**UHPFRC 2024 – Program at a glance**

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| **Monday October 21** | **Tuesday October 22** | **Wednesday October 23** |
| 8:30-10:00 Registration | 8:15-10:00 Parallel Technical Sessions | 8:30-10:00 Technical Session |
| Bridges | Material and Structural innovations | Students Projects |
| 10:00-11:30**Opening Ceremony + opening keynote lecture**AFGC-RILEM-fib-ACI-IABSE addresses | 10:30-12:00 Parallel Technical Sessions | 10:30-12:00 Technical Session |
| UHPFRC cases / Qualification & Durability | Structural tests | Structural tests and design |
| **12:00-13:00 2 Keynote lectures** |  |  |
| 13:00-14:30 Lunch | 12:00-13:30 Lunch | 12:00-13:30 Lunch |
| 14:30-16:00 Technical Session Bridges | 13:30-15:00 Technical Session Buildings | 13:30-15:00 Technical Session Bridges |
| 16:30-18:00 Technical sessionUHPFRC cases | 15:15-16:15 Technical SessionUHPFRC in Monaco projects | 15:15-16:45 Technical sessionDesign |
| **Welcome cocktail** | **Technical Visit** **Gala Dinner** | 16:45-17:00 **Closure / Students Project Award** |

**Monday October 21 - 10:00 AM – 1:00 PM**

**Amphitheater : Opening session and plenary lectures**

**Registration desk open from 8:30 AM**

**8:30 AM – 10:00 AM Registration - Welcome Coffee**

10:00 AM **Opening Ceremony**

Welcome address from AFGC, ***Claude LE QUÉRÉ****, the President of AFGC*

Encouragement address from ACI, Vic PERRY, convenor of ACI TC239, to be confirmed

Encouragement address from *fib (Marco di Prisco ?)*

Encouragement address from IABSE (Eugen Brühwiler ?)

Encouragement address from RILEM (Nicolas Roussel ?)

11:00 AM Overview of structures made of UHPC developed in France

 *Resplendino Jacques, Simon Alain, Rivoal Jean-Nicolas, Frécon Jérôme, Toutlemonde François*

**11:30 AM – 12:00 AM Coffee break**

12:00 AM Completion of first UHPC rehabilitation of entire suspension bridge deck

 *McDonagh Michael, Boukaram Sam, Scindia Shekhar, Tewelde Abate, Foden Andrew*

12:30 AM Ultra-high-performance fiber-reinforced cementitious composite for the preservation, strengthening, and transformation of existing buildings

(Title for the keynote lecture: UHPFRC for the preservation of buildings with a focus on environmental impact)

 *Bertola Numa, Küpfer Célia , Schiltz Philippe, Brühwiler Eugen*

**1:00 PM – 2:30 PM Lunch break**

**Monday October 21 - 2:30 PM – 4:00 PM**

**Technical session: Bridges**

**Amphitheater**

2:30 PM Major UHPC project - The Riddes Viaduct

 Boiron *Laurent, Hardegger Daniel, Moreillon Lionel*

2:45 PM Contractor’s approach on the use of UHPFRC for bridges rehabilitation and strengthening

 *Haidar Khalil, Geraud Vincent, Giroud Christophe, Tafforeau Jean-Louis, Gery David*

3:00 PM The Fornaci viaduct strenghtening using UHPFRC

 *Attanasi Gabriele, Mina Stefano*

3:15 PM First application of UHPFRC applied to bridge in Belgium: the retrofitting of the Soudromont road bridge

 *Franssen Renaud, Minette Damien, Braun Emilie, Chantry Julien*

3:30 PM UHPFRC application for FEDRO's bridge maintenance and construction

 *Spasojevic Ana, Caron Renaud, Cuennet Stéphane*

3:45 PM UHPFRC struts for strengthening and widening bridge decks

  *Ménétrey Philippe, Moreillon Lionel, Chollet Olivier*

**4:00 PM – 4:30 PM Coffee break**

**Monday October 21 - 4:30 PM – 6:00 PM**

**Technical Session: UHPFRC Cases**

**Amphitheater**

4:30 PM A precast UHPFRC system for efficient construction of durable port docks

 *Camacho Esteban, Lopez Juan Angel, Galàn Fernando, Coll Hugo*

4:45 PM Application of UHPFRC for the renewal of railway slab tracks

 *Trouillet Jean-Georges, Hochuli Antonina, Brühwiler Eugen*

5:00 PM UHPFRC Transition piece for offshore wind turbines

 *Bounhoure François, Tourlet Hervé, Collet Pascal, Lebrun François*

5:15 PM Corrugated steel pipe reinforcement with UHPC pouring with a sliding concrete formwork

