

A. Title Page

Attending a Traffic Accident Reconstruction Course for Vehicle Safety Design Research
Final Report

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B. Restatement of problem researched, creative work, or professional enhancement opportunity

Traffic accidents have become a serious social problem that threaten people and their property at an accelerating rate. In the United States, motor vehicle accidents are the leading cause of death for college age people.¹ Globally, traffic accidents are the second leading cause of death for young people between the ages of 18-25.² Astonishingly, road traffic accidents kill 1.2 million people each year and injure 50 million more.² In addition to the number of human lives affected, the financial impact on a society is significant. It is estimated that motor vehicle injuries account for 22% or \$89 billion of the total annual cost of injuries in the United States.³

The effects of vehicle accidents can be minimized by better educating/training of drivers, engineering safer trafficways, and designing safer vehicles. Vehicle safety design has made great strides during the last 20 years. Crumple zones, air bags, anti-lock brakes, and safety data recorders were direct results of control crash test and real-world accident investigations. With changing designs in automobiles (such as introduction of hybrid and all electric models) continued research is needed to make the next generation of automobiles is safe as possible.

In this professional enhancement proposal, the PI attended a course entitled “Traffic Accident Reconstruction 2”, hosted by Northwestern University. (Please note: the PI attended Traffic Accident Reconstruction 1 over the winter break and funded the project with personal funds) This course gave the PI new techniques to pursue a new area of research in vehicle safety design. Specifically, the PI would learn from this course: oblique Collisions, occupant kinetics, injury mechanisms, pedestrian accidents, pedestrian motion, vehicle damage, pedestrian injuries, braking capabilities, and speed from damage analysis.⁴

D. Summary of findings, outcomes, or experiences had.

I attended the conference April 28 – May 2, 2008 on the campus of Northwestern University and successfully completed the course (see attached certificate). Surprisingly, I met several engineers at this conference that work with attorneys and insurance companies during litigation of auto-accidents.

E. Conclusions and recommendations

In conclusion I have successfully completed a traffic accident reconstruction from Northwestern University. This professional development activity will aid in future research into vehicle safety design.

REFERENCES

1. Center for Disease Control, “Leading Causes of Death Annual Report”,
<http://webappa.cdc.gov>
2. World Health Organization, “Faces behind the figures: voices of road traffic crash victims and their families”, (2007)
3. Center for Disease Control, “The Incidence and Economic Burden of Injury in the United States”,
http://www.cdc.gov/ncipc/factsheets/CostBook/Economic_Burden_of_Injury.htm
4. Northwestern University Center for Public Safety course description website,
<http://nucps.northwestern.edu>



NORTHWESTERN
UNIVERSITY

Northwestern University Center for Public Safety

This is to certify that

Daniel Bullock

has successfully completed a forty-hour course

Traffic Accident Reconstruction II

Evanston, Illinois

April 28 – May 2, 2008

Dawn R Patten
Director, Accident Investigation Division

Richard T. Johnson
Executive Director, Center for Public Safety