

Institute of Transportation Engineers

ANNUAL REPORT OF STUDENT CHAPTER ACTIVITIES

FROM: April 1, 2008 to March 31, 2009

STUDENT CHAPTER AT: Portland State University

1. STUDENT CHAPTER OFFICERS

President: Lisa Dierksen
Vice President: David Ruelas
Secretary: Rolando Melgoza
Treasurer: Josh Crain

Other:

Social Coordinator: Leah Tomlinson

2. STUDENT CHAPTER MEMBERSHIP

Number of Student Chapter members: 43

Number of Student members of Institute: Not tracked

Number of Students eligible to be a Student member of the Institute: Not tracked

Number of faculty members who are current ITE members: 3

3. INFORMATION ON TRANSPORTATION ENGINEERING ENROLLMENT

Number of undergraduate students (sophomore - senior years) in your academic department: 93

Full time: Not tracked **Part time:** Not tracked

Does your curriculum allow an undergraduate student to major or minor in Transportation?

Yes No: Not specifically listed, but students have the option to declare an emphasis.

Number of graduate students in Transportation: 49

Full time: Not tracked

(Includes the School of Urban Studies and Planning)

4. SUMMARY OF STUDENT CHAPTER ACTIVITIES

Attached

5. ROSTER OF STUDENT CHAPTER MEMBERS

Attached

Report submitted by: Rolando Melgoza

Email: stepinfo@pdx.edu

Contents approved by:

Name: Chris Monsere (Faculty Advisor)

Phone: 503.725.9746

Date: April 1, 2009

Please submit report to: Alyssa Reynolds, District 6 Student Initiatives Chair





ANNUAL REPORT CONTENTS

Overview.....	3
Summary of Student Activities	4
Acknowledgements	10
Roster of Student Chapter Members	11

OVERVIEW

The Portland State University ITE Chapter, Students in Transportation Engineering and Planning (STEP), strives to engage its members in relevant transportation issues to further their professional and academic development through its activities in 2008-2009. The chapter also sought to facilitate relationships between transportation students from different disciplines, both within PSU and with other universities, with a view toward building a shared understanding that would be helpful to students both in their academic studies and in practice.

At our welcome meeting in Fall 2008, we presented students with a list of activities for the fall term. The involved a mix of conferences, field visits, presentations from industry experts, and social events to strengthen chapter membership. The activities included all disciplines. The hope is to emphasize the collaborative efforts needed to resolve transportation issues. This winter, STEP took a tour of a new commuter rail facility built in Washington County between Beaverton and Wilsonville. The chapter felt that this trip would provide students with a good exposure to transportation issues faced by suburban portions of the region that students in Portland may be less apt to encounter. In previous years, the chapter toured Portland's Aerial Tram, an innovative transportation solution which has generated significant local controversy. The tradition of touring new transportation facilities before opening to the public will continue this fall 2009 when the chapter tours the new Metropolitan Area Express (MAX) Green Line.

The chapter had the largest number of participants in the Region X Student Transportation Conference held in Seattle, Washington. This conference is unique because it is organized and run exclusively by students. A professional panel was asked to identify the issues and new paradigms that transportation students should be thinking about as they begin their careers and offer students insights into how planners and engineers can most effectively collaborate.

The chapter has worked to bring more awareness about transportation to the university and to the local community. This is often done by projects such as Safe Routes to Schools or participating in the Engineering Discovery Showcase. In addition, the chapter invites transportation faculty and students from different departments and degree programs to present their research and findings. We hope to have a strong alumni attendance at a happy hour this spring, to help new students network and find summer internships.

STEP has also participated in data collection for ITE. This year, the chapter was awarded the data collection project for the IKEA big box store parking lot counts in Portland, Oregon.

The chapter has also continued several traditional events, including participation in the ITE Traffic Bowl. This year, the chapter won \$200 and the title of third place.

STEP is looking forward to completing the remaining activities scheduled for this academic year, bringing a new team of officers on board for the next school year, and beginning to plan for an exciting new year of activities.

SUMMARY OF STUDENT ACTIVITIES

Transportation Student-Faculty Happy Hour • April 2008

STEP hosted a happy hour for transportation students and faculty to kick off Spring term. The 20 or so students and faculty who attended enjoyed catching up with each other and took in the view of Mt. Hood on a beautiful Friday afternoon.

City of Portland Transportation Operations Center Tour • May 2008

STEP took a field trip to the PDOT Traffic Operations Center (TOC) in May 2008. Willie Rotich, an ITS Engineer at the City of Portland's Office of Transportation, gave STEP a tour of the TOC and talked about the applications, technology and operations involved within the center.



