

# The 12<sup>th</sup> Central European Congress on Concrete Engineering

31 August - 1 September 2017, Tokaj, Hungary

## FINAL PROGRAMME

### Innovative Materials and Technologies for Concrete Structures

<http://www.fib.bme.hu/cce2017.html>

CONGRESS VENUE: TOKAJ – CULTURAL AND CONFERENCE CENTRE, SERHÁZ STREET 55., H-3910 TOKAJ

#### Wednesday, 30 August 2017

17 <sup>00</sup> -19 <sup>00</sup>	Registration at the Congress Venue (Serház street 55.)
19 <sup>00</sup> -21 <sup>00</sup>	Welcome drink in Rákóczi cellar Tokaj (Kossuth square 15.)

#### Thursday, 31 August 2017

##### Session 1: Opening of CCC2017 Tokaj

Chairmen: György L. Balázs and Jelena Bleiziffer

8 <sup>00</sup> -18 <sup>00</sup>	Registration at the Congress Venue
9 <sup>00</sup> -10 <sup>00</sup>	Opening of CCC2017 by György L. Balázs Welcome to Tokaj by György Posta, Major of Tokaj Antal Family, Folklore dance Invitation to CCC2019 by Jelena Bleiziffer and Nikola Miletić
10 <sup>00</sup> -10 <sup>15</sup>	Béla Csíki, Károly Kőszeghy, Zoltán Perczel New type prefabricated water towers with prestressed mast
10 <sup>15</sup> -10 <sup>30</sup>	Robert Schedler, Michael Fritsch, Iztok Arnuga The longest integral bridge in Austria – A5.24 Bridge over the Satzengraben
10 <sup>30</sup> -10 <sup>45</sup>	Jan L. Vítek, Robert Coufal, Jiří Kolísko, Radek Vašátko Modulus of elasticity – specification, acceptance criteria and influence on structural performance
10 <sup>45</sup> -11 <sup>00</sup>	Marek Salamak, Artur Salachna, Piotr Łaziński Construction and load test of cable-stayed concrete tram bridge in Krakow
11 <sup>00</sup> -11 <sup>15</sup>	Josip Galic, Ivan Klepo Examples of advanced concrete structures in Croatia
11 <sup>15</sup> -11 <sup>45</sup>	Opening of Poster Session and Exhibition Morning coffee break

#### Thursday, 31 August 2017

##### Session 2: Topic 1. Tailored properties of concrete

Chairmen: Michael Pauser and Katalin Kopeckó

11 <sup>45</sup> -12 <sup>00</sup>	Tamás Mészöly, Norbert Randl An advanced approach to derive the constitutive law of UHPFRC
12 <sup>00</sup> -12 <sup>15</sup>	Miquel Joseph, Zeger Sierens, Jeroen Massaer, Dylan Noppe, Jiabin Li, Luc Boehme Influence of the purity of recycled concrete aggregates on the mechanical properties of dry and self-compacting precast concrete

12 <sup>15</sup> -12 <sup>30</sup>	<b>Ildikó Merta, Bojan Poletanović, Katalin Kopecskó</b> Natural fibres within cementitious composites
12 <sup>30</sup> -12 <sup>45</sup>	<b>Egon Milost, Tadeja Kosec, Aljoša Šajna, Irina Stipanović Oslaković, Andraž Legat, Violeta Bokan Bosiljkov</b> Effect of supplementary cementitious materials on mortar properties and corrosion of steel in different environments
12 <sup>45</sup> -13 <sup>00</sup>	<b>Jiří Kolísko, David Čítek, Petr Tej, Milan Rydval</b> Experimental pedestrian thin walled double curvature arch footbridge made of UHPFRC
13 <sup>00</sup> -13 <sup>15</sup>	<b>Tibor Kausay, Tamás K. Simon</b> Evaluation of the compressive strength of concrete
13 <sup>15</sup> -14 <sup>15</sup>	Lunch
14 <sup>15</sup> -18 <sup>00</sup>	<b>Poster session</b>