 *Frecon Jérôme, Flaus Anthony, Meaude Constance*

5:30 PM Shotcrete UHPFRC: 5 years feedback and perspectives

 *Floquet Arnaud, Amanjean Elsa, Rivoal Jean-Nicolas, Jaillet Cédric*

5:45 PM Shotcrete UHPFRC: an improved material/process to ease repair and reinforcement without formwork

 *Blachier Christian, Rivoal Jean-Nicolas, Jaillet Cédric, Halin Olivier, Bonnet Emmanuel*

**6:00 PM – 7:30 PM Welcome cocktail offered by the City of Menton**

**Tuesday October 22 - 8:15 AM – 10:00 AM**

**Parallel technical sessions**

**Registration desk open from 8:00 AM**

**Amphitheater - Bridges**

8:15 AM New Pleyel interchange UHPFRC footbridge

 *Gellée Aymeric, Tatat Frédéric, Yacoubi Mehdi*

8:30 AM UHPFRC overlay with polymer fibers on foot path bridge in Germany

 *Sagmeister Bernhard*

8:45 AM The pylons repair of ‘pont de Bourgogne’: an example of use of UHPFRC on existing concrete affected by delayed ettringite formation

 *Odin Jean-Michel, Haidar Khalil, Gery David, Giroud Christophe*

9:00 AM Feedback on the implementation of UHPFRC as overlay on two French highway bridges: recommendations for a correct UHPFRC execution

 *Toutlemonde François*

9:15 AM ABC replacement of five multispan Texas bridges reopens each bridge within 11 days using UHPC closure pours

 *Frécon Jérôme, Tzabari Hannah*

9:30 AM Major UHPC projects – Conctractor’s perspective

 *Hardegger Daniel, Laurent Boiron*

**Room for parallel sessions - Material and structural innovations**

8:15 AM Water film thickness concept in UHPFRC matrix with different SCMs

 *Shen Xiujiang, Kamyab Hadi Kazemi*

8:30 AM Experimental investigation on key properties of innovative UHPFRC containing different alternative recycled constituents

 *Manafpour Ali Reza, Kasaei Jamil, Esmaeili Jamshid*

8:45 AM Enhancing electrical conductivity of UHPFRC with carbon fibres

 *Abrishambaf Amin, Atay Timy, Zimmermann Gregor, Weber Markus*

9:00 AM UHP-FRCM: innovating bridge strengthening

 *Abutahnat Yazan, Sorelli Luca, El Refai Ahmed*

9:15 AM UHPFRC-prefabricated elements for building and infrastructure construction-saving in resource and embodied energy compared to reinforced concrete

 *Olipitz Michael*

9:30 AM Optimal design of multi-span composite floors made of CLT and UHPFRC: minimizing material usage and environmental impact

 *Emami Hossein, Sorelli Luca, Auclair Samuel, Blanchet Pierre, Orr John*

9:45 AM Optimisation of UHPC girder for medium-span highway bridges

 *Leela Aparna Devi Kondapalli, Hanurag Reddy Devireddy, Balakrishnan Bijily*

**10:00 AM – 10:30 AM Coffee break**

**Tuesday October 22 - 10:30 AM – 12:00 AM**

**Parallel technical sessions**

**Amphitheater - UHPFRC Cases / Qualification and durability**

10:30 AM Durable retrofitting for highly loaded bus lanes using Ultra-High Performance Fibre Reinforced Concrete (UHPFRC) as Ultra-Thin White-topping (UTW)

 *Jungwirth Jörg, Strotmann Andre, Sikorski Oliver, Vogt Stefan, Braun Mattias*

10:45 AM Mechanical behavior of a 3 m-high precast UHPFRC retaining wall

 *Charron Jean-Philippe, Sylvestre Danny, Massicotte Bruno*

11:00 AM On-site protecting ability demonstration of UHPFRC giant tiles

 *Marchiol Albert, Lamoureux Guillaume, Mazzacane Patrick, Lauge Jean-Christophe, Frecon Jérôme, Geffray Fanny, Toutlemonde François*

11:15 AM Study of UHPFRC waterproofing performance on two French bridges

 *Généreux Grégory, Naudan Michaël, Pittet Romain, Croze Aurélien, Simian Benjamin*

11:30 AM Ultra-high performance shotcrete under combined loading from uniaxial tensile stress and chloride exposure

