





# Neville Centre of Excellence

in Cement and Concrete Engineering

# **Multi-Scale Cracking of Concrete Materials**

Online CPD Short Course

Delivered over three days:

24th October 2023 - 2:00pm to 4:30pm (BST)

25th October 2023 - 2:00pm to 4:30pm (BST)

26th October 2023 - 10:00am to 12:30pm (BST)

Delegate fee: £125 - limited bursaries available for PhD students

# **Topics covered**

Designed to improve your understanding of cracking in concrete, this jointly-delivered online course will cover key topics including:

- The **origin and analysis of the crack shape**, profile and width at different ages; this is related to the RILEM technical committee TC 287 CCS Early age and long-term crack width analysis in RC Structures and it is fundamental to understanding the link between cracking, durability and structural performance
- How we can control cracks at nano, micro and macro-scale
- Guidance on the measurement, analytical and numerical modelling of cracks
- The concept of self-healing cracks and an update of the current state of this technology







#### Who should attend?

This course is suitable for you if you are:

- A civil, structural or materials engineer involved in design, construction and management concrete infrastructure
- An academic or researcher interested in the latest challenges on durability and structural performance of concrete assets
- A service engineer or scientist who would value a deeper understanding of cracking in concretes and how the theory can be applied to develop effective control strategies

### **Delivered by**

Dr Miguel Azenha

Minho University, Portugal

**Prof Alejandro Pérez Caldentey** 

Universidad Politecnica de Madrid, Spain

**Dr Daniela Ciancio** 

RILEM, Italy

Prof John P. Forth

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Dr Jaime Mata-Falcón

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Dr Mercedes Sánchez Moreno

University of Cordoba, Spain

Prof Hong S. Wong

Imperial College London, UK

## Coordinated by

Prof John P. Forth

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Dr Michał P. Drewniok

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Dr Michele W.T. Mak University of Leeds, UK

#### **Further details**

The course will be delivered **online** and joining instructions will be provided to delegates following registration.

The **course fee is £125** for engineers and industry participants. This covers CPD certificates accredited by the Institute of Concrete Technology (ICT).

The Neville Centre will offer bursaries to cover the course fees of 10 PGR students. For further details please email NevilleCentre@leeds.ac.uk.

View the full programme and book your place online: <a href="https://bit.ly/2VM32yh">https://bit.ly/2VM32yh</a>