

# WEBINAR

## Recent Developments in: **Evaluating Pumping Behavior** of Flowable & Self-Consolidating Concrete

**DATE:** Wednesday, November 19, 2014

**TIME:** 1:00 PM CST

**LOCATION:** 213 Butler-Carlton Hall, Missouri S&T campus

Presented by:

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### ABSTRACT

In this seminar, the recent developments in evaluating pumping behavior of flowable and self-consolidating concrete (SCC) are discussed. First, a brief overview of the underlying physics of concrete pumping is given to introduce the participants to the concepts of friction, flow, hydrodynamic and hydrostatic pressure and the concept of the lubrication layer. Different techniques to assess the lubrication layer properties are then discussed, including tribology and different visualization techniques for the velocity profile. Using tribology, or by combining the rheological properties of the concrete and its constituent mortar and knowing the thickness of the lubrication layer, it is shown that pressure losses during concrete pumping can be successfully predicted. Finally, the influence of different mix design parameters on pumping pressures will be demonstrated.

