

Institute of Transportation Engineers

ANNUAL REPORT OF STUDENT CHAPTER ACTIVITIES

FROM: June 1, 2010 to March 31, 2011

STUDENT CHAPTER AT: Portland State University

1. STUDENT CHAPTER OFFICERS

President: Adam Moore
Vice President: Carl Olson
Secretary: Courtney Slavin
Treasurer: Chengxin Dai
Social Chair: Sara Morrissey
Historian & Webmaster: Kristina Currans
Sustainability Co-Chairs: Eric Albright & Chris Muhs

2. STUDENT CHAPTER MEMBERSHIP

Number of Student Chapter members: 48
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: 219*

*Only includes junior and seniors because students are admitted as juniors

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: 35 in Civil Engineering and 90 in Urban Studies and Planning

Full time: Not tracked

4. SUMMARY OF STUDENT CHAPTER ACTIVITIES

Attached

5. ROSTER OF STUDENT CHAPTER MEMBERS

Attached

Report submitted by: Courtney Slavin

Email: stepinfo@pdx.edu

Contents approved by:

Name: Miguel Figliozi (Faculty Advisor)

Phone: 503-725-2836

Date: April 1, 2011

Please submit report to: Danielle Scharf, Western District Student Initiatives Chair



Portland State University ITE Chapter Students in Transportation Engineering and Planning



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OVERVIEW

The Portland State University (PSU) Student 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 yearly activities. The chapter has also seeks 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.

Portland State's STEP Chapter attended several conferences during the past year. Members from STEP attended and presented at the ITE Western District Annual Meeting in June of 2010, in San Francisco, California. Portland State was very well represented at the Transportation Research Board Annual Meeting in January of 2011, which was in Washington, D.C. In February of 2011, twenty students traveled to Corvallis, Oregon for the FHWA Region X Student Transportation Conference. This conference is unique because it is organized and run exclusively by students. In July 2011, students will attend the ITE Western District Annual Meeting, which is in Anchorage, Alaska. Through attendance at these conferences students have been able to share their research while learning about the latest research being done elsewhere, in addition to being great networking opportunities for members of STEP.

The chapter has continued several traditional events, including participation in the ITE Traffic Bowl. This year, the chapter won the title of first place for the region competition for the second year in a row and will be competing in the Western District traffic bowl in July. Our chapter also holds a social hour in the Engineering Building at the beginning of the term to encourage students to become involved and to hear about upcoming events, in addition to several bike rides to smaller social hours throughout the term. STEP members also hold an informal transportation-oriented discussion, debate and social night, titled "DrinX", in which members discuss and debate popular transportation related topics relevant to current events.

This year, the chapter started several new events that will be repeated in years to come. The Gingerbread Transit-Station Building Competition was successful and an ideal way to integrate our growing understanding of integrating mixed-land use, multi-modal transportation infrastructure in a pleasant and sugar coated format. This event proved to be an opportunity for engineering and planning students to show their creative sides and to work in teams with classmates. The Urban Olympics is scheduled for April 1st, 2011, which is a chance for engineers and planners to get to know each other outside of classes. The speaker series, which are scheduled for spring term will be continued next year as a way to give students the opportunity to meet representatives from companies and government agencies and to learn about projects.

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

ITE Western District Annual Meeting • June 4, 2010

Fifteen STEP members attended the 2010 ITE Western District Annual Meeting in San Francisco, California. Student attendees were able to communicate with professionals from thirteen western states and learn about case studies that were divided into four tracks: Operations, Planning & Sustainability, Alternate and Special Interest. Four students gave presentations at the conference and fielded posters. In the traffic bowl competition, four STEP members were selected as representatives of Portland State. After a series of intensive competitions, Portland State won first place. The following are the students that presented or had a poster at the conference.

Presentations:

- Nikki Wheeler: Analysis of the Impacts of Congestion on Freight Movements in Portland Metro Area
- David Ruelas and Nikki Wheeler: Using Time-Series Photography to Study Bicycle Parking Occupancy & Utilization in Portland, Oregon
- Ryan Conrad and Nikki Wheeler: A Statistical Analysis of Bicycle Rider Performance: The Impact of Gender on Riders' Performance at Signalized Intersections in Portland, Oregon

Posters:

- Alex Bigazzi: On-Road Vehicle Data Collection for Local Emissions and Air Quality Estimates



ITE Annual Meeting • August 8, 2010

Four STEP students traveled to Vancouver, BC to attend the 2010 ITE Annual Meeting and competed in the national traffic bowl. Though they didn't win, they took advantage of the large conference to attend sessions, network with their peers, and sightsee. Two STEP members even traveled to and from the conference by bicycle.