**Thursday, 31 August 2017****Session 3: Topic 3. Advanced production and construction technologies****Chairmen: Nikola Miletić and Salem G Nehme**

14 <sup>15</sup> -14 <sup>30</sup>	<b>Michael Olipitz</b> Small bridges up to 32.5 m span in UHPC-construction – bridge systems with aesthetic requirements
14 <sup>30</sup> -14 <sup>45</sup>	<b>Michael Kleiser, Wolfgang Lindlbauer, Helmut Huber</b> An ASFINAG pilot project for a watertight structure without reinforcement for crack width control
14 <sup>45</sup> -15 <sup>00</sup>	<b>Vítězslav Vacek, Miroslav Sýkora, Jiří Kolísko, Vladimír Vančík</b> Effect of design and execution on quality and durability of multi-storey reinforced concrete parking garages
15 <sup>00</sup> -15 <sup>15</sup>	<b>Herbert Weier</b> The Sanna-bridge – “temporarily suspended” super-structure safely landed
15 <sup>15</sup> -15 <sup>30</sup>	<b>Árpád Orosz, János Nagy, Ernő Zábrádi, Aliz Horváth, Imre Répáczki</b> Foundation slabs supported by spot footing
15 <sup>30</sup> -15 <sup>45</sup>	<b>Vedad Terzić, Reuf Kadrić</b> Application of macro-synthetic-fiber-reinforced sprayed concrete for primary lining support on Highway Tunnel Project in Bosnia And Herzegovina
15 <sup>45</sup> -16 <sup>00</sup>	<b>Kálmán Koris, István Bódi</b> Shear capacity of prestressed FRC beams with sparse stirrup spacing
16 <sup>00</sup> -16 <sup>30</sup>	Afternoon coffee break

**Thursday, 31 August 2017****Session 4: Topic 2. Advanced reinforcing and prestressing materials and technologies****Chairmen: Andor Windisch and István Bódi**

16 <sup>30</sup> -16 <sup>45</sup>	<b>Vazul Boros, Balthasar Novák</b> Adjustment of internal prestressing in existing structures – a case study
16 <sup>45</sup> -17 <sup>00</sup>	<b>Michael Huss, Viet Tue Nguyen</b> Innovative steel fibers and their effect on fiber distribution in beams – experimental investigations
17 <sup>00</sup> -17 <sup>15</sup>	<b>Agnieszka Wiater</b> Research on the lightweight concrete bridge deck slabs reinforced with GFRP composite bars

17 <sup>15</sup> -17 <sup>30</sup>	<b>Viorel Constantin Todea, Valeriu Stoian, Daniel Dan, Tamás Nagy-György, Sorin Codruț Floruț, Emanuela Boita</b> Hybrid steel-concrete shear walls strengthened using high performance steel fibre reinforced composites
17 <sup>30</sup> -17 <sup>45</sup>	<b>E. Apostolidi, K. Bergmeister, A. Strauss, P. Winkler, P. Kremnitzer, C. Rauch, B. Schembera</b> Innovative perforated steel sheet reinforcement: Corbel approach
17 <sup>45</sup> -18 <sup>00</sup>	<b>Cronje Bruwer</b> Behaviour of multi-directional CFRP and unidirectional CFRP plate bonded to concrete by means of epoxy and a combination of epoxy and mechanical anchors
18 <sup>00</sup> -18 <sup>15</sup>	<b>Péter Schaul, György L. Balázs</b> Shear design opportunities for synthetic reinforced concrete beams
18 <sup>30</sup> -23 <sup>00</sup>	Wine tasting in Holdvölgy cellar Mád Congress Dinner in Kúria Hotel Mád

**Thursday, 31 August 2017 – 14<sup>00</sup>-17<sup>45</sup>**
**Poster Session**
**Chairmen: Jan Vitek and Kálmán Koris**
**Poster Session is organized for the Poster presentations:**

1. Posters are prepared and displayed by the authors at the Venue before the Opening of the Congress (before 9 o'clock Thursday, 31 Aug 2017)
2. Posters are presented by one of the authors in front of a Jury (3 min. + questions)
3. Posters with Poster presentations are evaluated during the Closing ceremony

