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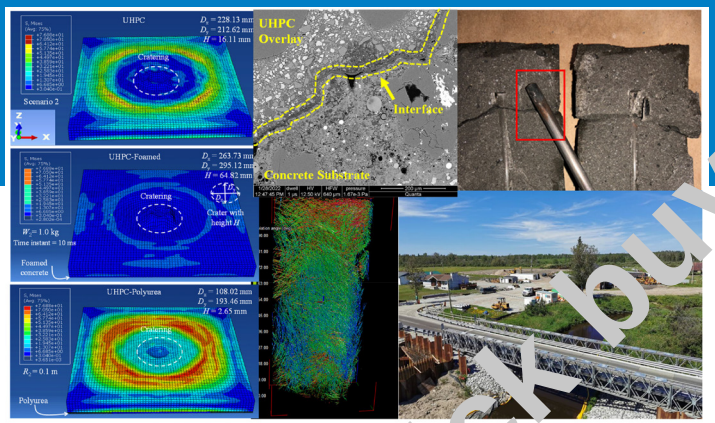

Developments, Applications, and Case Studies in UHPC for Bridges and Structures

Editors:
Yail J. Kim, Steven Nolan, and Antonio Nanni

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Ultra-high performance concrete (UHPC) is a state-of-the-art cementitious composite. Since the concept of this novel concrete mixture emerged in the 1990s, significant advancements have been made with numerous benefits such as high strength, flowability, high post-cracking tensile resistance, improved durability, reduced maintenance, and extended longevity. Currently, UHPC is employed around the globe alongside recently published practice guidelines. Although numerous research projects were undertaken to examine the behavior of UHPC-incorporated structures, there still are many gaps to be explored. Of interest are the development of robust and reliable mixtures and their application to primary load-bearing members for bridges and buildings, including various site demonstration projects that would promote the use of this leading-edge construction material. This Special Publication (SP) contains nine papers selected from three technical sessions held in the ACI Spring Convention in March 2022. All manuscripts were reviewed by at least two experts in accordance with the ACI publication policy. The Editors wish to thank all contributing authors and anonymous reviewers for their rigorous efforts. The Editors also gratefully acknowledge Ms. Barbara Coleman at ACI for her knowledgeable guidance.

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