Fall Term Social Hour • October 6, 2010

STEP hosted a social hour for current and prospective transportation students as well as faculty to kick off the new academic year. About 40 students and faculty attendees enjoyed this gathering and took in the view of Mt. Hood from Portland State's Engineering Building on a beautiful Friday afternoon. The STEP President, Adam Moore, introduced the new officers, informed the attendees about STEP, and promoted upcoming events.



Green Facilities Bike Tour • November 5, 2010

Alice Meyers and Casey Cunningham from the City of Portland's Bureau of Environmental Services led eight STEP members on a bike tour around Portland to view green facilities. The tour started at the Urban Center at Portland State University and included OMSI, Rivers East, 12th and Clay, and the Ecoroof at Solterra Systems. Students learned about the history of Portland's green facility movement, current projects focused on managing storm water, and innovative uses of warehouse roofs in Portland's industrial district to gather electricity and rain water. This tour highlighted the importance of integrating roadway design with other elements of sustainability, allowing infrastructure to function as a system with its surroundings.



Peter Appel's Visit • November 12, 2010

OTREC hosted a visit with Peter Appel, the Administrator of the USDOT Research and Innovative Technology Administration. Students were invited to a presentation by Peter Appel for the launch of the Oregon Modeling Collaborative in the Engineering Building Atrium. Students had the opportunity to meet with Peter and share their research in a series of morning presentations. Peter Appel enjoyed the experience so much, he initiated a similar meet-and-greet between senior transportation officials and students at the TRB Annual Meeting two months later.

Traffic Bowl • November 18, 2010

Portland State competed in the Oregon ITE's William C. Kloos Traffic Bowl, which was held at McMenamins Edgefield in Troutdale, Oregon. This event tests students on transportation-based knowledge with Jeopardy-style questions. Competitors included teams from Oregon State University, University of Washington, University of Portland and Oregon Institute of Technology. The Portland State team consisted of Eric Albright, Brian Davis, Chris Muhs, and Mark Haines. After rigorous training from Coach Carl Olson, Portland State won first place. Twelve fellow STEP members attended to cheer on their team to victory for the second year in a row.



Gingerbread Transit Station Competition • December 3, 2010

STEP held the first annual gingerbread transit station competition at the end of fall term. Four teams of students pulled their attention away from human transit to focus on the needs of gingerbread people. The transit station building competition was a challenge in both creativity and design. Building with unknown structural property material turned out to be a difficult issue. Finally after strict assessment on buildings, bridges and pavement with extensive judging criteria, the Transit Wonderland team was crowned as the winner (shown in bottom right corner). STEP used this event to create a casual and relaxed environment for students to unwind from the stresses of term finals while networking with one another.





Winter Term Social Hour • January 19, 2011

STEP hosted a social hour for transportation students and faculty at the beginning of the new winter term. About 35 students and faculty attendees from Transportation Engineering departments and Urban Planning department attended this social event and enjoyed conversing with each other while learning about upcoming activities. Nine-feet of sub-sandwiches were devoured during this meeting.



90th Annual Transportation Research Board Meeting • January 23-27, 2011

The Transportation Research Board Meeting took place in Washington DC. Portland State University was well represented in poster sessions, workshops and presentations. Some STEP members participated in an organized bike share tour following the new infrastructure improvements around the Washington, D.C. area. Twenty-six students attended the conference and many of them attended the receptions, such as the OTREC and ITE ones. The following are the students that presented or had a poster at the conference.

Presentations:

- Nikki Wheeler: Multi-criteria Trucking Freeway Performance Measures in Congested Corridors
- Asa Bergman: Predicting Access Modes to Westside Express Service Commuter Rail
- Hongwei Dong: Forecasting the Location of New Housing in Integrated Land Use Models: Comparison of Three Approaches to the Developer's Perspective in the Portland Region

Posters:

- Lindsay Walker: Identifying Surface Transportation Vulnerabilities and Risk Assessment Opportunities Under Climate Change: Case Study in Portland, Oregon & Climate Action Plans and Long-Range Transportation Plans in the Pacific Northwest: Review of State of the Practice
- Wei Feng: Techniques to Visualize and Monitor Transit Fleet Operational Performance in Urban Areas
- Christine Kendrick: Impact of Bicycle Lane Characteristics on Bicyclists' Exposure to Traffic-Related Particulate Matter
- Adam Moore: Assessing Bicyclist and Pedestrian Exposure to Ultrafine Particles: Passive Shielding with Noise Barriers
- Alex Bigazzi: Analysis of the Relative Efficiency of Freeway Congestion Mitigation as an Emission Reduction Strategy & Motorists' Exposure to Traffic-Related Air Pollution: Modeling the Effects of Traffic Characteristics
- Jesse Boudart: Economic and Environmental Optimization of Vehicle Fleets: Case Study of Impacts of Policy, Market, Utilization, and Technological Factors