**Mária Erdélyiné Tóth, Anikó Pluzsik, Tamás Pluzsik, Bálint Morlin**

Experimental investigations of pull-out behaviour of synthetic fibres

**Jan Tichý, Bohuslav Slánský, Stanislav Ševčík**

Optimizing of UHPC railing panels and their practical application

**George C. Fanourakis**

Evaluation of the creep coefficients of the fib 2010 and Rilem B4 concrete creep prediction models

**Wojciech Kubissa, Roman Jaskulski, Tamás Simon**

Surface blast-cleaning waste as a replacement of fine aggregate in concrete

**Cronje Bruwer**

Influence of unidirectional CFRP plate pull-off strength bonded to concrete by means of epoxy and a combination of epoxy and mechanical anchors

**Szweda Zofia, Śliwka Andrzej**

Predicting risk of corrosion of bridges made of concrete with portland cement and low alkali portland cement

**Faustyn Recha, Tomasz Jaśniok, Tomasz Krykowski**

The simulation of corrosion degradation of concrete specimen in stationary heat and moisture condition

**Andrzej Śliwka**

Deformation of the ground caused by mining exploitation and internal forces in freely supported bridge

**Ahmed J. Al-Basha, Craig M. Newton, Brad D. Weldon**

Compressive and flexural strengths of heat cured ultra-high performance concrete produced with local materials

**Peter Paulík, Michal Bačuvčík, Katarína Gajdošová, Jaroslav Halvoník**

Material properties study of seven 100-years old concrete bridges in Slovakia

**Katarína Gajdošová, Róbert Sonnenschein, Peter Paulík, Jaroslav Halvoník**

Long-term properties of FRP reinforcement

<b>Damian Szczech, Monika Kaszubska Renata Kotynia</b> Comparison of shear strength assessment according to Eurocode 2 and Model Code 2010 design procedures
<b>Miklós Gálos, Ákos Orosz, János P. Rádics, Kornél Tamás</b> Modelling the behaviour of concrete additives via discrete element numerical simulation
<b>Hana Šimonová, Petr Daněk, Petr Frantík, Martin Sedlmajer, Zbyněk Keršner</b> Characterization of old/repairing structural concrete through mechanical fracture parameters
<b>Vlastimil Bílek, David Pytlík, Markéta Bambuchová, Sabina Bonczková</b> Comparison of modules of elasticity and mechanical properties of different concrete types
<b>Piotr Klikowicz, Marek Salamak, Mateusz Smolana</b> Various aspects of bridge health monitoring systems in Poland
<b>Yupeng Yang</b> Value-added recycling and reuse of waste concrete on a construction site
<b>Daguang Han, Yongwang Geng, Jianfeng Bai, Yupeng Yang, Chunli Ying, Hongyuan Li, Jiabin Li</b> Feasibility of on-site recycling and reuse of waste concrete in China – a case study
<b>Łukasz Krawczyk, Michał Gołdyn, Tadeusz Urban</b> Digital image correlation systems in the experimental investigations: capabilities and limitations
<b>Waldemar Bober</b> Experimental prestressed shell by Wacław Zalewski
<b>Slaven Katalinić, Anđelko Vlašić</b> Comparison of different calculation methods and models for mixed core-frame structural system
<b>Mateusz Źarski, Tomasz Płaszczek, Marek Salamak</b> Integrated lifecycle analysis of a concrete bridge
<b>Bartosz Piątek, Tomasz Siwowski</b> Research on the new CFRP prestressing system for strengthening of RC structures
<b>Čechmánek René, Drdlová Martina, Boháč Martin</b> Fresh and hardened state of fibre concrete
<b>Zoltán Gyurkó, Anna Szijártó, Mohammed Abed, Rita Nemes</b> Effect of cellular concrete powder on durability of normal strength concrete
<b>Tereza Sajdllová, Radomír Pukl, Károly Péter Juhász, Lóránt Nagy, Péter Schaul</b> Fibre reinforced concrete constitutive laws for numerical simulation
<b>Zeger Sierens, Miquel Joseph, Luc Boehme, Jiabin Li</b> Early-age mechanical properties of recycled aggregate concrete
<b>Károly Péter Juhász, Péter Schaul, John Hammond</b> Numerical modelling of a precast fibre reinforced concrete track slab
<b>Vanessa V. Rocha, Péter Ludvig</b> Characterization of portland cement composites prepared by a dispersion of carbon nanotubes on cement particles
<b>P. Łaziński, J. Krzakała</b> Estimation of modulus of elasticity of concrete on granite aggregate with the consideration of mechanical parameters of aggregate
<b>Katarzyna Domagała, Andrzej Śliwka</b> Application of potentiostatic measurements according to PN-EN 480-14 in assessment of the efficiency of reinforcement protection against corrosion by concrete with addition of fly ashes
<b>Zsolt Roszevák, István Haris</b> Comparison of different models on different cast-in-situ RC joints

