

CE 890 Graduate Seminar

- DATE:** October 22, 2008
- TIME:** 4:00 p.m. (refreshments served at 3:45 p.m.)
- PLACE:** Durland 1052
- SPEAKER:** Dr. Kyle Riding, Asst. Prof., Civil Engg. Dept., KSU
- TOPIC:** “Autogenous Deformation of Concrete”

ABSTRACT

Volume change in concrete is a major source of cracking and premature deterioration in concrete structures and pavements. These early age deformations are caused by temperature changes, drying shrinkage and autogenous deformation. Research was recently performed on quantifying early age volume change from autogenous deformation. An overview of concrete autogenous deformation mechanisms will be given, as well as some examples of early age cracking in concrete structures. A combination of chemical, free deformation, and restrained deformation experiments was used to relate the material properties to the early age volume change. The difference in autogenous deformation between different cementitious materials as well as the efficiency of mitigation methods were explored and will be discussed.