10th Annual Region X Conference • February 18, 2011

The 2011 ITE Region X Student Conference took place at Oregon State University in Corvallis, Oregon. Portland State University brought twenty students to the conference. Six STEP members choose to brave the weather warnings and bike 80-miles down and 92-miles to and from Corvallis, and they were rewarded with beautiful weather and riding both days--despite snow and storm warnings for the entire Willamette Valley. The conference started with a keynote speaker, Galen McGill, the ODOT ITS Director, who discussed statewide projects involving intelligent transportation systems. The students at Oregon State University were excellent hosts, providing three workshops in addition to the morning poster and presentation session. These workshops highlighted their new driving simulator, accessibility research and ODOT's work with bringing high-speed rail to Oregon. The great food and coffee kept students going all day long. The following Portland State students presented and submitted posters to the conference.

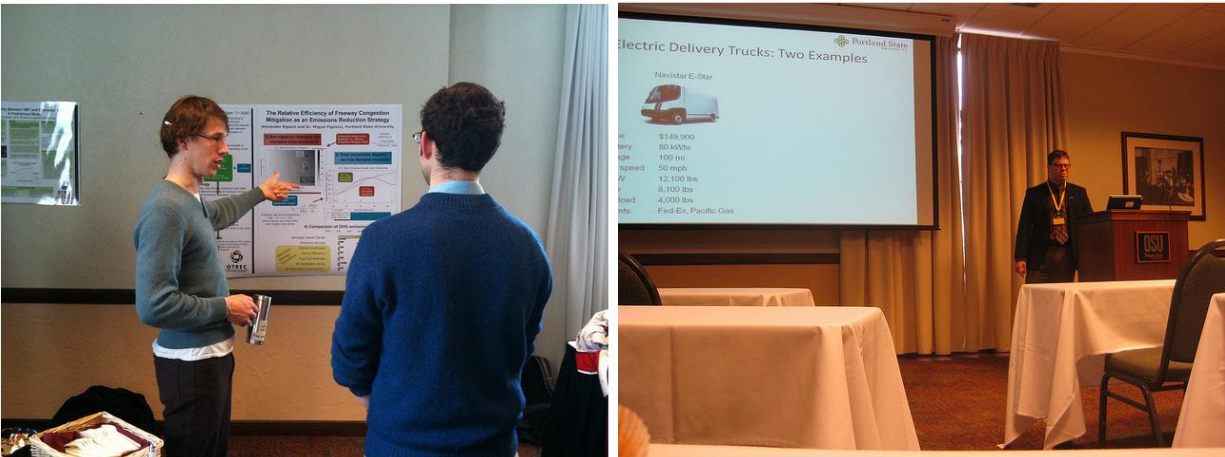
Presentations:

- Kaveh Shabani: Freight Transportation Modeling: Approaches, Issues and Data
- Jesse Boudart: Economic and Environmental Optimization of Vehicle Fleets
- Todd Johnson: A Safety Study: Pedestrian Actuated Traffic Signals
- Brian Davis: Modeling the Power Consumption and Cost of Electric Vehicles in Typical Portland, OR Routing Scenarios

Posters:

- Wei Feng: Using Archived AVL/APC Data to Identify Spatial-Temporal Distribution of Bus Bunching and Attributes
- Jesse Boudart: Economic and Environmental Optimization of Vehicle Fleets
- Adam Moore: Assessing Bicyclist and Pedestrian Exposure to Ultrafine Particles
- Justin Willard: The Effects of Weather on Bicycle Ridership in Portland
- Kaveh Shabani: A Statistical Study and Comparison of Freight Trends in Oregon and the U.S.
- Alex Bigazzi: Congestion Mitigation as an Emissions Reduction Strategy

Brian Davis won the Best Presentation Award and Alex Bigazzi received the Best Poster Award as voted by the students that attended the conference, as shown below.



Happy Hour for Prospective Graduate Student Visit • March 4, 2011

During the new orientation for potential graduate students at Portland State University, STEP hosted a happy hour at a local brewery after a long day of Portland and PSU tours and introductions. As with most casual STEP events, the happy hour began with a walk-pool and bike-pool leaving from the engineering building, and ended with great conversation about all that the university, city and state has to offer. This provided a casual environment for the prospective students to take the opportunity to learn about the program at Portland State and STEP from current students.

Upcoming Activities

Spring Term Weekly Speaker Series • Wednesdays, Spring of 2011

During spring term there will be a speaker each week from local private companies and government. The first two that are scheduled include DKS Associates and ODOT. This is an opportunity for students to learn about recent projects in Portland and be exposed to an understanding of the transition between academic life and industry. Attendance for undergraduates is highly encouraged during this event in order to expose them to potential opportunities in industry and local government.