<b>Andreas Haus</b> The effect of steel fibres for crack width limitation
<b>Viktor Hlavička, Éva Lublőy</b> Bonded anchors in thermally-damaged concrete
<b>Zoltán Teiter</b> Spectacular structure in an economical way
<b>Barbara Słomka-Słupik, Adam Zybura</b> Thaumasite formation in cement paste exposed for 4 days to ammonium chloride saturated water solution at ambient temperature and pressure
<b>Sándor Sólyom, Anna Szijártó, György L. Balázs</b> Non-metallic reinforcements with different moduli of elasticity and surfaces for concrete structures
<b>Abdulkader El Mir, Ágnes Péity, Salem G. Nehme</b> Effect of maximum aggregate size on mechanical properties of high-strength concrete
<b>Abdelmelek Nabil, Éva Lublőy</b> Improved fire resistance by using different dosages of metakaolin
<b>Czesław Machelski, Bartosz Pisarek</b> Change of the grade line of bridges constructed with cantilever concreting technology
<b>Dalibor Sekulić, Mario Ille, Igor Džajić</b> Monitoring of RC structures with integrated sensors
<b>Tomislav Brozović, Tomislav Kišiček, Ana Mandić Ivanković</b> Static and dynamic response of damaged prestressed RC beams flexural strengthened with CFRP
<b>Naser Alimrani, György L. Balázs</b> Structural consequences of fire on concrete structures - Review article

<b>Friday, 1 September 2017</b>	
<b>Session 5: Topic 5. Modelling, design and codification</b>	
<b>Chairmen: Jan Biliszcuk, Pawel Hawryszkow and István Völgyi</b>	
8 <sup>30</sup> -12 <sup>00</sup>	Registration at the Congress Venue
9 <sup>00</sup> -9 <sup>15</sup>	<b>Jelena Bleiziffer, Ivana Milić</b> Advances in bridge management systems
9 <sup>15</sup> -9 <sup>30</sup>	<b>Andor Windisch</b> New concept for design of concrete structures
9 <sup>30</sup> -9 <sup>45</sup>	<b>Radomír Pukl, Vladimír Červenka, Tereza Sajdlová, Jan Červenka, Drahomír Novák</b> Probabilistic study about uncertainties in predicting shear beam cracking and failure
9 <sup>45</sup> -10 <sup>00</sup>	<b>Michaela Kopp, Markus Vill</b> Shear load assessment of existing concrete bridges by nonlinear FE-modelling
10 <sup>00</sup> -10 <sup>15</sup>	<b>Peter Joachim Heinrich, Dirk Schlicke, Nguyen Viet Tue</b> Adoption of a rheological body for the simulation of viscoelastic effects in hardening concrete
10 <sup>15</sup> -10 <sup>30</sup>	<b>Károly Péter Juhász, Péter Schaul, Lóránt Nagy</b> Optimisation of TBM Tunnel in the Shanghai Metro Extension using Macro Synthetic Fibre
10 <sup>30</sup> -10 <sup>45</sup>	<b>George C. Fanourakis</b> Validation of the fib 2010 and Rilem B4 models for predicting creep in concrete



