

# ACI COMMITTEE 239: ULTRA-HIGH PERFORMANCE CONCRETE

2019 ACI Fall Convention, Cincinnati

Monday, October 21, 2019 3:30 pm – 6:00 pm

Room: Convention Center, C-233

NOTE: Meeting will be chaired by Tess Ahlborn. Ben Graybeal must depart Cincinnati on 10/21 in relation to other assigned responsibilities.

## MEETING AGENDA

1. Welcome and Attendee Introductions
2. Approval of Agenda
3. Approval of March 2019 meeting minutes from Quebec City
4. TAC Report – Michael Brown
5. Membership update – Kennan Crane
6. Upcoming symposia and conferences
  - a. *HiPerMat*, Kassel, Germany, March 11-13, 2020
  - b. *BEI International Symposium on UHPC and Emerging Concrete (BEI-UHPC)*, Singapore, June 22-25, 2020
7. CRC Research Proposal Vetting – Carin Roberts-Wollmann
  - a. CRC Research Proposals – [5 minutes presentations plus 3 minutes for Q&A]
    - Srinivas Allena – Improving Sustainability of UHPC Using Rubber Particles and High Volume SCMs
    - Weina Meng – Developing Self-Cooling with Robust Workability for Field Applications
    - Nathalie Roy – Seismic Behavior of Reinforced Concrete Columns Repaired with UHPFRC
    - Fatmir Menkulasi – Punching Shear Strength of Unbonded Posttensioned UHPC Flat Plates
  - b. ACI544 topic (Sorelli: UHPFRC Fiber Distribution and Related Response) – Ferrara
  - c. Committee discussion of process between 10/21 and 12/1
8. Committee Priorities / Reports
  - a. 239-C ETR on the Structural Design of UHPC – Vic Perry
  - b. 239-D Materials & Methods of Construction with UHPC – Dominique Corvez
  - c. 239-E Educational Outreach – Tess Ahlborn
  - d. 239 UHPC Strategic Direction – Jimm Milligan
9. Test Methods for UHPC - Vic Perry
10. Presentation Sessions: Current and Future – Kay Wille
  - a. Fall 2019 Cincinnati – *UHPC: Innovations and Changes in Structural Design*
  - b. Spring 2020 Rosemont – *Unlocking UHPC Workability*
  - c. Fall 2020 Raleigh – *UHPC: Making Connections*
11. CRC Funded Research – Structural Response and Buckling Behavior of Slender UHPC Columns – Moustafa
12. Key External UHPC-related Efforts
  - a. CSA Bridge Design Standard – Katrin Habel and Vic Perry
  - b. FHWA Development of Guide Specification for AASHTO – Zach Haber
  - c. FHWA Research on Long-Span Pretensioned Girders – Rafic El Helou
  - d. Other...
13. Collaborations
  - a. International updates
  - b. ACI Committee Liaison Reports
14. New business – (please inform chair prior to start of the meeting if you wish to add new business)
15. Adjourn – next F2F meeting March 30, 2019 @ 3:30 pm, Rosemont Illinois

**PARKING LOT: Student Competition (Milligan), Compilation of Research (El Helou), 239-A ETR (Crane)**

## Events Associated with ACI COMMITTEE 239

### ULTRA-HIGH PERFORMANCE CONCRETE at the 2019 ACI Fall Convention, Cincinnati

#### Committee Meetings:

239	Ultra-High Performance Concrete	Monday	3:30p - 6:00p	C- 233
239-C	Structural Design on UHPC	Monday	10:30a - 12:30p	C- 204
239-D	Materials & Methods of Construction with UHPC	Monday	1:00p - 3:00p	H-Regency C
239-E	Educational Outreach	Sunday	1:00p - 3:00p	H-Wolverine B

#### Sessions:

##### **UHPC – Innovations and Changes in Structural Design, Part 1 of 3** SUN, 10:30a to 12:30p C-JR Ballroom D

- *Employing Ultra High Performance and Ultra High Durability Concrete for a Novel Durability-based Concept and Design of Structures Exposed to Extremely Aggressive Environments: The Approach of the Horizon 2020 Project ReSHEALience – Liberato Ferrara*
- *Long Span Ultra High Performance Concrete Voided Slab – Maher Tadros*
- *Achieving High Strength, Ductility, and Durability in Flexural Members Reinforced with Fiber-Reinforced Polymer Rebars by Using UHP-FRC – Shih-Ho Chao*
- *UHPC an Alternative to Control End-zone Cracking in Prestressed Bridge Girders – Eduardo Torres*
- *Behavior of UHPC Encasing Steel H-pile Bridge Columns: Experimental Study – Mohamed ElGawady*
- *UHPC Link Slabs and Overlays – A Robust Combination – Gregory Nault*

##### **UHPC – Innovations and Changes in Structural Design, Part 2 of 3** SUN, 1:00 to 3:00p C-JR Ballroom D

- *Design and Implementation of a UHPC Vehicular Bridge in Canada – Don Gardonio*
- *Seismic Behavior of UHPC Segmental Column – Mohamed ElGawady*
- *UHPC Creep and Shrinkage Models to Estimate Long-Term Losses of Prestressed Girders – Alireza Mohebbi*
- *Low Shrinkage Architectural UHPC – Larry Rowland*
- *Framework for Structural Design with UHPC-Class Materials: Flexural Behavior and Design Methodology – Rafic El-Helou*

##### **UHPC – Innovations and Changes in Structural Design, Part 3 of 3** SUN, 3:30 to 5:30p C-JR Ballroom D

- *Reinforcement Anchorage and Bond-Slip Laws for UHPC Structures – Stavroula Pantazopoulou*
- *Effect of Fiber Reinforcement on the Tensile Behavior of Rebar Reinforced UHPC – Kay Wille*
- *Transitioning from Shear to Bending Failure of UHPC Beams: Fibers as the Key Factor – Tathagata Bhaduri*
- *Shear Performance of Pretensioned UHPC Girders – Gary Greene*
- *Experimental Evaluation of UHPFRC Beams with Longitudinal Reinforcement Designed at Balanced Strain Condition – Jorge Torres-Alamo*
- *Mechanical Properties and Failure Characterization of UHPC – Aashay Arora*

##### **123 Forum: Is Ultra-High Performance Concrete Necessary?** MON, 6:30 to 8:30p C-JR Ballroom B

- *UHPC: A Compelling Solution to a Wide Variety of Challenges – Zach Haber (for Ben Graybeal)*
- *UHPC: An Opportunity to reinvent Steel and Reimagine Concrete – JP Binard*
- *Taking Advantage of UHPC Properties: Role of Specifications – Kyle Riding*
- *Challenges in Performance Evaluation and Characterization of UHPC – Jan Vasahlik*
- *Advanced Concrete (UHPC) Pedestrian Bridges in Columbia – Byron Velasquez*