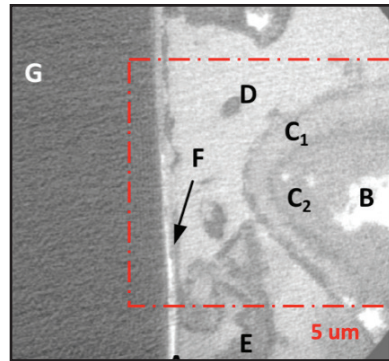
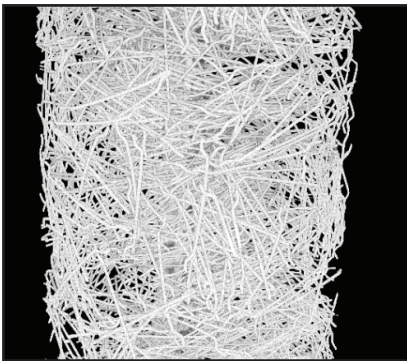


WEBINAR

Three-Dimensional Study of Concrete Microstructure using X-ray Computed Tomography



ABSTRACT

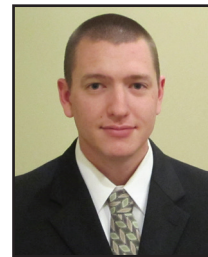
New technology has made it possible to create three-dimensional images of microstructure to better understand the performance of concrete. X-ray computed tomography (XCT) has been used to study phases — aggregate, paste, air bubbles, porosity and fibers — and discern crack propagation of samples under load. This webinar will feature recent research that explores how XCT can be applied to concrete materials over a range of scale that encompasses small cement grains on the low end to steel fibers and aggregates on the high end. XCT provides unprecedented opportunities: We can interrogate wet samples over time to observe hydration; we can study distribution of entrained air bubbles; we can load samples to study crack propagation and contrast HPC and OPC; we can investigate fiber reinforced materials to appreciate how fibers influence fracture. The research community is only beginning to appreciate how these powerful new techniques will lead to profound new knowledge about concrete materials.

Presented by:



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Monday, March 30

Time:

10 am - 11 am CST

Location:

317 Butler-Carlton Hall

RE-CAST