



COLLEGE OF ENGINEERING

SEMINAR ANNOUNCEMENT

“Structural Identification and Structural Health Monitoring of Bridge Structures”

Presenter: Matthew Yarnold, Assistant Professor, Civil and Environmental Engineering

Abstract

Bridge structures support vital arteries for national transportation systems and serve as lifelines across waterways and otherwise impassable terrain. They play a substantial environmental, social, and economic role in their respective regions. As a result, the state-of-the-art in bridge assessment and management is continually being advanced. In recent years field measurements have been leveraged through short-term and long-term methodologies such as structural identification (St-Id) and structural health monitoring (SHM), respectively. St-Id is a short-term mechanistic “characterization” of a constructed system through the correlation of simulation models and experimentally observed responses; whereas SHM is the practice of identifying and long-term performance tracking of a structure by measured data and analytical simulation. This presentation will briefly introduce each methodology along with research and applications performed by Dr. Yarnold. In addition, his on-going and future research in these areas will be discussed.

About the Speaker

Matthew Yarnold is a newly appointed assistant professor in the Department of Civil and Environmental Engineering at Tennessee Technological University. Dr. Yarnold began his career at Lehigh University where he received his BS and MS degrees in Civil Engineering (2003 and 2005, respectively). Following graduation he accepted a position as a bridge engineer for Ammann & Whitney, during which time he contributed to more than fifteen bridge design and rehabilitation projects along with obtaining his professional engineering license. In 2009 he returned to academia for pursuit of his PhD from Drexel University completing the degree requirements in March of 2013. Dr. Yarnold's research aims to further our understanding of bridge structures through advancements in structural identification and structural health monitoring.

Date: October 17, 2013 - Thursday

Time: 12 P.M. – 1 P.M.

Bring your own lunch; beverages and snacks to be provided.

Location: Prescott 225