Parsons Brinckerhoff Office Visit • May 2008

Isabella Bejarano, a PSU graduate and Civil Engineer at PB, invited STEP to PB's Portland offices on Wednesday the 28th of May. The visit included a tour of the offices and presentations by practicing engineers on topics such as BRT, the "Road Diet" and Oregon statewide transportation modeling.

PSU Engineering Discovery Showcase • May 2008

The Intelligent Transportation Systems (ITS) Lab and STEP volunteered at the Engineering Discovery Showcase, an interactive event for prospective freshman and transfer students. It was held on May 16, 2008 in the Engineering Building Atrium. Students were given lab tours and learned about research and student life in the Maseeh College of Engineering and Computer Science program. STEP enjoyed talking with prospective students about transportation engineering.

STEP helps City of Portland with Safe Routes to School Program • June 2008

STEP members assisted the City of Portland with efforts to evaluate the Safe Routes to School program. Ten STEP members counted parked bikes at 25 participating Safe Routes schools during one of three weeks between May 12 and June 6. The results will be correlated with student surveys completed in class during the same week. STEP members plan to assist the City with the analysis over the summer.



STEP Active Participants in 2008 ITE Annual Meeting and Exhibit • August 2008

STEP members attended the 2008 ITE Annual Meeting and Exhibit in Anaheim, California. Students were able to interact with professionals from all over the country and learn about case studies that were divided into four categories; traffic engineering and design, safety, planning, management and operations, and conversation circles. Members also went on a special tour of the toll lanes on California State Route 91. This



congestion priced road is one of the country's few roads that generate enough revenue to fully pay all of its expenses. Dr. Christopher Monsere presented on the National Transportation Education Conference at the Current Practice in Professional Education and Training session. STEP was presented with the Student Chapter Web Site Award. STEP members had the opportunity to partake in Southern California attractions and enjoy nearby



Downtown Disneyland and Newport Beach. STEP would like to thank SALP and OTREC for their funding support. The picture on the left shows (from left to right)

Dr. Christopher Monsere, Chengyu Dai, Rolando Melgoza, Huan Li, Alex Bigazzi, Lisa Diercksen, and Leah Tomlinson.

STEP Welcome New Students to Maseeh College • September 2008

STEP participated in the MCECS orientation on September 25, 2008 to welcome new students. New students had the opportunity to learn about STEP and its many activities. This was also an opportunity to recruit new members with an interest in transportation.



STEP Hosts Transportation Student-Faculty Happy Hour • October 2008



On October 10, 2008, STEP hosted a happy hour for transportation students and faculty at the beginning of the new fall term. Around 20 students and faculty from different departments at PSU, including Urban Planning, Urban Studies, Civil Engineering, and Computer Science attended this friendly social event and enjoyed conversing with each other and having free dinner in addition to the views of Portland from the MCECS Dean's office.

STEP Participates in the last Bridge Walk • October 2008

What better way to tour "Bridgetown" than by bridge? Sharon Wood Wortman, author of *The Portland Bridge Book* led a "Bridge Walk" in Portland on Saturday, October 25, 2008. Students and faculty participated in the Bridge Walk and enjoyed learning more about Portland's bridges, visiting the Bridge Museum at ODOT and experiencing the Morrison Bridge during a test lift.



ITS Lab Students Participate in the 17th Annual Oregon ITE Student Traffic Bowl Competition • November 2008

ITS Lab students participated in the social event of the year for the Oregon Section of ITE - the 17th



Annual Traffic Bowl. The PSU team was made up of Alex Bigazzi, Leah Tomlinson, Rolando Melgoza, and Robert Acevedo. The team started off strong, winning the first round competition against Oregon State University and the Oregon Institute of Technology in the Jeopardy-style game. Similar to the fate of last year's Traffic Bowl, PSU's team tussled with University of Portland and the University of Washington in the



second round of competition. The Pilots of UP, the eventual winner, again brought the famed "Traffic Bowl" home. This year the Vikings of PSU won the title of 3rd place and a \$200 prize.

Active Participation in the Sixth Annual Region X Student Conference, University of Washington, Seattle • November 2008

PSU students participated in the Sixth Annual Region X Student Conference at the University of Washington – Seattle (UW) on November 7, 2008. Region X is a showcase for transportation research and education in the Pacific Northwest which includes the states of Washington, Oregon, Idaho, and Alaska. A total of 60 students from Northwest universities participated in the conference. PSU students



presented a total of 3 (of 10) presentations and 12 (of 16) posters. After an intense vote, Meead Saberi took home a \$200 prize for having the best presentation. Huan Li, Chengyu Dai, Rolando Melgoza and Nathan McNeil were also awarded for having the best posters. The each received an official UW thermos. PSU had the most participants in the poster competition. A summary of their involvement can be found below:



