

# Institute of Transportation Engineers

## ANNUAL REPORT OF STUDENT CHAPTER ACTIVITIES

**FROM:** June 1, 2012 to March 31, 2013

**STUDENT CHAPTER AT:** Portland State University

### 1. STUDENT CHAPTER OFFICERS

**President:** Sam Thompson  
**Vice President:** Patrick Singleton  
**Secretary:** Zef Wagner  
**Treasurer:** Nick Foster  
**Professional Development Director:** Katie Bell  
**Website/Blog Manager:** Kirk Paulsen  
**Events Coordinator:** Kathryn Doherty-Chapman

### 2. STUDENT CHAPTER MEMBERSHIP

Number of Student Chapter members: 50  
Number of Student members of Institute: 18  
Number of Students eligible to be a Student member of the Institute: Not tracked  
Number of faculty members who are current ITE members: 4

### 3. INFORMATION ON TRANSPORTATION ENGINEERING ENROLLMENT

**Number of undergraduate students (sophomore - senior years) in your academic department:** 198\*

\*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:** 30 in the Civil Engineering Department and 25 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:** Zef Wagner

**Email:** psustep@googlegroups.com

**Contents approved by:**

**Name:** Miguel Figliozzi (Faculty Advisor)

**Phone:** 503-725-2836

**Date:** April 1, 2013

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

# Portland State University ITE Chapter: Students in Transportation Engineering and Planning (STEP)

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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 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 will be helpful to students both in their academic studies and in professional 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 2012, in Santa Barbara, California. Portland State STEP also had presenters and attendees at the Transportation Research Board Annual Meeting in January of 2013, which was in Washington, DC. Additionally, Portland State STEP hosted the Region X Student Transportation Conference in November of 2012 and hosted 94 attendees. This conference is unique because it is organized and run exclusively by students. In July 2013, students will attend the ITE Western District Annual Meeting in Phoenix, Arizona. 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 annual events, including participation in the Oregon ITE Traffic Bowl. This year, the chapter came in first place for the region competition. Our chapter also holds a social hour at the beginning of each term to encourage students to become involved and to hear about upcoming events. Another annual event is the Gingerbread Competition, now in its third year. The event was a great success and was a fun way to bring out creativity in engineering design. This event was a wonderful way for engineering and planning students to work in teams and take a break from studying for finals. The Urban Olympics event is scheduled for April 5<sup>th</sup>, 2013, which everyone has been eagerly anticipating since last year's event. The events for the competition will change this year, but it will remain a great way for engineers and planners to get to know each other outside of classes.

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 24-27, 2012

PSU students were active at this year's ITE Western District Annual Meeting, held in Santa Barbara, California. Eight students attended the meeting and presented their research.

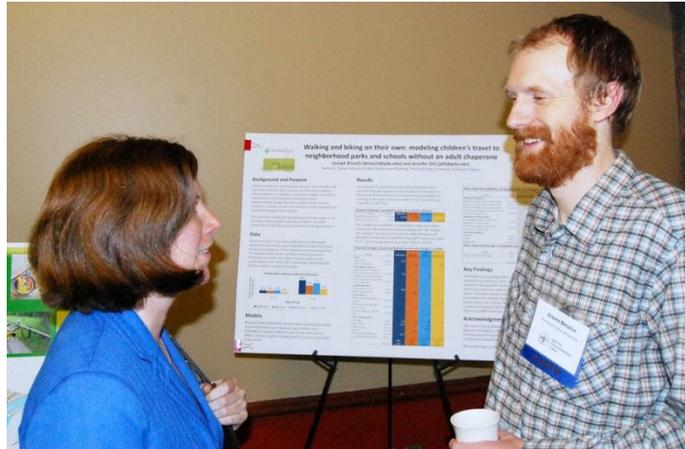


### Oregon Transportation Summit • September 10, 2012

Several students participated in this conference hosted by the Oregon Transportation Research and Education Consortium (OTREC) in partnership with several other transportation organizations. This event included a plenary session, poster sessions, workshops and a luncheon. The summit was held on campus at Portland State University. 13 PSU students, most of them active STEP members, brought posters to share with fellow summit attendees. The following is a list of the students and their posters:

