UTC Safety Summit
Institute for Safety and Operations of Large-Area Rural-Urban Intermodal Systems (SOLARIS)

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Center of Advanced Transportation Education and Research (CATER)
University of Nevada, Reno (UNR)

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Venn Diagram
Contributing Factors to Crashes

Roadway: 34

Driver: 93

Vehicle: 13

3 27 57

3 6 1

3 3 3
Who We Are

The SOLARIS Institute is a consortium of five outstanding research and higher educational institutions located in the desert southwest uniquely qualified to address issues related to transportation safety, operations and infrastructure.

- University of Nevada, Reno
- University of Nevada, Las Vegas
- Arizona State University
- University of New Mexico
- Desert Research Institute
What We Do

- We focus our research on "Large Area Rural/Urban" issues specific to our tri-state area and substantial parts of the U.S. where a sparse network connects smaller cities and towns and also connects the denser networks in large cities.

- We promote intermodal transportation systems for efficient, safe, and economical movement of goods and people. Additionally, the tri-states have abundant solar and other renewable energy resources which could potentially be used as alternative energy sources for the transportation industry.
• **University of Nevada, Reno**

  • As the lead university, UNR has three premier tracks in transportation programs:
    • Transportation/traffic
    • Pavements/materials
    • Transportation Infrastructure

  • The Department of Civil and Environmental Engineering houses three research centers focusing on these three tracks:
    • [The Center for Advanced Transportation Education and Research (CATER)](#)
    • [The Western Regional Superpave Center (WRSC)](#)
    • [The Center for Civil Engineering Earthquake Research (CCEER)](#)
Education and Workforce Development

Our goals:

- Enhance existing transportation programs by including new course materials for large sparse rural-urban regions.
- Hold workshops, conferences, and continuing education courses that focus on advances in multi-modal infrastructure development, sustainability, and operations and transfer that new research knowledge to the public, industry, and academic communities.
- Hold summer camps, internship programs, and provide fellowships.
- Prepare students for careers in transportation and facilitate the placement of successful graduates in government, industry, and academic organizations.
- Technology Transfer

  • Our primary focus will be on peer-reviewed journal publications, presentations at national conferences, technical workshops, short courses, seminars, webinars, and collaboration with U.S. DOT/RITA research clusters.
Research

- SOLARIS focuses on applied research to produce methodologies and tools which can be readily implemented to tackle both long-standing and emerging transportation issues. Our three main research areas are:
  - Traffic Safety Data Management and Crash Mitigation
  - Technologies for Safe Traffic Operations and Management
  - Sustainable and Safe Transportation Infrastructure
Traffic Safety Data Management and Crash Mitigation

- Development of a Nevada Statewide Database for Safety Analyst Software
- SHRP 2 Naturalistic Driving Study Data Usage Guidance for Nevada
- NDOT SHRP 2 Implementation Assistance Program Project
Development of a Nevada Statewide Database for Safety Analyst Software

- Objectives:
  - Q/A pilot project data for accuracy and coverage
  - Build a database for all statewide Safety Analyst data
  - Acquire the remaining data outside the pilot project limits
  - Deliver the Safety Analyst to NDOT so they may employ Safety Analyst results statewide.
SHRP 2 Naturalistic Driving Study Data Usage Guidance for Nevada

Objectives:

- Guidance for selecting NDS data for highway safety analysis in Nevada.
- Guidance for obtaining different types of NDS data and related information from other data sources.
- Guidance for using NDS data to improve highway safety in Nevada.
NDOT SHRP 2 Implementation Assistance Program Project

- Objectives:
  - To answer the question of “How driver, vehicle, roadway and environmental features affect turning drivers seeing the conflicting pedestrians?”
  - To identify effective countermeasures
Contact information

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Venn Diagram

Contributing Factors to Crashes

Driver: 93

Roadway: 34

Vehicle: 173

34 27 4

3 6

3 1

3 26

57
Venn Diagram

Contributing Factors to Crashes

Roadway: 0

Driver: 18

Zero Fatalities

Drive Safe Nevada
Thank You

Questions?