 *Pollner Toni, Kustermann Andrea, Dauberschmidt Christoph*

11:45 AM 18-years field durability experience of a non-protected UHPFRC bridge segment

 *Pons Tony, Terrade Benjamin, Guéguen-Minerbe Marielle, Omikrine-Metalssi Othman, Toutlemonde François*

**Room for parallel sessions - Structural tests**

10:30 AM Cyclic responses of post-heated UHPFRC columns: experimental tests and computational models

 *Huang Bo-Jun, Hung Chung-Chan*

10:45 AM Dynamic response of UHPFRC for protective structures

 *Cadoni Ezio, Dotta Matteo, Forni Daniele*

11:00 AM High cycle tensile fatigue behavior of UHPFRC

 *Zhan Jian, Nussbaumer Alain, Brühwiler Eugen*

11:15 AM Punching shear tests and finite element analysis of RC bridge slabs repaired with UHPFRC overlay

 *Matsumoto Takashi, Heng Chikhoeung, Mitamura Hiroshi*

11:30 AM Punching-shear strength of concrete slabs reinforced with a layer of UHPC

 *Vincens Baptiste, Redaelli Dario*

11:45 AM Design of precast bridge columns meeting seismic performance requirements for ABC

 *Massicotte Bruno, Long Corentin, Lewis Gabriel, Darveau Philippe*

**12:00 AM – 1:30 PM Lunch break**

**Tuesday October 22 - 1:30 PM – 3:00 PM**

**Plenary session: Buildings**

**Amphitheater**

1:30 PM Proposal of an engineering design approach for non-metallic fiber reinforced concrete through experimental study and numerical modelling on UHPFRC

 *Nana Serge, Rivoal Jean-Nicolas, Zhou FuLei, Herbé Simon, Starostina Darja, Bonnet Emmanuel, Trucy Laurence*

1:45 PM The UHPFRC prestressed stair opera house in Shanghai (CN)

 *Zhao Yuchao, Zhao Yanni, Liu Tianan*

2:00 PM Complex molds and blast resistant façade on Central Bank of Iraq

 *Garrau Sylvain, Kohen Beni, Maraşli Muhammed*

2:15 PM Comparing UHPFRC and Sprayed GRC for architectural applications

 *Herbé Simon*

2:30 PM Weight saving on the HYLO Tower

 *Garrau Sylvain, Kohen Beni, Maraşli Muhammed*

2:45 PM Beyond traditional building: the synergy of merging ultra-high-performance concrete in modular construction

 *Awassa Oumaima, El-Hacha Raafat, Perry Vic*

**3:00 PM – 3:15 PM Short break**

**Tuesday October 22 – 3:15 PM – 4:15 PM**

**Plenary Session: UHPC implementation in Monaco – preliminary explanations to the visit**

**Amphitheater**

3:15 PM Low carbon HPC and UHPFRC used in Mareterra Project

  *Resplendino Jacques, Verbauwhede Maryline, Brouard Gregory, Hirsinger Christophe, Adeline Regis*

3:30 PM Mareterra - UHPFRC used for underwater Eco-design

 *Resplendino Jacques, Hirsinger Christophe, Adeline Regis*

3:45 PM Mareterra – UHPC footbridge of the entertainment Marina

 *Resplendino Jacques, Hirsinger Christophe, Adeline Regis*

4:00 PM UHPFRC used for the heavy restructuring of the 40 piers of the Spélugues complex in Monaco

 *Marcel Romain, Nguyen Jean-Luc, Paille Ludovic, Simon Alain, David Daniel*

**4:15 PM – 7:00 PM TECHNICAL VISIT IN MONACO**

**7:00 PM – 11:00 PM GALA DINER**

**Wednesday October 23 - 8:30 AM – 10:00 AM**

**Plenary session – Special students’ projects**

**Registration desk open from 8:00 AM**

**Amphitheater - Students’ Projects**

8:30 AM Rockfall protection and underground corridor: passing through the “Grand Couloir” at 3400 metres altitude in the Mont Blanc

***Grégoire DELALANDE****, Lola FRANCISCO – Supervisors Benitha VASSEUR, Victor LACOUR, Pierre de MAHEAS, Serge BARTO*

8:45 AM Prestressed timber-concrete (UHPFRC) composite bridge solution for the footbridge of Brignoud

