan Biliszczyk; Pawel Hawryszków; Mariusz Sulkowski & Adam Maury

Design of a long steel footbridge with curved Y-form
Antonio Romero

Design of a footbridge in Porto with nonlinear lateral buckling analysis
João Fonseca; Bogdan Stankiewicz & Ryszard Kowalczyk

The Aldeias Footbridge at Gouveia: Design, construction and dynamic behavior
Rui Alves; Fernando Barbosa & Elsa Caetano

Footbridges at the Prat Airport in Barcelona, Spain
Juan D. Gómez & Alfredo Amedo

A Light steel footbridge in the restoration of an industrial site in Italy
Antonello Salvatori & Renato Morganti

FRIDAY, 4 JULY – AFTERNOON**14:30-15:00 Keynote Lecture** (Auditorium)

Chairs: António Adão da Fonseca, Wasoodev Hoopah

Bridge design

Dietmar Feichtinger

15:00-16:00 Round Table (Auditorium)

Aesthetics and Structural Design- open session

Initial intervention: *My experience in conception of bridges*

Álvaro Siza Vieira (Architect)

Panel:

Enzo Siviero (Structural Engineer) - Moderator

Ian Firth (Structural Engineer)

Juan Sobrino (Structural Engineer)

Keith Brownlie (Architect)

Mike Schlaich (Structural Engineer)

16:30-18:00 Closing Ceremony (Auditorium)

Chair of the Organising Committee,

Elsa Caetano

Co-Chair of the Organising Committee,

Álvaro Cunha

Chair of the Scientific Committee,

António Adão da Fonseca

Co-Chair of the Scientific Committee,

Ian Firth

Co-Chair of the Scientific Committee,

Wasoodev Hoopah

OTUA Representative,

Jean-Michel Vigo

Young Authors Prize

Footbridges conference: History, reason and the way forward
Wasoodev Hoopah

Footbridge 2011

Poster Session Pt3 (Coffee-break area)

Footbridges over the River Douro at Porto / Gaia

António Adão da Fonseca

A small metallic footbridge with an eccentric and leaned structural arc in Orense

Antonio González Serrano

An arch bridge in Prato with reinforced earth abutments

Alessandro Adilardi & Filippo Fiorentini

Structural components of given steel footbridge

Tadeusz Wilczynski

Sustainable cable technology for footbridges

Guy Sevoz & Erik Mellier

Special bridges – special tension members. Locked coil cables for footbridges

Martin Bechtold; Barrie Mordue & Friedhelm-Eric Rentmeister

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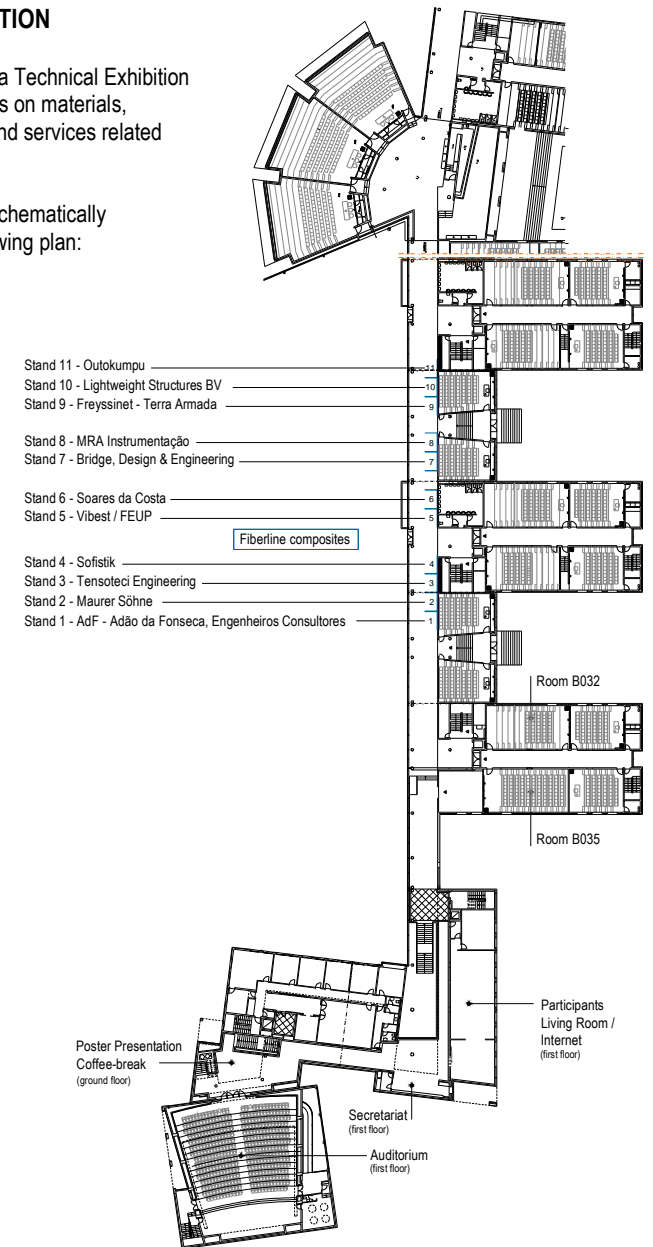
Other Supports



TECHNICAL EXHIBITION

During the conference, a Technical Exhibition will take place with focus on materials, equipments, software and services related with footbridges.