Presentations:

Adding Sustainability Metrics to a Transportation Data Archive (Green PORTAL), Alex Bigazzi
 Transition Features near Freeway Congestion, Wei Feng
 Evaluating the Data Accuracy of Loop Detectors in Adaptive Signal Control Systems, Meead Saberi

Posters:

Assessment of an Optimal Bus Stop Spacing Model Using High Resolution Archived Stop-Level Data, Huan Li

Using VISSIM to Solve a Bottleneck, Rolando Melgoza

Bike Boxes at Signalized Intersections, Nathan McNeil

Portland Streetcar Validation, Chengyu Dai

Portland Bicycle Rider Performance Study, Ryan Conrad, Nikki Wheeler

HSM Calibration Factors for Oregon, Kristie Gladhill

Rocky Mountain National Park Transportation, Todd Johnson

Reevaluation of the Mrytle Creek Adaptive Warning Curve System, Lisa Diercksen

Adding Sustainability Metrics to a Transportation Data Archive (Green PORTAL), Alex Bigazzi

Transition Features near Freeway Congestion, Wei Feng

Analysis the Factors Affecting Students Traveling Behavior, Meead Saberi

Does Weather Affect Traffic Flow on Freeways?, Meead Saberi

STEP Proposal Selected to Receive Funding for Data Collection Project from ITE District

6 • November 2008

STEP was one of a few selected groups chosen to receive funding for a data collection project. STEP will be collecting data at the Portland IKEA store located at Cascade Station near Portland International Airport. PSU alumnus, Matt Dorado, will serve as a mentor for the students. STEP officer Leah Tomlinson was main author of this proposal.

Active Participation in the Transportation Research Board's 88th Annual Meeting, Washington, D.C. • January 2009



Students and faculty from the Intelligent Transportation Systems Lab were very active at the Transportation Research Board's 88th Annual Meeting, held January 11-15, 2009 in Washington, D.C. Students and faculty presented a total of 14 peer-reviewed papers, and participated in committee meetings and other activities. Student travel

was partially supported by OTREC. Several conference attendees also spent one of the evenings at the OTREC reception.



While in Washington, D.C., STEP visited Congressman David Wu at his office after taking a tour of the United States Capitol. Students visited the congressman to express their appreciation to him for his enthusiastic interest and support of the ITS Lab and OTREC.

STEP Welcomes Prospective Students at Second Annual Engineering Discovery Showcase • January 2009

The Maseeh College of Engineering and Computer Science held the second annual Engineering Discovery Showcase on Friday January 23, 2009. Students staffed a



STEP table and led tours of the ITS lab. The Discovery Showcase is designed to be a fun, hands-on, interactive event for prospective secondary and high school students.

This was a great opportunity to meet PSU's engineering and computer science faculty and students, learn about the Maseeh College of Engineering and Computer Science Degree Programs, engage in interactive lab

tours and learn about innovative research opportunities, discover the many project opportunities for hands-on design and research.



STEP Previews Westside Express Service • January 2009

STEP members had the opportunity to preview the Westside Express Service (WES) prior to the official opening. The group of students and faculty rode the entire roundtrip stretching from the Beaverton Transit Center to Wilsonville. WES is different from other



transit systems because it is Oregon's first commuter rail service. In addition, WES has ticket vending machines that are card only and the trains also offer free wireless internet. WES connects to many bus lines at the transit center stops and connects to the MAX at the Beaverton

Transit Center. STEP would like to thank Trimet for the tour and the giveaways.



Kittelson & Associates, Inc. Career Presentation • February 2009

Brian Ray and Julia Knudsen of Kittelson & Associates, Inc. (KAI) presented information on transportation engineering and planning careers, on February 16th. KAI was founded in Portland in 1985. The corporate headquarters employs over 60 professionals who provide a full scope of transportation planning and traffic engineering services to clients throughout the Pacific Northwest and the rest of the country, spearheading projects as far away as Alaska and Texas. After the presentation, they stayed to discuss internship and full-time employment opportunities at KAI in a small group setting as well as individually. Snacks and beverages were also provided.



ODOT Career Info Session • February 2009

STEP welcomed Blake Dye, Stephen Hay and David Johnson from the Oregon Department of Transportation (ODOT) in the ITS Lab on February 3, 2009. They teamed up to deliver an informative presentation about 40 internship opportunities with ODOT. To develop the next generation of agency leaders,



ODOT has created programs for college students and recent graduates to gain meaningful experience through employment opportunities within the agency. Students may receive training and experience in areas throughout the organization beginning this summer. Training and experience in engineering disciplines include; construction project management, civil, environmental, geotechnical, hydraulic, structural, and traffic engineering.