10 <sup>45</sup> -11 <sup>00</sup>	<b>Marek Jasiński, Tomasz Płaszczyk, Marek Salamak</b> Visual programming and BIM technology in parametric concrete bridge superstructure design
11 <sup>00</sup> -11 <sup>30</sup>	Morning coffee break

**Friday, 1 September 2017**
**Session 6: Topic 4. Advanced concrete structures**
**Chairmen: Marek Salamak and György Farkas**

11 <sup>30</sup> -11 <sup>45</sup>	<b>Johannes Oppeneder, Lutz Sparowitz, Bernhard Freytag, Nguyen Viet Tue</b> Material development for the QUICKWAY system
11 <sup>45</sup> -12 <sup>00</sup>	<b>Jan Biliszcuk, Paweł Hawryszków, Marco Teichgraeber</b> Structural Health Monitoring system of a concrete cable-stayed bridge
12 <sup>00</sup> -12 <sup>15</sup>	<b>Benjamin Kromoser, Johann Kollegger</b> Construction of a thin walled concrete shell event canopy
12 <sup>15</sup> -12 <sup>30</sup>	<b>Krystyna Nagrodzka-Godycka, Marta Wiśniowska</b> Design and construction of tilted walls in accordance with codes' provisions on the example of the construction of the museum of the second world war in Gdańsk
12 <sup>30</sup> -12 <sup>45</sup>	<b>Gábor Durovsky, Eörs Henrik Thék</b> Precast bridge girders to span 44 m
12 <sup>45</sup> -13 <sup>00</sup>	<b>Dragoș Alupoie, Elena Metes, Sergiu Enache, Gavril Köllö, Edward Petzek</b> VTR® – Modular bridge concept for skew intersections
13 <sup>00</sup> -13 <sup>15</sup>	<b>Martin Schneider, Norbert Randl, Bernhard K. Hofer</b> Quantifying the effect of mixture properties of high performance concrete overlays on adhesive bond to NSC substrates on the basis of axial tensile tests
13 <sup>15</sup> -13 <sup>30</sup>	Closing ceremony
13 <sup>30</sup> -14 <sup>30</sup>	Lunch

14 <sup>30</sup> -16 <sup>30</sup>	<b>Technical Excursion</b> New concrete structure for SAUSKA Winery in Mád designed by Hydrastat Ltd.
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## CONGRESS VENUE

### Tokaj – Cultural and Conference Centre

Address: Serház Street 55.

H-3910 Tokaj

GPS: 48.127532 | 21.409459



### Registration (ground floor):

- Wednesday, 30 August 2017, 17.00 to 19.00 o' clock
- Thursday, 31 August 2017, 8.00 to 18.00 o' clock
- Friday, 1 September 2017, 8.30 to 12.00 o' clock



## WELCOME DRINK

Wednesday, 30 Aug. 2017, 19.00 to 21.00 o'clock

**Wine tasting in Rákóczi cellar Tokaj**

Address: Kossuth square 15.

H-3910 Tokaj

GPS: 48.125617 | 21.408203





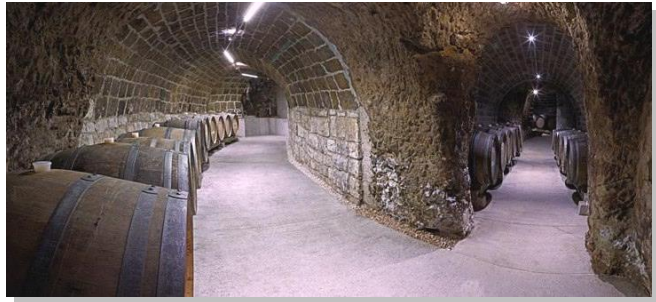
## CONGRESS DINNER

Thursday, 31 August 2017, 18.15 to 23.00 o'clock

### 1. Wine tasting before Dinner in Holdvölgy cellar Mád

Address: Batthyány street 69.

H-3909 Mád



### 2. Congress Dinner in Kúria Hotel Mád

Address: Rákóczi Ferenc street 48.

