

CONCRETE STRUCTURES

ANNUAL TECHNICAL JOURNAL

Affes Hatem – Salem G. Nehme

**PERFORMANCE OF
MECHANICALLY ACTIVATED
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II ADDITIVE: MECHANICAL
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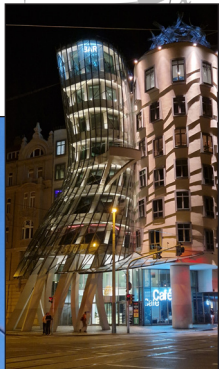
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Affes Hatem – Salem G. Nehme –

Béla Paláncz †

**ENHANCING CONCRETE
STRENGTH MONITORING VIA
DEEP LEARNING FUSION OF
NON-DESTRUCTIVE TESTING
DATA**

18



2025

Vol. 26

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Budapest University of Technology and Economics (BME),
Faculty of Civil Engineering

Supported by:

ACI - <https://www.concrete.org>
fib - www.fib-international.org
RILEM - <https://www.rilem.net>

Dates

December 15, 2025 Submission of abstracts
January 10, 2026 Extended Abstract deadline
January 15, 2026 Acceptance of abstracts
March 31, 2026 Full paper submission
May 31, 2026 Full paper review
July 1, 2026 Full paper acceptance

Registration fee

Early / regular 600 / 700 EUR
Student / PhD student 300 EUR
Banquet 100 EUR

Early bird ends July 15, 2026

Registration fee includes: Welcome cocktail, Coffee breaks, Lunches and Pre-Proceedings. It is required for every presentation to have a separate registration.

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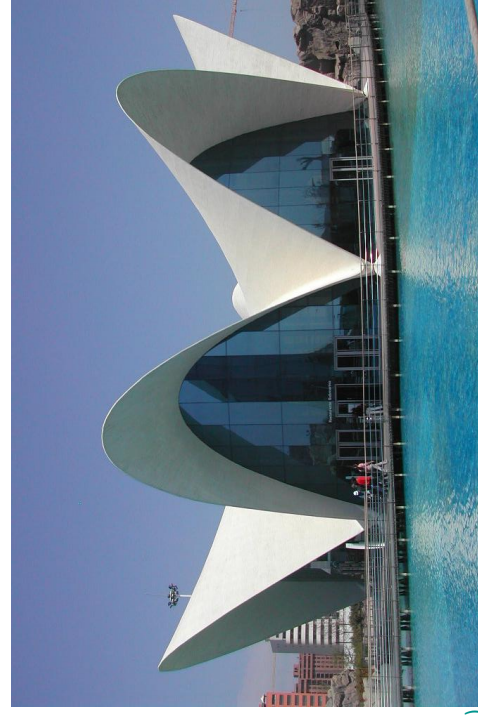
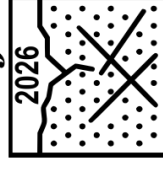
ACI-fib-RILEM

FRC-UHPFRC Workshop

„Fibre Reinforced Concrete – From Design
to Structural Applications”

Sept. 28 to 30, 2026 Budapest, Hungary

ACI-fib-RILEM



Steel fiber reinforced concrete thin shell structure

Oceanographic Park Restaurant. City of Arts and Sciences,

Valencia (2002)

Based on blueprint of Felix Candela, by: A. Domingo, C.

Lázaro, P. Serna

Workshop Aims and History

AIMS: Collaboration of prestigious associations **ACI**, **fib** and **RILEM** aimed to harmonize design rules and **jointly develop future code specifications** in the emerging fields of FRC and UHPFRC.

HISTORY: RILEM has been already active at the beginning of 1990'ies in FRC. Since 2010, the *fib* and ACI have been collaborating to strengthen ties between their technical communities. Their first focus area was Fibre Reinforced Concrete (FRC), where both organizations had active committee: **ACI Commissions 544, 239, 549 and fib Task Group T4.1**. These collaborations has led to a series of successful international workshops in the field of *Fibre Reinforced Concrete – From Design to Structural Applications*:

