

# 8th RILEM

## INTERNATIONAL SYMPOSIUM ON **FIBRE REINFORCED CONCRETE:** CHALLENGES AND OPPORTUNITIES **BEFIB 2012**



Hosted by University of Minho and ISISE

[www.befib2012.civil.uminho.pt](http://www.befib2012.civil.uminho.pt)



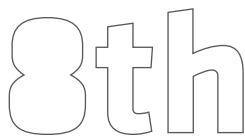
Institute for Sustainability and  
Innovation in Structural Engineering



Grupo  
Português  
de Betão  
Estrutural

The province of Minho, in the northwest of Portugal, is full of scenic and historical sites, being particularly famous for the production of wine. To the North of the region, it is possible to find the National Park of Peneda-Gerês with its rocky mountains, cascades, lakes and abundant wildlife. To the east, the famous Douro river valley, where the Port wine grapes are grown. To the South, it is possible to find the cosmopolitan city of Porto with its international airport, featuring an impressive architecture in the banks of the Douro River, the famous bridges and the Port wine cellars. The entire region is close to the sea, with marvellous beaches located near small phishing towns. Braga, Guimarães, Viana do Castelo and Vila do Conde are all examples of cities with interesting and well preserved historical centres, multiple cultural activities and summer entertainment. Several outdoor sports like canoeing, rappel, surf, diving, etc. are also common activities.





## VENUE

The Conference will be held at Centro Cultural Vila Flor, in Guimarães, Portugal. The city of Guimarães is like no other city in Portugal. Its past is so intimately intertwined with the History of Portugal that it is commonly and proudly referred to as the Cradle of the Nation. The Historic Centre of Guimarães is a wonderful example of the medieval town that developed into a modern city, showing the development of the Portuguese architecture between the XV and the XIX century and the use of traditional construction materials and techniques. Guimarães was declared a World Heritage Site in 2001 by UNESCO, due to its Middle Age historical monuments and was chosen to be the European Capital of Culture in 2012.

## REGISTRATION FEES

Up to February 15, 2012

Full Registration	600.00 €
Students	300.00 €
Accompanying persons	150.00 €

After February 15, 2012

Full Registration	750.00 €
Students	375.00 €
Accompanying persons	200.00 €

Full registration fee includes book of proceedings, coffee breaks, lunches, reception and conference dinner.

The students must send a copy of a valid student card or an institutional certification (MSc and PhD students are valid) together with the registration form. Student fee does not include participation in reception and conference dinner.

Accompanying person's fee includes the participation in the social program, i.e. reception and conference dinner.

## ACCOMMODATION

Information related to the Hotels and Pousadas available in Guimarães can be found in [www.befib2012.civil.uminho.pt](http://www.befib2012.civil.uminho.pt). Since during 2012 Guimarães is the European Capital of Culture, reservations should be made as soon as possible.

## ADDITIONAL INFORMATION

BEFIB2012

University of Minho - Civil Engineering Department - Azurém  
4800-058 Guimarães, PORTUGAL

Tel. +351 253 510 218 • Fax. +351 253 510 217

[befib2012@civil.uminho.pt](mailto:befib2012@civil.uminho.pt) • [www.befib2012.civil.uminho.pt](http://www.befib2012.civil.uminho.pt)

## **MOTIVATION**

In spite of more than 30 years of research and application of fibre reinforced concrete (FRC), the potentialities that discrete fibres can provide to cement based materials are not yet well explored. Furthermore, in the recent years new types of fibres, admixtures, and sophisticated numerical tools are potentiating the scientific and rational conception of advanced FRC materials for the development of innovative, sustainable and durable concrete structures. The bridge between research and design needs to be consolidated by the adoption of reliable and well accepted design guidelines. The techniques for the experimental characterization of the FRC properties that are representative of the real behaviour of FRC structures are still a controversial topic. Quality control also needs more clear rules since fibre orientation and distribution, which affect significantly the reinforcing performance of FRC materials, depend considerably of the geometry of the structural element, casting conditions and FRC composition characteristics. In this context, BEFIB2012 has the purpose of being a forum for the discussion of the potentialities and challenges of fibre reinforced concrete.

