

Photo by: Per Rohlén

# **Call for Abstracts**

# 5th International Workshop on Concrete Spalling due to Fire Exposure Borås, Sweden, October 12-13th, 2017

Controlling the sensitivity of concrete towards its spalling behaviour during fire exposure is one of today's major issues in the design and construction of concrete structures and infrastructure constructions. Real fires indicated that spalling of concrete can have serious consequences and is a phenomenon which should be taken into account when designing for fire. Recent achievements in concrete mix design have lead to new types of concrete which, besides an increased performance during loading, also have shown a different sensitivity towards spalling. However, the sensitivity towards spalling of a concrete structure is until now not fully understood and more research is needed to control the risk of spalling.

The 5th International Workshop on Concrete Spalling due to Fire Exposure emphasizes on real life experiences and observations, practical applications, experimental and numerical advances as well as structural design. The aim of this workshop is to obtain an overview of the current level of knowledge and to stimulate the discussion between Sponsored by: BRANDSKYDDSLAGET

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researchers and representatives from industry, authorities and code-making bodies in order to promote the understanding of concrete spalling. Interesting subjects of the workshop are the recent achievements in experimental research and testing for determining the key material properties and underlying processes and its contribution to understanding the global spalling behaviour under various conditions. Of further interests are also the actual advances in numerical modelling of spalling process and structural design when spalling needs to be taken into account. Finally, the workshop will be the platform for practical applications of projects to avoid spalling of concrete.

### Workshop topics

- Influence of chemical, physical and mechanical processes on spalling of concrete
- Thermal behaviour and thermal stability of concrete
- ingredients at high temperatures
- Influence of heating on concrete properties
- Pore pressure development
- Transport mechanisms in heated concrete
- Stress-strain behaviour and fracture mechanics of heated
- concrete
- Spalling mechanisms
- Model selection and multiscale modelling
- Testing requirements and interpretation
- Constitutive material laws
- Structural design models taking into account spalling
- Influence of spalling on fire resistance and residual capacity
- Benchmark modelling of the Jean-Christophe Mindeguia
- tests
- Occurrence of spalling in natural fires
- Damage assessment and repair of heated concrete
- Measures to reduce or prevent spalling
- Case studies
- Pre-normative research and standardization

## Oral presentations, posters and papers

The oral presentations at the workshop will be selected on the basis of the submitted abstracts. Depending on the number of submitted abstracts and the nature of their contents, some may be eventually invited to be presented as a poster. If a poster session is organized the possibility for short 5 minutes oral presentations will be given.

All submitted papers, orally presented or as poster, will be published in the workshop proceedings.

The official language of the workshop is English.

# Important dates

- 15 March 2017 Abstract submission
- 15 April 2017 Acceptance of Abstracts
- 15 June 2017 Full paper submission
- 15 July 2017 Early Bird registration
- 15 August 2017 Notification full paper review
- 1 September 2017 Final full paper submission
- 12-13 October 2017 Workshop





#### Organizing committee

Dr. Lars Boström, SP (Chair) Dr. Robert Jansson McNamee, Brandskyddslaget Ms. Linnea Hemmarö, SP Ms. Susanne Auralinna, SP

#### Scientific committee

Chairman: Dr. Robert Jansson McNamee (robert.mcnamee@brandskyddslaget.se) The scientific committee will consist of members of the RILEM TC SPF - Spalling of Concrete due to Fire: Testing and Modelling

# Workshop secretariat and information

email: Linnea.Hemmaro@sp.se More information regarding registration and accomodation etc. will be given on the website: http://conferencemanager.events/firespallingworkshop

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