Student Funding to Attend TRB Conference: Year Six

By

Dr. Michael D. Anderson
Department of Civil and Environmental Engineering
The University of Alabama in Huntsville
Huntsville, Alabama

Dr. Virginia P. Sisiopiku
Department of Civil, Construction, and Environmental Engineering
The University of Alabama at Birmingham
Birmingham, Alabama

Dr. Daniel S. Turner
Department of Civil, Construction, and Environmental Engineering
The University of Alabama
Tuscaloosa, Alabama

Prepared by

UTCA
University Transportation Center for Alabama
The University of Alabama, The University of Alabama at Birmingham, and
The University of Alabama at Huntsville

UTCA Report Number 08303
September 2009

UTCA Theme: Management and Safety of Transportation Systems
Student Funding to Attend TRB Conference: Year Six

By

Dr. Michael D. Anderson
Department of Civil and Environmental Engineering
The University of Alabama in Huntsville
Huntsville, Alabama

Dr. Virginia P. Sisiopiku
Department of Civil, Construction, and Environmental Engineering
The University of Alabama at Birmingham
Birmingham, Alabama

Dr. Daniel S. Turner
Department of Civil, Construction, and Environmental Engineering
The University of Alabama
Tuscaloosa, Alabama

Prepared by

UTCA

University Transportation Center for Alabama
The University of Alabama, The University of Alabama at Birmingham, and
The University of Alabama at Huntsville

UTCA Report Number 08303
September 2009
### Abstract

Students from the three campuses of The University of Alabama of System are engaged in a variety of transportation related research activities. This project intended to provide a forum for transportation students to present their research results to faculty and students from their home campuses as well as transportation professionals in a professional setting. The students selected to make presentations by faculty representatives from the three campuses were rewarded with travel money to cover the cost of attending the Transportation Research Board’s Annual Meeting in Washington D.C.
# Table of Contents

Table of Contents ........................................................................................................ iii  
List of Figures ................................................................................................................. iv  
Executive Summary ......................................................................................................... v  

1.0 Introduction .............................................................................................................. 1  

2.0 Selection of Students .............................................................................................. 2  

3.0 Student Seminar ..................................................................................................... 4  

4.0 TRB Attendance ..................................................................................................... 6  
   Comments from Student A .......................................................................................... 6  
   Comments from Student B .......................................................................................... 7  
   Comments from Student C .......................................................................................... 7  
   Comments from Student D .......................................................................................... 8  
   Comments from Student E .......................................................................................... 8  

5.0 Conclusions ............................................................................................................ 10
## List of Figures

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
<td>Announcement for UAH students</td>
<td>2</td>
</tr>
<tr>
<td>2-2</td>
<td>Students selected</td>
<td>3</td>
</tr>
<tr>
<td>3-1</td>
<td>Program for student seminar</td>
<td>4</td>
</tr>
</tbody>
</table>
Executive Summary

There were two issues examined in this project. First, students from the three University of Alabama campuses need the opportunity to present the results of their research in a professional forum. Second, students need the opportunity to attend international meetings to learn first-hand research work being conducted at other universities. This project addressed these issues by identifying deserving students and providing a forum to highlight their research work and a means to explore other research work being performed nationwide through attendance at the Transportation Research Board’s Annual Meeting.
1.0 Introduction

The issues examined in this project were twofold. First, there is a variety of quality transportation research currently being performed by undergraduate and graduate students from the three universities in the Alabama System. Unfortunately, no mechanism existed for students to present the results of their research to the other faculty members from either their home campus or the other campuses. The solution developed in this project was the development of a transportation student seminar hosted by the Institute of Transportation Engineers Student Chapter at The University of Alabama at Birmingham. Students from the three campuses were required to submit an original abstract and resume to faculty members from the three schools. The faculty members then formed a review board and selected those students who were invited to make a presentation at the technical session.

The second issue addressed in this proposal was the lack of funding to send some of the best students in Alabama to the Transportation Research Board’s Annual Meeting in Washington D.C. This meeting is one of the premiere transportation conferences in the world, attracting over 10,000 participants from around the globe. Attendance at this meeting enabled our students to experience, firsthand, the research topics being studied and the solutions to those topics. Attendance at this meeting represented an incredible opportunity for students from The University of Alabama System to learn about the future of transportation and how their education and research will help realize the future.

