

## Venue



Discover Aachen's diversity – and enjoy the city of water and horses, well known through Charlemagne and famous for its "Printen" (spicy ginger bread). The old imperial city presents itself as a cosmopolitan location with historical flair.

At the RWTH Aachen University and the other colleges roughly 40,000 students are registered. Young life especially pulsates in the "Pontviertel", the favoured nightlife area with its numerous cafes, pubs and restaurants, but also in the alleys and in the squares of the old town something is always going on. Around the cathedral and town hall numerous retailers and branches of well-known retail shops invite you for a stroll. In between you will always find a nice place to relax.

Aachen's historic old town is perfect for the city's visitors to promenade. You will be led through narrow lanes and historic squares and be inspired by Aachen's nearly 2000 years of history. Get to know the various facets of Aachen.



## Call for Papers

Papers are requested on the three themes of the conference. Papers submitted should present original and previously unpublished advances of knowledge and/or technology.

Papers will be presented in English. Abstracts and final papers will be reviewed by the Scientific Committee. Intending authors should send an abstract of 200 words, outlining the contents of the proposed paper and clearly indicating the reference to the topics. Abstracts should be submitted online using the web based abstract submission system.

To submit an abstract please visit the official homepage at

<http://www.matsci2010.rwth-aachen.de>

or

<http://www.rilem.org>

Information on the acceptance of abstracts and for the preparation of papers will be given by November 30, 2009.

Authors of accepted papers are expected to attend and present their papers at the conference. All papers accepted by the Scientific Committee will be published in the Conference Report and will also be available on the Symposium CD-ROM.

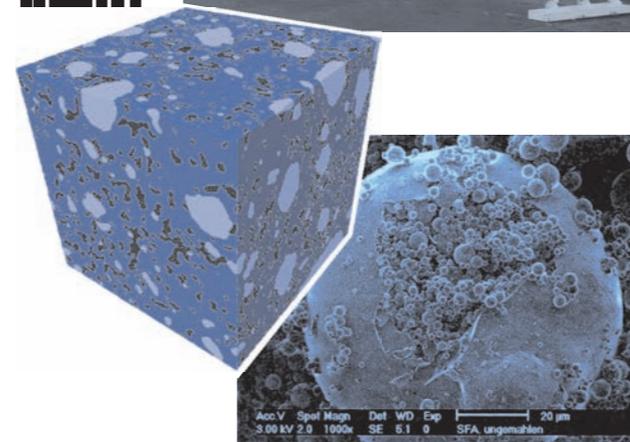
## Timetable

Submission of abstracts:	October 15, 2009
Acceptance of abstracts:	November 30, 2009
Submission of papers:	January 31, 2010
Approval of papers:	March 31, 2010
Final submission of papers:	April 30, 2010

## Announcement and Call for Papers

### International Conference on Material Science and 64<sup>th</sup> RILEM Annual Week

September 6-10, 2010, Aachen, Germany



RWTHAACHEN  
UNIVERSITY

German Research Foundation  
Deutsche Forschungsgemeinschaft

DFG

Institute of Building Materials Research  
Institut für Bauforschung



Institute of Textile Technology  
Institut für Textiltechnik



Institute of Structural Concrete  
Institut für Massivbau

## General Information

Embedded in the RILEM Annual Week is the Technical Day: On Thursday, September 9, 2010, the works of the technical committees are presented to all interested professionals working in the field of building materials and testing engineering.

Moreover, the Institute of Building Materials Research of RWTH Aachen University, Germany, organises a three-day conference comprising three different topics.

The latest findings regarding textile reinforced concrete, the modelling of heterogeneous materials and the application of additions such as fly ash, blast furnace slag or superabsorbent polymers and dispersions to improve the concrete properties are presented.

The three topics are treated simultaneously in a large lecture building so that it will be easy for the conference participants to switch between topics and choose from the numerous contributions.

There will be sufficient time during the breaks or at the evening event on Tuesday to establish new contacts and to maintain the old ones.

## Scientific Committee

Wolfgang Brameshuber (Germany, Chair)  
Carmen Andrade (Spain)  
Arnon Bentur (Israel)  
Rostislav Chudoba (Germany)  
Ravindra Gettu (India)  
Josef Hegger (Germany)  
Detlef Heinz (Germany)  
Ole Jensen (Denmark)  
Konstantin Kovler (Israel)  
Eddie A.B. Koenders (Netherlands)  
Peter Claisse (UK)  
Viktor Mechtcherine (Germany)  
Stefanie Reese (Germany)  
Hans W. Reinhardt (Germany)  
Karen Scrivener (Switzerland)  
Thanasis Triantafillou (Greece)  
Klaas van Breugel (Netherlands)  
Jan Wastiels (Belgium)  
Jason Weiss (USA)  
Peter Wriggers (Germany)  
Romildo Dias Toledo Filho (Brazil)

## Conference

### THEME ONE

September 6-8, 2010

#### ICTRC 2010

##### Textile Reinforced Concrete

**Coordinators:** Josef Hegger,  
Thomas Gries,  
Norbert Will,  
Marcus Hinzen

In 2006, the First International Conference on Textile Reinforced Concrete was held in Aachen. One focus was on the work of the Collaborative Research Centres Textile Reinforced Concrete in Aachen and Dresden. From the development of filaments up to the application, numerous scientific and practice-oriented contributions were presented.

