



4th Annual Cal Poly Pomona Student RSCA Conference
March 4, 2016

University Library,

Oral Presentations from 12:45 to 5 pm

Bronco Student Center (Ursa Major),

Poster Session, Performance Presentation, and Reception from 4 to 6:30 pm

Lead Author: Emily Yu

Major: Civil Engineering

College: Engineering

Co-author(s): Not Applicable

Faculty Mentor(s): Dr. Rosa Vasconez, PE, LEED AP

Presentation Type: Oral Presentation

Project Title: Analysis of National Bridge Inventory (NBI) Data for California Bridges

Synopsis: Trends and correlations will be drawn from data analysis and statistical comparisons of the National Bridge Inventory, primarily focused on bridges in Southern California counties.

Abstract: The National Bridge Inventory (NBI), managed by the Federal Highway Administration (FHWA), is an untapped source of data that accounts for all the bridges and tunnels that are more than 20 feet in length within the United States. It records significant data regarding bridge properties which include: roadway classification, geographic location, age, material, structure type and others. Although the data has been studied briefly in some research, in depth analysis for specific states has not been performed. The objective of this research is to understand the NBI data structure and its limitations; retrieve, organize, and analyze bridge data, and provide meaningful information on bridge properties and performance. This research will focus on bridges in California, with an emphasis in Southern California counties around and including Los Angeles such as Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. Trends and correlations will be drawn from data analysis and statistical comparisons. It is expected that a correlation between bridge performance and its properties will be established. Relationships between bridge performance in California in terms of strength and serviceability will also be examined. The data for this analysis is provided by the NBI, which is available through the FHWA website, the National Bridges website, which is an online database search engine that is based on data from the NBI and information from the Department of Transportation for each state, and the Department of Transportation website.