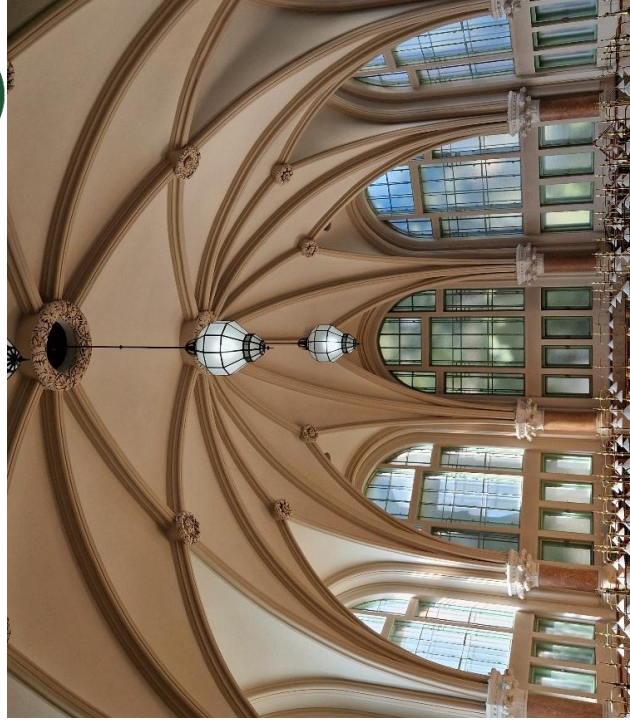
- **FRC 2014, Montreal, Canada, Fibre Reinforced Concrete – From Design to Structural Applications**, Polytechnique Montreal. Proceedings published in **ACI SP-310** and **fib Bulletin 79** (Editors: Bruno Massicotte, J-Philippe. Charron, G. Plizzari, Barzin Mobasher).
- **FRC 2018, Desenzano, Italy, Fibre Reinforced Concrete – From Design to Structural Applications – Proceedings** published in **ACI SP-343** and **fib Bulletin 95** (Editors: Bruno Massicotte, Fausto Minelli, Barzin Mobasher, Giovanni Plizzari).
- **FRC 2023, Tempe, Arizona, USA, Fibre Reinforced Concrete – From Design to Structural Applications – Publications** forthcoming (Editors: B. Massicotte, B. Mobasher, G. Plizzari).

The foundation for these workshops date back to **2004** with the first International Workshop on Advances in Fibre Reinforced Concrete held in **Bergamo, Italy**, organized by Giovanni Plizzari and Marco di Prisco during BEFIB 2004. This event, supported by ACI, focused on developing structural design methodologies for FRC (Editors: S. Ahmad, Marco di Prisco, Christian Meyer, Giovanni Plizzari, Surendra Shah).

- **Catania, Italy, 2007 – FRAMCOS 6 Workshop**, chaired by Carpinteri, Ferro, and Giovanni Plizzari. Published in *Materials & Structures* (2009, Special Issue).
- **Budapest, Hungary, 1999 – Early conference** on FRC, organized by György L. Balázs, bringing together international researchers on *Fibre Reinforced Concrete – from research to practice* http://fib.bme.hu/konyvek/szalerositesu_betonok.pdf

Joint publication

The Workshop will conclude by a joint publication being part of the fib Series Proceedings (that is going to index by Scopus) as well as a Special Publication by ACI. We are also looking for a Summary of results for RILEM.

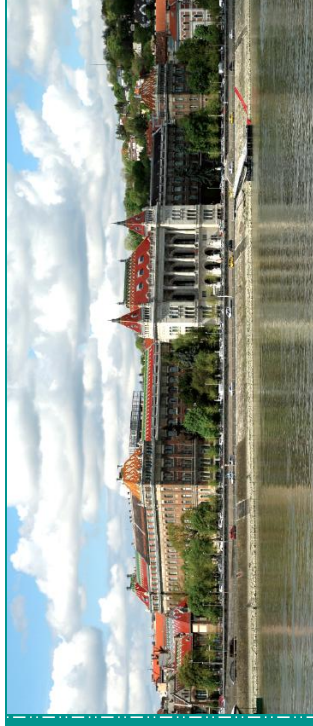


Library of the Budapest University of Technology and Economics

Venue – BME Budapest

Budapest University of Technology and Economics was founded in 1782 and it has been regarded as Hungary's number one technical higher education institution for more than 240 years.

Budapest, resting gracefully along the Danube, harmonizes centuries of history with a vibrant present. Landmarks like Buda Castle and Matthias Church echo tales of the past, while District VII's lively atmosphere embodies modern creativity in its eclectic bars and cafes. Art and culture thrive here, from the grandeur of the Hungarian State Opera House to the avant-garde exhibitions at the Ludwig Museum.