This project combined these two issues by awarding travel funds to students to attend the Transportation Research Board Meeting as a reward for being selected to present in the student seminar. This report is divided into five sections. The introduction presents the basis of the project. Section 2 discusses the selection and review process used to pick the students invited to present. Section 3 provides a review of the student seminar. Section 4 presents the impact from the students attending the TRB Annual Meeting. The final section of this report provides an overview of results and expectations for future projects.
2.0 Selection of Students

The initial task for this project focused on advertising and selecting the students to present at the seminar designed to highlight student research work. The advertising was accomplished through an announcement requesting students to submit an abstract of their potential research work for consideration of presentation at the student seminar. As an example, the announcement for UAH is shown in Figure 2-1. Copies of the announcement were distributed to each of the campus representatives for the project and they were responsible for placing these in locations the students would see them and generate interest.

![Figure 2-1. Announcement for UAH students.](image)

Each announcement requested that the appropriate on-campus representative collects abstracts and resumes. The two on-campus representatives who were not on the student’s home campus performed the reviews of the abstracts and resumes. This process was desirable in order to remove some bias from the reviews, as individual faculty who worked closely with students on projects, were not allowed to judge those same students. The reviews from the representatives were then forwarded to Dr. Anderson, summaries were developed, and letters of acceptance to present a paper or a poster at the conference were sent to the students.
Overall, 12 students submitted abstracts and resumes for the program (five from UA, four from UAB, and three from UAH). Based on the travel funds and seminar time available, nine students (three from each campus) were selected to brief summaries of their research at the seminar and receive funding to attend the TRB Annual Meeting. The remaining students were not invited to present and did not receive travel funds. The students selected are shown in Figure 2-2.
3.0 Student Seminar

The second task conducted in this project was to host a student seminar. The student seminar was developed and hosted by the Institute of Transportation Engineers (ITE) student chapter at The University of Alabama at Birmingham (UAB) and held on December 5, 2009 in the Business and Engineering Complex on the UAB campus, a location easily accessible to students and faculty from the three campuses, as well as representatives from around the state. The announcement for the student seminar, including presenters and presentation titles is included in Figure 3-1.

Figure 3-1. Program for student seminar.
The session was attended by approximately 23 people representing either faculty or students from the three campuses and employers from local transportation agencies.
4.0 TRB Attendance

The final task conducted in this project was to provide travel money to attend the Transportation Research Board’s Annual Meeting in January 2009 for students who were selected. Before attending the TRB Meeting, each student was responsible for preparing an itinerary of sessions and/or committee meetings they intended to participate and discuss these with their on-campus representative. In addition, each student attending the TRB Meeting was required to prepare a written summary of the sessions attended and the relationship between conference sessions and his or her current research or interest in transportation. Quotes from the student summaries are included in the following paragraphs:

Comments from Student A

This time I was able to present my research work on “The Effects of Initialization Time and Repetitions on the Accuracy of Simulation Results” at the session titled Doctoral Student Research in Transportation Operations and Traffic Control. It was a great experience for me to present before a large audience and address questions. I also attended the following sessions and meetings which were mainly related to my research:

- Role of Simulation in 2010 Highway Capacity Manual
- Signalized Intersections Subcommittee
- Highway Capacity and Quality of Service Committee
- Modeling Applications: Microscopic View
- Traffic Signal Systems Committee
- Highway Capacity Analysis for Intersections
- Assessing Performance of Traffic Signal Systems
- Highway Capacity for Freeways and Arterial Facilities
- Multimodal Arterial LOS Methodology to Evaluate and Plan Complete Streets
- Advances in Signal Timing, Optimization, and Management
- Travel Time Characteristics in Congested Networks

From these sessions/meetings I was able to keep myself updated with the current status and advances in the areas of traffic operation, highway capacity and simulation. At the poster sessions I met some of the authors. It was a good opportunity for me to ask specific questions to those authors whose research area matched with mine and their comments were really useful and helped me to shape
up my current research. My visit to the Exhibits was equally good in understanding the state of practice. I sincerely thank UTCA for providing me such a wonderful opportunity to participate in TRB 2009.