***Clara SWOROWSKI****– Supervisor Raphaël RABUSSIER*

9:00 AM The Sioule Viaduct

***Wesley Consty BIATCHO TCHABEU****, Aaron Gaius TSAKEM DONGMO, Viscael Bostyl FEUDJIEU –*

*Supervisors Alain SIMON, Pascal BODET*

9:15 AM Surface aspect of UHPFRC for design and architectural purposes

***Aysegül Mine KOCA*** *– Supervisor Anthony FLAUS*

9:30 AM Repair and rehabilitation of underground infrastructures with sprayed UHPFRC

***Darja STAROSTINA*** *– Supervisors Jean-Nicolas RIVOAL, Serge NANA*

9:45 AM A sustainable architectural material for the redevelopment of public spaces and heritage sites

 ***Betsy SANSORES*** *– Supervisors Esteban ASTUDILLO DE LA VEGA, Carlos BARBA*

**10:00 AM – 10:30 AM Coffee break**

**Wednesday October 23 - 10:30 AM – 12:00 AM**

**Plenary technical session**

**Amphitheater - Structural tests and design**

10:30 AM Tension stiffening and cracking of rebar-reinforced coarse aggregate ultra-high performance concrete (R-CA-UHPC) members

 *Shi Zhanchong, Su Qingtian, Kanstad Terje*

10:45 AM Shear behavior of steel dowel connector in thin UHPFRC element

 *Shen Xiujiang*

11:00 AM Study on static performance and damage characteristics of precast BFRPC permanent capping beam formwork structure

 *Gong Yafeng, Bi Haipeng, Li Fayang, Hu Xinpeng, Feng Wenxu*

11:15 AM Investigation on the effects of surface preparation on bond between UHPFRC and concrete

 *Kita Yushi, Yamashita Takahisa, Watanabe Shinya, Makita Tohru*

11:30 AM Crack-bridging effect in the repair and strengthening of pre-damaged reinforced concrete structures using Ultra-high Performance Fibre-Reinforced Shotcrete (UHPFRSC)

 *Strotmann Andre, Puth Cornelius, Jungwirth Jörg*

11:45 AM Direct and inverse analysis to assess the post-cracking behaviour law of a UHPFRC from a 3 points bending test

 *Marchand Pierre, Rivoal Jean-Nicolas, Simon Alain*

**12:00 AM – 1:30 PM Lunch break**

**Wednesday October 23 - 1:30 PM – 3:00 PM**

**Plenary technical session: Bridges**

**Amphitheater**

1:30 PM UHPC reinforcement of grouted prestressed tendon

 *Roibet Adrien, Simon Alain*

1:45 PM Numerical simulation: a tool for innovation in UHPFRC bridges

 *Ménétrey Philippe, El Jisr Hammad, Moreillon Lionel*

2:00 PM Cast-on site UHPFRC for the rehabilitation of existing structures - Feedback over 20 years of exposure to chlorides

 *Denarié Emmanuel, Sofia Lionel, Rudaz Jacques*

2:15 PM UHPFRC clamp for PT tendon

 *Roibet Adrien, Hamparian Serge, Brouilly Ludovic*

2:30 PM Delaware Memorial Bridge - The largest UHPC overlay deck rehabilitation project in the United States

 *Seibert Peter S,* *Brindley Gilbert S.*

2:45 PM Štvanice Footbridge in Prague - Construction and innovation

 *Tej Petr, Mourek Jan*

**3:00 PM – 3:15 PM Short break**

**Wednesday October 23 - 3:15 PM – 4:45 PM**

**Plenary technical session: Design**

**Amphitheater**

3:15 PM UHPFRC structural design guidance in the United States

 *Graybeal Benjamin, Helou Rafic*

3:30 PM Prediction of multiple-cracking in fiber-reinforced concrete using Weibull theory

 *Gontero Romain, Sellier Alain, Vidal Thierry, Millard Alain, Sorelli Luca*

3:45 PM A design methodology for high stiffness, strength, ductility, and durability in UHPFRC flexural members with fiber-reinforced polymer rebars

 *Kaka Venkatesh, Chao Shih-Ho*

4:00 PM Non-linear finite analysis of ribbed vaulted floor made of ecological UHPFRC

 *Aljawhary Mohammad, Sorelli Luca, Briseghella Bruno*

4:15 PM Fatigue behavior of UHPFRC and its implementation for design

 *Brühwiler Eugen, Zhan Jian*

4 :30 PM Failure mechanism of threaded anchors in UHPFRC as simulated by finite element analysis

 *Hochuli Antonina, Brühwiler Eugen*

**Wednesday October 23 – 4:45 PM – 5:00 PM**

**Amphitheater**

**Closure session / Student Project Award**

Closing address, thanks and prospective

***François TOUTLEMONDE, Jacques RESPLENDINO***