Wavetronix Advance Detector Presentation • February 2009

STEP invited Tim Janes, Advanced Traffic Products Speaker, to visit the ITS Lab on February 2, 2009 to present about Wavetronix Advance Detectors. The Wavetronix Smart Sensors use the latest technology to collect consistently accurate traffic data in high definition. Using the Digital Wave Radar II patent, these smart sensors are able to measure traffic volume, individual vehicle speed, average speed, 85th percentile speed, average headway, average gap, lane occupancy, vehicle classification and presence. Refreshments were provided for attendees.

STEP Participates in Transportation Research Forum • March 2009

STEP members were active at the 50th Annual Transportation Research Forum, held in Portland, Oregon March 16-18, 2009. Several STEP members served as volunteers at conference sessions and also organized the very successful poster session.



Upcoming Activities

- Transportation Students, Faculty, and Alumni Happy Hour in early April to get acquainted or to reacquaint with familiar faces
- ITE Quad Conference, Victoria, B.C. About a half-dozen students plan to attend and/or present papers at the conference in late April.
- Assist in planning for the Region X 2009 Student Conference
- Visit the new Green MAX light rail line before the scheduled Fall 2009 opening

ACKNOWLEDGEMENTS

The Portland State University ITE Chapter, STEP, would particularly like to acknowledge ITE for its generous financial support of the student chapter and for its support of students in general. STEP would like to thank the following organizations and individuals for their enthusiasm, advice, and financial support:

- ITE Western District (6) and Oregon ITE
- OTREC (Oregon Transportation Research & Education Consortium)

- DKS & Associates
- Kittelson & Associates, Inc.

- Dr. Chris Monsere (Faculty Advisor)
- Dr. Robert Bertini
- Dr. Jennifer Dill

- K.C. Hall
- Nicole Bramen
- Sara Vandehey

- Suzanne Flores (Portland State University Student Group Advisor)

ROSTER OF STUDENT CHAPTER MEMBERS

The following chart shows the breakdown of STEP members who participated in at least one event in the 2007-2008 academic calendar year as of March 31, 2008. A complete list of active members, i.e. participating in at least one event, is provided below.

Faculty

Last	First
Bertini	Robert
Dill	Jennifer
Figliozi	Miguel
Gliebe	John
Monsere	Chris
Tufte	Kristen

Students

Last	First	Dept	Degree
Acevedo	Robert	CE	Undergrad
Alwakiel	Heba	CE	Masters
Amiton	David	USP	Masters
Bergman	Asa	USP	Masters
Bigazzi	Alex	CE	Undergrad
Chee	John	CS	Masters
Cibor	Cathy	USP	Masters
Conrad	Ryan	CE	Masters
Constantino	Daniel	USP	Masters
Crain	Josh	CE	Undergrad
Dai	Chengyu	CE	Masters
Delahanty	Ray	USP	Masters
Dickman	Dana	USP	Masters
Diercksen	Lisa	CE	Masters
Dong	Hongwei	USP	Masters
Eshel	Oren	USP	Masters
Fayed	Enas	CE	Masters
Feng	Wei	CE	Masters
Fernandez	Rafael	CS	PhD
Fletcher	Scott	Comp Sci Liberal Studies	Masters
Freeman	Nevin	USP	Undergrad
Gilbert	Mark	USP	Masters
Gladhill	Kristie	CE	Masters
Haggerty	Brendon	USP	Masters
Hangautner	Bryan	CE	Undergrad
Johnson	Todd	CE	Masters
Kaur	Harleen	USP	Masters
Kim	KiHong	USP	PhD
Li	Huan	CE	PhD

Luce	Justin	CE	Undergrad
Maher	Colin	USP	Masters
McNeil	Nathan	USP	Masters
Melgoza	Rolando	CE	Masters
Owings	Amanda	USP	Masters
Ping	Guo	CE	Masters
Ruelas	David	USP	Masters
Saberi	Meead	CE	Masters
Smith	Oliver	USP	Masters
Tomlinson	Leah	CE	Masters
Trout	Ian	CE	Undergrad
VanZerr	Mariah	USP	Masters
Wheeler	Nikki	CE	Masters
Wieczorek	Jerzy	STAT	Masters

Alumni

Last	First
Berkow	Mathew
Boice	Steven
Brandon	McVeigh
Chi	Delia
Dorado	Mathew
Horowitz	Jonathan
Horowitz	Zachary
Kapell	Hannah
Leary	Caroline
Lingley	Terra
Mahmud	Maisha
Oliveras	Damaris
Puppala	Sandeep
Stephens	Max
Thorwaldson	Lewis
Tipper	Ariana
Tufte	Kristin
Wolfe	Michael