- Eric Albright - Schedule Recovery for Late Buses: What Are Individual and Joint Contributions of Transit Signal Priority and Bus Operator Behavior?
- Katie Bell - Evaluation of Smart Phone Weight-Mile Truck Data for Supporting Freight Modeling, Performance Measures and Planning
- Sarah Bronstein - Complete Streets Policies in Transportation Disadvantaged Communities: Lessons from U.S. Case Studies
- Joseph Broach - Modeling Children's Independent Walk and Bike Travel to Parks and Schools
- Kristina Currans - Adjusting ITE's Trip Generation Handbook for Urban Context
- Steven Gehrke - Application of Geographic Perturbation Methods to Residential Locations in the Oregon Household Activity Survey: Proof of Concept
- Tara Goddard - Psychology and Voluntary Travel Behavior Change: Is Research Guiding Practice?
- Jennifer Koch - Assessing Public Transportation Agencies' Climate Change Adaptation Activities and Needs
- Adam Moore - School Commute Air Quality: Understanding Variation in Pollutant Exposure for Students Traveling to School by Auto, Bus or Walking
- Sara Morrisey - Consumer Behavior and Travel Choices: A Focus on Cyclists and Pedestrians

- Patrick Singleton - Pedestrians in Regional Travel Demand Forecasting Models: State of the Practice
- Oliver Smith - Well-being of Portland Commuters: Untangling the Influences
- Sam Thompson - Bicycle-Specific Traffic Signals: Results from a State of the Practice Review



### Fall Term Social Hour • October 5, 2012

STEP hosted a social hour for current and prospective transportation students as well as faculty to kick off the new academic year. About 35 students and faculty attendees enjoyed this gathering in the ITS lab in Portland State's Engineering Building. The STEP President, Sam Thompson, introduced the new officers, informed the attendees about STEP, and promoted upcoming events. Officers from Urban Planning Club also attended, and talked about their upcoming events as well.



### **Kittelson & Associates Brown Bag • October 31, 2012**

STEP and Urban Planning Club co-hosted a brown bag discussion with representatives from local consulting firm Kittelson & Associates entitled “Careers, Business Models, and You.” The event was held in the ITS lab in the PSU Engineering Building and was attended by 11 students.

### **Oregon ITE Traffic Bowl • November 15, 2012**

Portland State competed in the Oregon ITE’s William C. Kloos Traffic Bowl, which was held at McMenasins Edgefield in Troutdale, Oregon. This event tests students on transportation-based knowledge with Jeopardy-style questions. Competitors also included teams from Oregon State University, University of Oregon, Cal Poly Pomona, University of Washington, University of Portland, and Oregon Institute of Technology. The Portland State team consisted of Kirk Paulsen, Sam Thompson, Nick Foster, and Alex Bigazzi. After a tough competition, Portland State came in first place, with University of Washington and Oregon State University taking second and third place, respectively.



### **10<sup>th</sup> Annual Region X Student Transportation Conference • November 16, 2012**

The 2012 Region X Student Transportation Conference took place at Portland State University and was very well-attended. There were 94 attendees, including students from Cal Poly Pomona, Oregon State University, University of Oregon, University of Utah, University of Washington, Washington State University, and Portland State University.

After a short introduction by STEP President Sam Thompson, the conference started with a panel of distinguished transportation professionals in the Portland area speaking about their experiences. The panel consisted of: Wayne Kittelson from Kittelson & Associates; Tom Kloster from Metro; Jason Tell from the Oregon Department of Transportation; and Mia Birk from Alta Planning & Design. The panel took questions from Sam Thompson and from the audience, and focused on discussing their own career paths and the various challenges they had faced and overcome.