In addition to this conference, also the results of the RILEM-TC 201 TRC were published in the form of an extensive state-of-the-art report. Meanwhile, this highly innovative composite material has been further developed. First applications substantiate the high efficiency of this new cement-based building material.

On the Second International Conference on Textile Reinforced Concrete, the status quo of the developments and applications shall be shown to a broad expert audience.

All aspects of textile reinforced concrete – from the filament properties, its bond to the matrix, new developments concerning the yarns, innovative textiles, further developments of the matrices including short fibre concretes, mechanical properties of the composite material, the load bearing behaviour of the element and the applications up to the micro-/macro-mechanical modelling – shall be presented and discussed.

Apart from the basics, mainly examples of applications shall illustrate the potentials of this building material. According to the questions, many disciplines of engineering sciences but also of architecture will be addressed.

Already at the First International Conference on Textile Reinforced Concrete, this combination had just led to a vivid exchange of information.

## Conference

### THEME TWO

September 6-8, 2010

#### HetMat 2010

##### Modelling of Heterogeneous Materials

**Coordinators:** Wolfgang Brameshuber,  
Joachim Hannawald,  
Rostislav Chudoba

The modelling of the mechanical or physical behaviour of heterogeneous materials is an important field of research in building material science as well as in mechanics.

Heterogeneous, anisotropic or isotropic composite materials as for instance fibre-reinforced plastic materials, textile reinforced concrete, concrete and fibre concrete as well as masonry are modelled with micro-mechanical or macro models in most different ways.

Also the moisture transport in heterogeneous, porous materials offers a multitude of modelling possibilities.

The often existing multi-scaling of heterogeneous materials such as concrete requires the modelling on different scales and the transition from one level to another by suitable homogenisation methods. Alternatively, there is the application of smeared concepts which suppress the multi-scaling.

All these models are created from clearly different angles by scientists of building materials as well as of mechanics. It is the aim of this event to initiate a scientific discussion between engineering and natural sciences to develop a common strategy for the modelling of heterogeneous materials. Both disciplines can establish a mutual understanding on this joint conference and thus reach a successful realisation of their own modelling strategies.

Therefore, scientists are addressed who develop mechanical, fracture-mechanical or physical models in the field of building materials or mechanics in order to describe the strength, the fracture behaviour or the moisture transport behaviour of heterogeneous building materials such as concrete but also of fibre-reinforced materials and masonry.

## Conference

### THEME THREE

September 6-8, 2010

#### AdIPoC 2010

##### Additions Improving Properties of Concrete

**Coordinators:** Wolfgang Brameshuber,  
Anya Vollpracht,  
Holger Nebel

The application of inert and reactive concrete additions is particularly sustainable not only because of waste recycling but it saves resources and energy at simultaneously improved technical properties of concrete in the case of mineral materials and has positive effects on durability in case of superabsorbent polymers as well as dispersions.

Pozzolans such as fly ash, silica fume or metacaolin, latent hydraulic materials – here especially the ground granulated blast furnace slag powder and certainly also the stone powders which are mainly chemically not reactive – offer substantial potentials to improve for instance the density but also the workability of concrete.

Different application concepts are already stated in the standards. The concept of exchange, the equivalent performance concept or the k-value concept have already been applied in different countries.

Also the combination of different additions to optimise the particle packing and thus to improve the workability and strength enables a tailor-made adjustment of the concrete properties.

Within the framework of this theme, the latest developments regarding normal concrete, self-compacting concrete or high-strength concrete in combination with the application of concrete additions are presented.

A section on organic additions will be included in this theme. The focus is on the scientific state of knowledge as well as on the application.

Therefore, all building material engineers who are engaged in the application of concrete additions are addressed.

## Additional Information

### Homepage

<http://www.matsci2010.rwth-aachen.de>

Any relevant conference information will be presented here as soon as it is available, such as

- online registration forms for
  - submission of abstracts/papers
  - attendance at conference
- conference scheme incl. topics and speakers
- social programme
- venue and accommodation
- others

### Newsletter

Would you like to be informed about details and news concerning the conference?

We invite you to subscribe our e-mail newsletter which will alert you of major updates to our website.

First Name (\*) \_\_\_\_\_

Last Name (\*) \_\_\_\_\_

Company / Institute \_\_\_\_\_

E-Mail (\*) \_\_\_\_\_

Address \_\_\_\_\_

(\*) required

All your information will be kept private, and will be used only to send you updates strictly related to the conference.

Please fill in the online form at our website or fax/post this form to:

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