PROJECT OVERVIEW REPORT

1. Center Identifying Number
   YI-RU0781-06

2. Project Title
   “Smart Bicycle”-based Safety Enhancement for Bicycle/Motorcycle Riding

3. Principal Investigator
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5. Project Description
   The bicycle/motorcycle is one of the widely-used transportation/recreation vehicles and an unstable platform. Comparing with passenger vehicles, active safety technology is less developed for bicycle/motorcycle systems and yet it is urgently needed. The project will build a theoretical and algorithmic foundation for the bicycle-based dynamic balance modeling and control for safety enhancement. Specifically, the Principal Investigator plans to develop (1) A human/bicycle/environment (HBE) interaction modeling scheme; (2) Human-centered active safety control; and (3) “Smart bicycle” systems design and testing.

6. Dates and Budget
   Start date: 1/01/2010
   End date: 5/31/2011
   Total Dollars: $25,000

7. Keywords
   Bicycle safety, transportation safety, passenger safety, smart bicycle