

**Grants Development Office**  
California Polytechnic State University, San Luis Obispo  
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**Awards & Augmentations from 7/1/07 to 6/30/08**  
**College: Engineering**

PI/PD Name	GDO#	Sponsor	Project Dates	Award Date
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**Engineering**

**Mechanical Engineering**

**Birdsong, Charles      06-050      Transportation Research Board Transit Cooperative Research Program**

**Proposal**      Sensor Integration for Low-Cost Crash Avoidance

**Summary:** Pre-crash sensing is virtually required for significant improvements in truck safety. Avoiding accidents and dangerous situations is the only way to achieve a major reduction in crash-related injuries and fatalities. While several different sensor technologies have been proposed to meet this need, those that will provide enough information are cost-prohibitive even for commercial vehicle use. We propose to use an alternative approach – include several different low-cost sensors in a system with an integration algorithm to achieve more information than the sum of the parts. By balancing weaknesses of one type of sensor with the strengths of others, we can avoid these shortcomings. In addition, the response signals from different sensors on the same target will allow the system to determine the object type.

**Personnel:** Birdsong, Charles      Schuster, Peter  
Mech Engr                              Mech Engr

Project # 50020

01/07/08 - 03/06/09

12/20/07