Topics

1. Design specifications for applications

- A. *fib* Model Code 2020
- B. Standards and design specifications
- C. Enhanced material behaviour and modelling
- D. Enhanced structural behaviour and modelling in reinforced and in prestressed concrete members

2. Structural applications

- A. Buildings, Bridges, Foundations
- B. Tunnels
- C. Prefabrication
- D. Concrete industrial floors

3. Sustainability, Durability, Serviceability

- A. Design aspects for sustainability and durability. Life Cycle Assessment.

- B. Serviceability aspects: cracking, first-crack, crack pattern, spacing of cracks, crack widths, increase of crack width

4. Design aspects for long term and extreme loads

- A. Long term behaviour and modelling for shrinkage, creep, fatigue

- B. FRC under fire, impact or blast loading.

5. Retrofitting and strengthening of existing structures

6. Fibres in new types of concretes and in 3D printed concretes

Sponsorship opportunities

We offer levels of sponsorship: Diamond (8,000 EUR), Gold (5,000 EUR), Silver (2,500 EUR), and Standard (1,000 EUR). Diamond and Gold sponsors receive exhibition space (larger for diamond). Diamond, Gold and Silver receive complimentary workshop registrations (4 for Diamond, 3 for Gold and 2 for Silver). All sponsors will have their logo displayed and name acknowledged during the opening and closing ceremonies, in the workshop proceedings, and on-site materials such as flyers and roll-ups. To become a sponsor, please provide your company details, and the sponsorship fee must be transferred prior to the workshop.

Additionally a Platinum sponsorship level is also considered and prize is assigned on special topic proposed by the Sponsor.

Contact information

Official website:

<https://frcworkshop2026.bme.hu>

Műgyetem 3, Budapest, H-1111 Hungary

frcworkshop2026@emk.bme.hu



BME, consortium leader

SW Umwelttechnik Mo. Kft.,
ÉMI Nonprofit Kft. MC Bauchemie.
CRH Mo. Kft.

National Competitiveness and Excellence Program, Subprogram B: National Program for Materials Science and Technology
Hungarian Research Grant NVKP_16-1-2016-0019

“Development of concrete products with improved resistance to chemical corrosion, fire or freeze-thaw”.

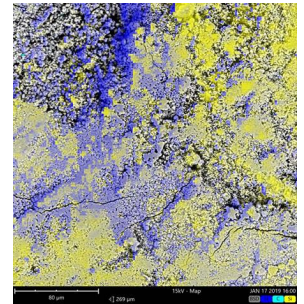
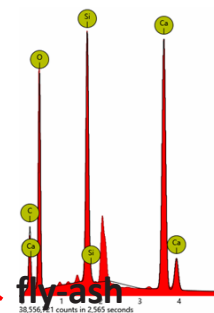
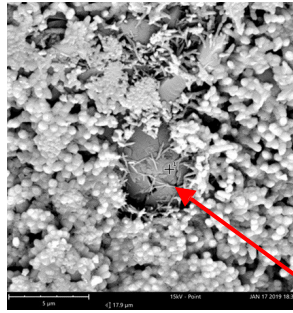
Procurement of laboratory equipment within the framework of the tender entitled

Project supervisor: Prof. György L. Balázs

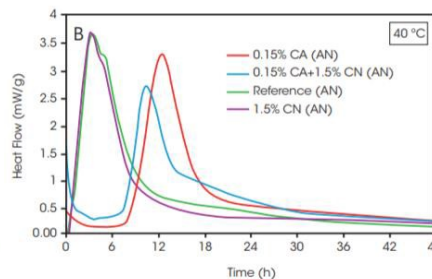
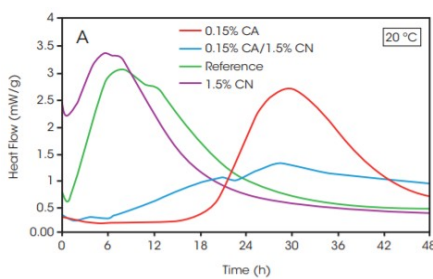
Project sub-theme responsables: Dr. Éva Lublóy, Dr. Salem G. Nehme, Dr. Katalin Kopecskó

MATERIAL SCIENTIFIC STUDIES FROM NANO-LEVEL TO MACRO-LEVEL

1. PHENOM XL Scanning Electron Microscope (SEM) with elemental analysis of EDS
(energy dispersive X-ray spectroscopy) for small and large (max. 100 mm x 100 mm) samples



2. TAM Air 3+3 channel microcalorimeter, with 125 ml ampoules, application range: from cement paste to concrete



3. Zetasizer Nano ZS – Measurement of Zeta potential with titrator (variable pH range)
3,8 nm – 100 μm, particle size distribution in range 0,3 nm – 10 μm