## **TOPICS**

- Rheology
- Mechanical properties
- Nanofibers in fibre reinforced cement based materials
- Long term properties and durability
- Analytical and numerical models
- Codes and standards
- Innovative structural systems
- Structural and industrial applications
- Case studies

## **CALL FOR ABSTRACTS**

Abstracts limited to 300 words may be submitted by logging on to [www.befib2012.civil.uminho.pt](http://www.befib2012.civil.uminho.pt). The templates for Abstracts, Extended abstracts and Full Paper are in this website.

## **IMPORTANT DATES**

Deadline for Abstract Submission - April 30, 2011  
 Approval of Abstracts - June 30, 2011  
 Submission of Full Papers - November 30, 2011  
 Approval/Revision of Papers - January 31, 2012  
 Deadline for Reviewed Version of Full Paper - April 30, 2012  
 Conference 19-21 September, 2012



# 8th

Founded in the year of 1973, the University of Minho (UMinho) welcomed its first students in the academic year of 1975/76. Today, UMinho is recognised for the competence and quality of its academic staff, the excellence of its research activity, its dynamism, its large range of undergraduate and postgraduate degree programmes, its ability for leadership and intervention, and its high degree of interaction with other institutions.

The UMinho considers itself to be a complete university, offering degrees which span from Medicine, Sciences and Technology, to Arts, Humanities and Law.

Located in the North of Portugal, in the province of Minho, the University has two campi, one located in Braga and the other in Guimarães, which are 20 kilometres apart.



Both Braga and Guimarães are historical cities, which offer a thousand-year-old cultural heritage alongside a lively modernity populated by young populations. Braga is a district capital, grown from the ancient roman city of Bracara Augusta. Guimarães, classified by UNESCO as World Heritage site, is known as the "birth place" of the Portuguese nation.



## ORGANIZING COMMITTEE

**Chairman**

Joaquim Barros

University of Minho

**Members**

Isabel Valente

University of Minho

José Sena-Cruz

University of Minho

Miguel Azenha

University of Minho

Rui Miguel Ferreira

University of Minho

Salvador Dias

University of Minho

## SCIENTIFIC COMMITTEE

Alva Peled

Israel

Janson Weiss

USA

Ann Lambrechts

Belgium

John Bolander

USA

Antoine Naaman

USA

Joost Walraven

The Netherlands

António Figueiredo

Brazil

Klaus-Alexander Rieder

Germany

Barzin Mobasher

USA

Liberato Ferrara

Italy

Bhushan L. Karihaloo

UK

Lucie Vandewalle

Belgium

Billy Boshoff

South Africa

Marco di Prisco

Italy

Bruno Massicotte

Canada

Mehmet Ali Tasdemir

Turkey

Bryan Barragán

Italy

Nemkumar Banthia

Canada

Climent Molins

Spain

Pedro Serna

Spain

Corina Aldea

Canada

Pierre Rossi

France

Dean Forgeron

Canada

P.N. Balaguru

USA

Frank Dehn

Germany

P.A. Muhammed Basheer

UK

György L. Balázs

Hungary

Raúl Zerbino

Argentina

Gerhard Vitt

Belgium

Ravindra Gettu

India

Giovanni Plizzari

Italy

Romildo Toledo

Brazil

Gregor Fisher

Denmark

Salim K.A. Al-Oraimi

Oman

Gustavo Parra-Montesinos

USA

Stefan Bernard

Australia

Henrik Stang

Denmark

Surenda Shah

USA

Hirozo Mihashi

Japan

Terje Kanstad

Norway

Horst Falkner

Germany

Venkatesh Kodur

USA

Jakob Sustersic

Slovenia

Victor C. Li

USA

Jan van Mier

Switzerland