Urban Olympics • April 1, 2011

This event is a collaboration between STEP and the Portland State's Planning Club. The events include an urban infrastructure Scavenger Hunt, a Human-Streetcar and Relay Race, an Urban Planning and Engineering "Nerd" Trivia, Dizzy-bat Kickball Competition and an "Olympic"-themed bike parade ending at a local park for a barbeque. Fifty students and potentially some faculty are expected to participate in teams of two to compete for various prizes representing their individual teams, but also their loyalty to their department.

Spring Term Social Hour • April 7, 2011

Similar to past social hours, this one will highlight the upcoming events, summarizing and reminiscing the most recent events and announcing future conference opportunities available and awards recently received. Social hours are an excellent opportunity to blend students and faculty, graduates and undergraduates, and engineers and planners. Students will gather for an afternoon of socializing, Hot Lips pizza and organic soda. This event provides students with the opportunity to meet other STEP members, learn about what their classmates are working on, and enjoy some delicious local food!

Bake Sale • April 22, 2011

In an attempt to showcase the incredibly talented baking skills of this chapter's students, STEP will be hosting a bake-sale to raise money for the purchase of bicycle related equipment to be used by STEP members. Cupcakes, coffee cake and brownies will fill the Engineering Building atrium in an effort to raise some small funds to purchase additional bike equipment for the STEP students. Bike racks, a bike stand and additional tools available will be among purchased items.

Fremont Bridge Tour with Oregon Department of Transportation • May 24, 2011

For all participating Urban Olympia's representing the Engineering Department, a lottery will be created for a limited number of STEP members to climb the Fremont Bridge in Portland and get a tour from ODOT. Few people ever have the opportunity to climb the Fremont Bridge Arches, and this opportunity is an excellent reward for the participation and patriotism shown by STEP members during the Olympics.

Western District ITE Annual Meeting • July 10-13, 2011

The conference will be held in Anchorage, Alaska. Ten states will be represented including: Alaska, Arizona, California, Colorado, Hawaii, Montana, Nevada, Oregon, Utah and Washington. This is a chance for Portland State students to share their research and learn about what other students are doing. STEP is looking forward to cheering on their team at the next round of the traffic bowl competition, the ITE District traffic bowl.

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

- DKS & Associates
- Oregon Department of Transportation

- Dr. Miguel Figliozzi (Faculty Advisor)
- Dr. Chris Monsere

- 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 2010-2011 academic calendar year as of March 31, 2011. A complete list of active members, i.e. participating in at least one event, is provided below.

Last Name	First Name	Department	Degree
Abercrombie	Nathan	CE	Undergrad
Albright	Eric	CE	Masters
Anderson	Gina	USP	Masters
Bigazzi	Alex	CE	Masters
Boren	John	USP	Masters
Boudart	Jesse	CE	Masters
Broach	Joseph	USP	PhD
Conrad	Ryan	CE	Masters
Currans	Kristina	CE	Masters
Cutter	April	USP	Masters
Dai	Chengxin	CE	Masters
Davis	Brian	CE	Masters
Dong	Hongwei	USP	PhD
Edgar	Liz	CE	Undergrad
Eshghi	Mahsa	CE	Masters
Farley	William	CE	Masters
Feng	Wei	CE	PhD
Gladhill	Kristie	CE	Masters
Gwinn	Jesse	CE	Undergrad
Haines	Mark	CE	Undergrad
Hangartner	Bryan	CE	Masters
Hills	Travis	CE	Undergrad
Hostetler	Krissy	USP	Masters
Johnson	Todd	CE	Masters
Karra	Teja	CE	PhD
Kendrick	Christine	Env. Science	PhD
Khoya	Ali	CE	Undergrad
Kothuri	Sirisha	CE	PhD
Lee	Ben	CE	Undergrad
Lind	Emily	CE	Undergrad
Ma	Liang	USP	PhD
Monsef	Kouros (Sam)	CE	Masters
Moore	Adam	CE	Masters
Morrissey	Sara	USP	Masters
Muhs	Chris	CE	Masters
Najafi	Zhubin	CE	Masters
Nave	Jim	CE	Undergrad
Olson	Carl	CE	Masters

Robinson	Andrew	CE	Undergrad
Ruelas	David	USP	Masters
Sax-Barnett	Melelani	CE	Certificate
Sarkar	Shreemoyee	Comp. Science	Masters
Shabani	Kaveh	CE	PhD
Slavin	Courtney	CE	Masters
Smith	Oliver	USP	PhD
Sprague	Lucas	CE	Undergrad
Steinberger	Alex	USP	Masters