H-3909 Mád

GPS: 48.194370 | 21.279090

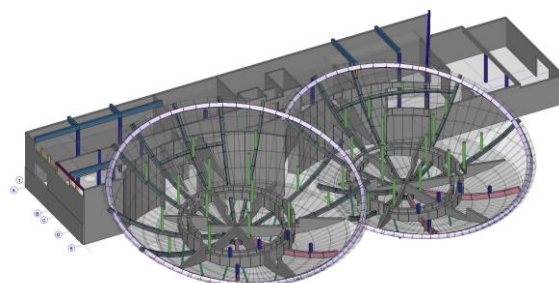
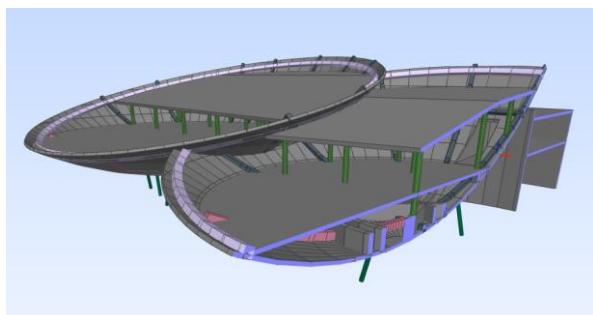
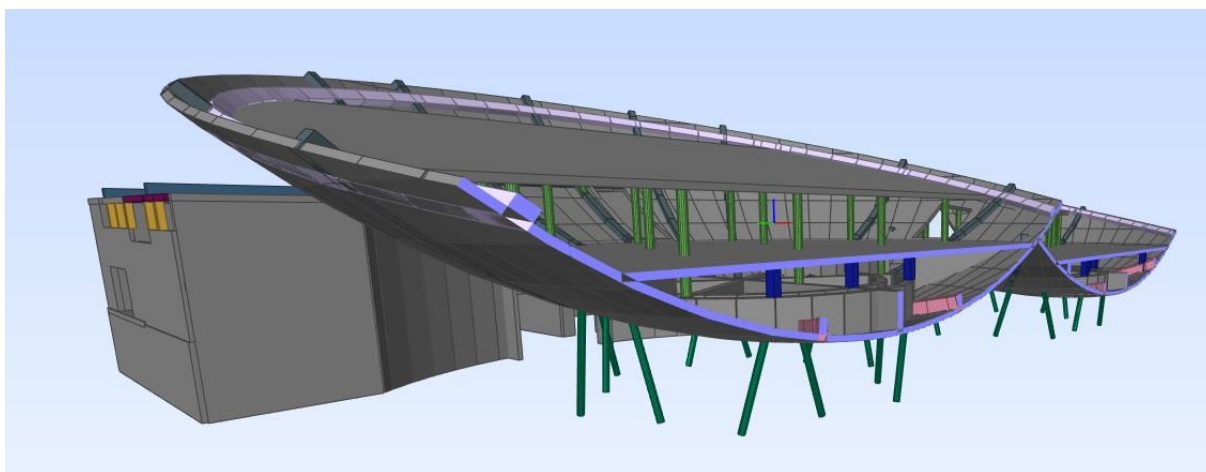


## TECHNICAL EXCURSION

Friday, 1 Sept. 2017, 14.30 to 16.30 o' clock

### Sauska Winery

Address: H-3909 Mád





## ACCOMPANYING PERSON'S PROGRAM

Programs start from the Registration Desk of the Conference Venue (Tokaj, Cultural and Conference Complex, Serház street 55.)

- Thursday, 31 August 2017, 14.00 to 16.30 o' clock  
**Historical walking** through Tokaj and **Ship Tour** on the River.



- Friday, 1 September 2017, 9.30 to 11.00 o' clock  
**'Lekvárium' Tour** - visit with pregustation in a small jam (lekvár) preserving manufacture 'Ízes - Örömet'. (<http://izesoromest.hu>)





## CCC2017 TOKAJ CONGRESS HAS BEEN SUPPORTED BY:



## EXHIBITORS



## CCC Member Countries

Austria, Croatia, Czech Republic, Hungary and Poland

