

ACI COMMITTEE 239: ULTRA-HIGH PERFORMANCE CONCRETE

2022 ACI Spring Convention
Monday, March 28, 2022 3:30 pm – 6:00 pm
Orlando, Florida; Room: C-Grand Sierra E

MEETING AGENDA

1. Welcome and Attendee Introductions
2. Approval of Agenda
3. Approval of October 2021 meeting minutes
4. TAC Report – Anton Schindler
5. Membership update – Graybeal and Crane
 - Voting Members: Graybeal (Chair), Crane (Secretary), Aaleti, Ahlborn, Bandelt, Corvez, El-Helou, Ferrara, Green, Habel, Milligan, Moustafa, Myers, Nault, Perry, Rowland, Seibert, Shah, Wille
6. SPARK Session Focused on **UHPC Material Testing** – [brief presentations plus Q&A]
 - Workability and Fiber Stability Tests for UHPC – Jiong Hu
 - AASHTO TP 119 Resistivity Testing to Assess UHPC Durability – Luca Montanari
 - Quality Control Testing for UHPC Tensile Behavior – Megan Voss
 - AASHTO T 397 Uniaxial Tensile Response of UHPC – Ben Graybeal
7. Upcoming symposia and conferences
 - 4th ACF/HNU *Intl. Conference on UHPC Materials and Structures*; Hanoi, Vietnam; Oct 27-29, 2022
 - BEI *International Symposium on UHPC and Emerging Concrete (BEI-UHPC)*; Singapore; Summer 2023
 - *UHPFRC'2024*; French Riviera (possibly Monaco); late October 2024
8. Committee Priorities / Reports
 - 239-E Educational Outreach – Robert Thomas
 - 239-D Materials & Methods of Construction with UHPC – Greg Nault (for Dominique Corvez)
 - 239-C Structural Design of UHPC – Vic Perry
9. Test Methods for UHPC – Ben Graybeal
10. Presentation Sessions: Current and Future – Kay Wille
 - Spring 2022 – *See Next Pages for Full Sessions (6) and Presentations (37 total)*
 - Fall 2022 (Dallas); Title: *UHPC – New Insights*
 - Spring 2023 (San Francisco)
11. Concrete Research Council
 - Ongoing CRC-Funded Project – *Transverse Reinforcement Requirements for UHPC Columns: Assessment of Existing ACI Provisions and New Developments* – Mohamed Moustafa
12. Key External UHPC-related Efforts
 - AASHTO Guide Specification for Structural Design with UHPC – Ben Graybeal
 - CSA Bridge Design Standard – ?
 - FHWA EDC-6 *UHPC for Bridge Rehabilitation and Repair* – Zach Haber
 - Other...
13. Collaborations
 - International updates
 - Reports/Updates from other ACI committees
14. New business – (please inform chair prior to start of the meeting if you wish to add new business)
15. Adjourn – next meeting expected to be October 24, 2022 in Dallas, Texas

Events Associated with ACI COMMITTEE 239
ULTRA-HIGH PERFORMANCE CONCRETE
at the 2022 ACI Spring Convention

Committee Meetings:

239	Ultra-High Performance Concrete	Monday	3:30p - 6:00p	C-Grand Sierra E
239-C	Structural Design on UHPC	Monday	10:30a - 12:30p	C-Bonaire 2
239-D	Materials & Methods of Construction with UHPC	Monday	1:00p - 3:00p	C-Bonaire 6
239-E	Educational Outreach	Sunday	1:00p - 3:00p	C-Boca VII

Sessions:

Developments, Applications, and Case Studies in UHPC for Bridges and Structures, Part 1 of 3

MON, 11:00a to 1:00p, C-Boca III

- *Numerical Modeling of UHPC Bridge Elements to Capture Both Strain-Hardening and -Softening Behaviors* – Serhan Guner
- *UHPC Alternative for the West Wilson Bridge* – David Gee
- *Bond of GFRP Rebars Embedded in UHPC at Elevated Temperatures* – Ali Alatify
- *Structural Design Guidance for UHPC* – Benjamin Graybeal
- *Large Reinforcing Bars Spliced in UHPC* – Christina Freeman
- *UHPC Fresh Chloride Limits* – Raid Alrashidi

Developments, Applications, and Case Studies in UHPC for Bridges and Structures, Part 2 of 3