The Exhibition area is schematically represented in the following plan:



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IABSE

"...The International Association for Bridge and Structural Engineering (IABSE) comprises 4'000 members in 100 countries. Founded in 1929, IABSE deals with all aspects of planning, design, construction, maintenance and repair of civil engineering structures. To fulfill its mission, IABSE organises conferences and publishes a quarterly journal, Structural Engineering International, as well as books and reports. The Association has a number of technical groups and presents awards in recognition of outstanding contributions in the domain of structural engineering.."

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STAND 7

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Redaelli Tensoteci Engineering

STAND 3

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Redaelli
 Tensoteci Engineering

OTUA/Construir Acier

Established in 1929, OTUA /CONSTRUIRACIER (Technical Advisory Bureau for Steel Users) is a professional body whose mission is to contribute to advancing the cause of steel in France and constantly to expand the scope of its applications by furnishing technical support to steel users but also by promoting the steel culture, from school right through to commerce and industry. Commercially impartial and independent, Otua/ConstruirAcier is the preferred "steel partner" for government (ministries of Industry, Public Works...), specifiers (architects, design offices, consulting engineers...) and the fragmented construction and public works and engineering markets. Otua/ConstruirAcier provides support every step of the way to steel users who so require. A boon for design offices, consulting engineers, architectural practices, construction or engineering companies, profilers, stampers, fabricators, sheet metal workers, etc.) who find here the technical support that they require.

Otua/ConstruirAcier has at its disposal a team of experts who act as technical advisers in their respective fields of competence: - building; - bridges and civil engineering structures; - heavy plates, offshore; - engineering; - surface treatments; - sustainable development applied to construction.

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“AdF – ADAO DA FONSECA – Engenheiros Consultores” specializes in design of Bridges and Special Structures, in services of consulting and expert advice in Structural Engineering and in leadership of multi-component design teams for complex projects

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**BETAR Consultores, Lda**

Projects of Bridges, Viaducts and Tunnels Projects of road and railroad bridges elaboration. Its Clients are not only the main responsible authorities for the roads and national railroads but also City councils, Construction Companies and other private customers.

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Bridges Management The Betar Consultores developed a Bridges Management System based in periodic inspections, carried through by its specialized technicians. As a tool which supports the management, BETAR has created and patented specific software (GOA) that answers to the needs of the Clients caring through the management of a wide sum of bridges.

Inspection of Bridges The Betar Consultores have a specialized sector that carries through bridges inspections and provides technical support helping the responsible for a road infrastructures net. The experience in this domain of engineering, leads to the production of technical clauses for tendering documents, and to the development of procedures / constructive details to adopt in the phases of conception, execution and exploration of bridges.

Roads Project Coordination By its own or associated with other companies Betar Consultores have coordinate projects of roads.

Projects Checking and Management In its area of intervention, Betar Consultores has carried through independent projects checking. Integrated in multidisciplinary teams have carried through projects management

Preparation of tenders, elaboration of Specifications Jointly with the described activities and as its complement, the Betar Consultores has supported its customers in the preparation of tenders and accomplishment of technical and economical studies of enterprises.

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GERB Schwingungsisolierungen GmbH & Co. KG

Since GERB Group was founded in 1908 and initially designed vibration isolation systems, these systems and their fields of application have evolved and GERB now provides elastic support systems for machinery in power plants, in the metal working industry and for precision facilities. Regarding the construction sector, GERB provides earthquake protection systems for buildings, passive isolation systems to protect buildings from traffic vibrations and trackbed isolation systems for railways.

GERB also develops Tuned Mass Dampers, which are in particular applied at footbridges. Beside an effective design to reduce human or wind induced vibrations of footbridges, the company also provides individual solutions, that meet the creative aspects of the structures architecture.

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Mota-Engil

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The wide business vision in the 22 countries has been producing an amazing internationalization share and a rate of diversification of specialised services without parallel in Portugal.

MOTA-ENGIL sustainable growth has ensured a solid performance in the Stock Market- MOTA-ENGIL entered in Shareholder Index from Euronext Lisbon PSI 20- and the international recognition of its Value and respect for the Environment and Social Responsibility is opening perspectives of continuous expansion in its internationalisation.

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EXHIBITORS

STAND 2

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STAND 5

Laboratory of Vibrations and Monitoring – ViBest / FEUP

The Laboratory of Vibrations and Structural Monitoring (ViBest) is a facility / research unit of the Civil Engineering Department of FEUP that provides support to the performance of experimental and numerical works in the context of the development of research, consultancy and teaching activities in the field of Structural Dynamics, aiming in particular the experimental characterization of vibratory phenomena, the analysis, identification, monitoring and control of the structural behaviour under different types of dynamic loads.

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**STAND 9**
Freyssinet – Terra Armada

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STAND 10
Lightweight Structures BV

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**STAND 11**
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