Comments from Student B

I attended a doctoral research in transportation modeling session and was able to learn new things in addition to strengthening my knowledge on some issues such as dilemma zone. In the afternoon, I attended the New and Young Attendees welcome session and was able to learn the diversified areas of researches conducted under TRB, and also in a small discussion group I was able to exchange ideas and meet people. In each day, I attended presentations, subcommittee and committee meetings and poster sessions involving the project I am working on “Transit Evacuation Planning” and was able to gather some updates on the status of other research projects on Carless Evacuation. On the last day, I attended the presentation on school bus safety belt studies and I was able to gather some information from the North Carolina study and from an Australian experience.

Some of the programs I attended are listed below:

- Evacuation Simulation, Modeling and Optimization
- Information for Special Circumstances and people with Special needs
- Emergency Evacuation Subcommittee
- Highway Capacity for Freeways and Arterial Facilities
- Motor Coach and School Bus Safety

Comments from Student C

I attended a number of Sessions and Committee Meetings. In addition to these I also attended a Poster Session, where a wide range of on-going research projects were on display. It was a one-stop-shop and I had the opportunity to interact with a number of researchers. This experience was very enlightening, arousing my interest in some areas and also helping me appreciate what research is currently going on especially in my areas of interest. Apart from these, I also went “window shopping” to see a bit of what was generally going on at the conference and made a few friends.

The railroad meetings have been particularly challenging, giving me a much wider perspective of the subject area. They also gave more insight into the current railroad research project that I am working on, helping shape some of my thoughts.
In a nutshell, the meeting was very enlightening, giving me a sense of belonging and appreciation of the larger Transportation Engineering family. The meeting has also helped deepen my interest in research and will in the long run help shed some of my fears and worries.

Comments from Student D

It was a good learning experience as far as my research point of view, which is the implementation of Active Traffic Management strategies specially the use of temporary shoulder lanes in the peak hours, by attending many poster sessions that discuss the recent research topics and have a chance to talk with presenters on their research and exchange contacts, as well as hearing questions and comments from the attendees. This opportunity will help me a lot in writing and adding more references in my thesis.

Comments from Student E

Railway research has always been an area of interest for me. I had been involved in two railway projects in my country and worked on planning and design of railway infrastructure. My country is a developing one and currently it is focusing on railway sector development.

As it satisfies my interest and is beneficial for my profession, I have attended a presentation screening the benefits of ITS in rail service. This is closely knit with my study as I had taken an ITS course in my last semester. The course involved application of ITS in efficient and safe operation of roadway vehicles in particular. Since, the course did not involve the application of ITS in railroad operation in an extensive manner, the subject presentation was an excellent supplementary learning resource for me. ITS can be beneficial in improving overall railroad system, and can divert more passengers from roadway. Thus it has the potential to reduce congestion, fatal roadway accidents, and CO₂ emissions. The knowledge I gained will certainly be useful as I plan to get involved in other railway projects after my study.

In addition, I attended safety poster sessions and marine safety presentations, although these are not completely relevant to my research area. I had the opportunity to acquire knowledge about the models that predict road accidents, injury severities and collision risks at port areas. Each model employed many different variables.

Finally, my visit provided financial support and greater ability to meet people from other originations, and to get to know new and relevant research projects.”
Overall, the students took advantage of the opportunity to learn from top researchers and identify how those research ideas can be incorporated into the student’s work.
5.0 Conclusions

This project worked toward the development of a community of students from the three campuses, highlighted the work students from the three are performing, and provided a means to explore other research work being performed nationwide.

The relevance of this project was far reaching. The project allowed students from the three campuses to compete against each other and present their research results in a professional forum attended by transportation professionals from across the state. In addition, this project allowed students to learn first-hand what research topics were being examined internationally through attendance at the TRB’s Annual Meeting. The students’ experiences and education gained through this project is anticipated to become evident in the completion of graduate level work being performed at the three campuses.