The morning also included four student presentations:

- Pat Marnell (OSU): "Permissive Left Turn Behavior at the Flashing Yellow Arrow in the Presence of Pedestrians"
- Kristi Currans (PSU): "The Development and Application of the Household Travel Survey Urban Context Adjustment (HTS UCA) to ITE's Trip Generation Handbook Vehicle Trip Estimates"
- Oliver Smith (PSU): "Commute Well-Being among Bicycle, Transit, and Car Users"
- Nicholas Meltzer (UofO): "When Engineers Become Planners: Disaster Response to Extreme Events"

After the student presentations, there was a poster session that allowed students from various schools to show their research and answer questions from attendees. The poster presentations were:

- Hagen Hammons - University of Oregon - The Tangi Trail: A Rail-"with"-Trail Vision for South Louisiana
- Joe McAndrew - University of Oregon - LiveMove: Student Driven Change Transforming Campus and Community
- Joshua Swake - Oregon State University - Fuzzy Logic for Improved Dilemma Zone Identification: A Driving Simulator Study
- Katherine Bell - Portland State University - Evaluation of Smart Phone Weight-Mile Tax Truck Data for Supporting Freight Modeling, Performance Measures and Planning
- Molly Bacon and Allison Camp - University of Oregon - Western Europe Active Transportation Takeaways
- Patrick Singleton - Portland State University - Data Cleaning in Activity and Travel Surveys: A Methodology Applied to Walk Trips
- Sara Thompson - Portland State University - Bicycle-Specific Traffic Signals: Results from a State of the Practice Review
- Tianxing "Walker" Cheng - University of Washington - Dexter Avenue/7th Avenue Conceptual Design

Over lunch, students watched a live video feed of the OTREC Transportation Seminar. The speaker was Ken Zatarain, Director of Service Planning and Scheduling at TriMet, the Portland metro area transit agency. He presented on the topic of Transit Scheduling & Routing Data Applications.

The afternoon breakout sessions consisted of four different tours:

- *Play Nice - Interactions with Bikes and Freight:* This tour explored examples in which bikes and freight have had to find ways to successfully worked together. Students toured the Central Eastside Industrial District (with Bob Hillier, PBOT Freight

Transportation Planner) and Swan Island (with Lenny Anderson, Swan Island Business Association).

- *Building Bridges*: This was a guided construction tour of the new multi-modal transit bridge, which will one day carry light rail, streetcars, buses, pedestrians, and cyclists on a dedicated facility with no cars allowed. Guides from TriMet were on hand to explain the complex in-water construction process and discuss the choice to build Portland's first cable-stayed bridge. Then students toured the new Sellwood Bridge, currently being constructed alongside the unsafe and narrow 1925 span.
- *Designing for Bikes - Bike Tour*: This was a bike tour of some of the interesting parts of town that display the engineering/planning decisions specifically built for bikes.
- *Accessibility for ALL*: This was a walking tour, focusing on the needs of the most vulnerable users (those that are hard of hearing, blind, use wheelchairs, etc.) within the transportation system. Students visited TriMet's Paratransit Assessment Center, observed and discussed pedestrian improvements and had leaders in this area of study talk with the group along the route.

### Gingerbread Bridge Competition • December 3, 2012

STEP held the third annual gingerbread transit station competition at the end of fall term. Four teams of students, staff, and faculty worked to build a streetcar and associated transit-oriented development made out of gingerbread and candy. The competition was a challenge in both creativity and design. Several judges helped select the one that they felt met the criteria, crowning one and only one team as the winner. The streetcars are shown below with their corresponding team members.



### **Winter Term Social Hour • January 8, 2013**

STEP hosted a social hour for transportation students and faculty at the beginning of the new winter term. 43 students and faculty attendees from the Engineering and Urban Planning departments attended this social event and enjoyed conversing with each other while learning about upcoming activities. The meeting focused mainly on plans for the upcoming Transportation Research Board Meeting, including business cards and pre and post-TRB events. STEP Officers also previewed several upcoming events and ideas, and gauged the level of interest in these events through sign-up sheets.



### **92nd Transportation Research Board Annual Meeting • January 13-17, 2013**

The Transportation Research Board Meeting took place in Washington DC. Portland State University was well represented in poster sessions, workshops and presentations. Dozens of students attended the conference. For many students, this was their first time attending TRB. This proved to be a huge opportunity for STEP members to share their research, learn about other research being done all over the world, and network with transportation students and professionals.