MON, 1:30 to 3:30p, C-Boca III

- *UHPC for Bridge Preservation and Rehabilitation: State of the Practice in the U.S.* – Zachary Haber
- *Use of UHPC H-Piles for an Abutment at the Lily River Detour Bridge in Ontario Canada* – Philip Loh
- *UHPC Overlays for Suspension Bridges – The Why & How?* – Vic Perry
- *Simplified Double-Punch Test as a Potential Tensile Quality-Control Test for UHPC* – Megan Voss
- *Cyclic and Strength Performance of Slab-Beam Superstructure System with UHPC Closure Pour* – Francisco Chitty
- *Bridge Preservation with UHPC Overlays* – Peter Seibert

Developments, Applications, and Case Studies in UHPC for Bridges and Structures, Part 3 of 3

MON, 4:00 to 6:00p, C-Boca III

- *Bonding of Overlays to Ultra-High-Performance Concrete* – Saber Larfi
- *UHPC an Alternative to Control End-Zone Cracking in Prestressed Bridge Girders* – Eduardo Torres
- *Use of UHPC in Innovative Infrastructure Systems to Enhance the Resiliency of Coastal Cities* – Jorge Cueto
- *Effect of Tensile Strength and Ductility of UHPC on the Development Length of Steel Reinforcement* – Amr Soliman
- *A Magnetic Nondestructive Method for UHPC* – Christopher Ferraro
- *Effect of Steel Reinforcement Grade on the Flexural Behavior of UHPC Beams* – Hassan Aoude

UHPC – Student Experiences, Part 1 of 3

TUES, 8:30 to 10:30a, C-Boca IV

- *Ultra-High Performance Concrete: Traps of the Fresh State* – Aghiles Begriche
- *UHPC as an Environmentally-Friendly Concrete Material* – Hannah Tzabari
- *Lessons Learned During Development of Non-Proprietary UHPC Mixes* – Megan Voss
- *Mixing Kinetics of Ultra-High-Performance Concrete (UHPC)* – Weina Meng
- *UHPC Shear Strengthening of Concrete T-Beams* – Tongxu Liu
- *UHPC Repair of Steel Columns in the Walnut Tunnel in Philadelphia* – Michael McDonagh

UHPC – Student Experiences, Part 2 of 3

TUES, 11:00a to 1:00p, C-Boca IV

- *An Experimental Methodology to Assess Fatigue Behavior and Fatigue Damage Recovery by Autogenous Self-Healing of UHPC* – **Niranjan Prabhu Kannikachalam**
- *From UHPC Graduate Scholars to Technical Field Experts* – **Hannah Tzabari**
- *The Fresh, Mechanical and Durability Performance of UHPC with Colloidal Nano-Silica Liquids and Nano Graphene Oxide* – **Miaomiao Li**
- *Corrosion Performance of Ultra-High-Performance Concrete in Uncracked and Cracked Beams: A Student's Perspective* – **Seyed Masoud Shirkorshidi**
- *Innovative UHPC Mixing and Placing Techniques for Repair of Three Illinois Bridges* – **Michael McDonagh**
- *Durability Based Design of UHPC Structures: A Performance Based Approach Based on Extensive Laboratory Research and Long Term in Situ Observations* – **Salam Alobaidi**

UHPC – Student Experiences, Part 3 of 3

TUES, 1:30 to 3:30p, C-Boca IV

- *Great Performances with Great Challenges: The Confusions of Young (Ph.D.) Students at Politecnico di Torino (Part 1)* – **Oscar Mancinelli**
- *Emission Density Diagrams Developed with Machine Learning Models to Evaluate the Sustainability of Advanced Concrete Materials* – **Cesario Tavares**
- *Plastic Viscosity Prediction of Ultra-High-Performance Concrete via Long-Term Recurrent Convolutional Network* – **Pengwei Guo**
- *Great Performances with Great Challenges: The Confusions of Young (Ph.D.) Students at Politecnico di Torino (Part 2)* – **Nicolas Burello**
- *UHPC Plates for Repair of Corroded Steel H-Piles* – **Binod Shrestha**
- *Use of Steel Microfibers, Steel Macrofibers, PVA Fibers, and Hybrid Fibers in UHPC: Experience from Shear Tests and Bond Strength Tests of UHPC Beams* – **Manuel Bermudez**

Other UHPC-Related Presentations

- *Development of UHPC Mixtures and Production of Full-Scale Pretensioned Bridge Girders* – **Hyeonki Hong**
 - *Session: Open Topic Session (1 of 2), TUES, 1:30p-3:30p, C-Boca II*