### **Post TRB Aftershock • January 29, 2013**

Students and area professionals met at the Lucky Labrador in NW Portland to discuss and share stories about TRB's annual meeting. Students had the opportunity to showcase the research presented at TRB to local professionals who were unable to attend the conference. Conference attendees wore "Ask me about TRB" buttons so that those who did not attend the Washington DC conference knew who to go to for a conference summary. All in all, over 40 students and professionals showed up to swap stories, network, and participate in discussions about current transportation issues.



### **Social Hour to Welcome New Students • March 8, 2013**

Students and faculty attended happy hour with the prospective graduate students at Saucebox in downtown Portland. This provided an opportunity for the prospective students to get to know the current students and faculty. After a full day of tours and presentations, the prospective students were happy to relax over appetizers and get to know more about the transportation engineering and planning programs at Portland State University.

### **Upcoming Activities**

#### **Urban Olympics • April 5, 2013**

This annual event is sponsored by STEP and Portland State's Planning Club. The day will start off with the opening ceremony, will include an urban triathlon, and will end the night with a barbeque at a park. Fifty students and 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 and Transportation Film Night • April 10, 2013**

Similar to past social hours, this one will highlight the upcoming events and reminisce about the most recent ones. Additionally, future conference attendance and funding guidelines will be discussed. Social hours are an excellent opportunity to blend students and faculty, graduates and undergraduates, and engineers and planners. We will also be hosting a transportation-themed anthology of vintage film clips, presented by local film archivist Dennis Nyback.

#### **Jarrett Walker Lecture • April 15, 2013**

Renowned public transit expert and professional consultant Jarrett Walker will present a public lecture sponsored by STEP.

**Moody Cycle Track Tour • April 18, 2013**

STEP members will be led by DKS Associates on a tour of the Moody Avenue Cycle Track in the South Waterfront neighborhood of Portland.

**Western District ITE Annual Meeting • July 14-17, 2013**

PSU faculty and students are making preparations to attend the ITE Western District Annual Meeting, which will be held in Phoenix, Arizona. The conference will consist of technical sessions, poster sessions, tours, and the traffic bowl competition. Many STEP members have already had their presentation or posters accepted for the conference. STEP is looking forward to attending this annual conference.

## **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 2012-2013 academic calendar year as of March 31, 2013. A complete list of active members, i.e. participating in at least one event, is provided below.

CE: Civil Engineering

USP: Urban Studies and Planning

CS: Computer Science

<b>Last Name</b>	<b>First Name</b>	<b>Department</b>	<b>Degree</b>
Ahillen	Michael	USP	Masters
Albright	Eric	CE	Masters
Banuelos	Ricardo	USP	Masters
Bell	Katie	CE	Masters
Bennett	Tom	CE	Undergrad
Bigazzi	Alex	CE	PhD
Bussey	Stefan	CE	Undergrad
Clifton	Kelly	CE	Faculty
Currans	Kristi	CE	Masters
Dai	Chengxin	CE	Masters
Doherty-Chapman	Kathryn	USP	Masters
Feng	Wei	CE	PhD
Figliozi	Miguel	CE	Faculty
Foster	Nick	CE	Masters
Haines	Mark	CE	Undergrad
Hamilton	Rebecca	USP	Masters
Huddleston	Amy	CE	Undergrad
Johnson	Pam	CE	Undergrad
Jordan	Brooke	USP	Masters
Kothuri	Sirisha	CE	PhD
Mayberry	Salim	CE	Post-Bacc
Monsef	Sam	CE	Masters
Monsere	Chris	CE	Faculty
Moore	Adam	CE	Masters
Muhs	Chris	CE	Masters
Paulsen	Kirk	CE	Masters
Singleton	Patrick	CE	Masters
Slavin	Courtney	CE	Masters
Thompson	Sara	CE	Masters
Tufte	Kristin	CS/CE	Faculty
Wagner	Zef	USP	Masters
Warr	Jacob	USP	Masters