

## 1.0 Introduction

After long years of inactivation, the Institute of Transportation Engineers Student Chapter at University of Waterloo (UW ITE Student Chapter) was finally re-established in June 2002. The student chapter's activities have focused on introducing transportation engineering to undergraduate students and to encourage them to specialise in transportation engineering. We have also had a goal of interacting with members of the transportation industry (i.e. government, consulting companies), and sharing ideas for the advance of transportation studies in Canada.

UW ITE Student Chapter is a student organisation established by graduate students from the Transportation Systems Research Group (TSRG). TSRG is one of the most active student organisations within the Department of Civil Engineering at the University of Waterloo.

The mandate of the UW ITE Student Chapter includes but not limited to the following:

- Promote transportation engineering;
- Enhance the knowledge of transportation engineering through student chapter events, such as field trips, guest speakers and conference attendance;
- Provide opportunities for networking with transportation professionals.

Our annual report includes the detailed discussion on the programs and activities organised by the UW ITE student chapter, as well as the experience and difficulties encountered throughout the year.

## 2.0 UW ITE Student Chapter Officers & Members

Due to the short existence of the UW ITE Student Chapter since the re-establishment, the student chapter only consists of 5 officers. Nixon Chan, President of the chapter, has initiated the re-establishment of the chapter and volunteered to occupy multiple positions. The following is a list of the UW ITE student chapter officers. Table 1 summarised the membership status of the chapter as of March 20, 2003.

### Student Chapter Officers:

Advisor:	Dr. Bruce Hellinga, PEng. (Associate Professor)
President:	Nixon Chan (M.A.Sc. Candidate)
Vice President:	Vacant
Secretary:	Chris Lee (Ph.D. Candidate)
Treasurer:	Ryan McNally (M.A.Sc. Candidate)
Program Director:	Nixon Chan (M.A.Sc. Candidate)
Membership Director:	Nixon Chan (M.A.Sc. Candidate)
Webmaster:	Chris Lee (Ph.D. Candidate)
Undergraduate Representative:	Mary Kang (4 <sup>th</sup> Year Undergraduate Student)

UW currently has five undergraduate civil engineering classes for a total of 401 students and there are also 26 graduate students in the TSRG. There are a total of 93 students who signed up as Student Chapter Members and receive emails from the student chapter. Among 93 students, 53 have signed up as ITE Student Members. From our membership drive, we have successfully attracted 29 new Student Members.

### Student Chapter Membership:

**Table 1: Summary of ITE Members at UW**

Summary of ITE Members at UW	Under-graduate	Graduate	Total
Number of Student Chapter Members (UW ITE)	41	33	75
Number of ITE Student Members at UW	25	24	49
Number of students eligible for ITE Student Members at UW	600*	50*	650*
Number of Civil Engineering faculty members who are currently ITE Members	-		4

\* Approximate number of Civil Engineering and Planning students.

*Note: The full list or roster members is included in Appendix A.*

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It should be noted that in keeping with the vision of ITE as an organisation for all transportation professionals, we have made concerted efforts to attract students from the Faculty of Environmental Studies and more specifically the School of Planning. Our efforts have been successful, as we have attracted Planning students to our session and to membership of ITE. Their participation is reflected in the above statistics.

## 3.0 Overview of UW Transportation Engineering

At UW, Transportation Engineering is one of the four major civil engineering disciplines in graduate studies. However, UW does not offer any major, minor, or option in transportation engineering at the undergraduate level. Students who entered Civil Engineering before September 2002 are required to take at least one course in Transportation Engineering in the third year. An enhanced curriculum has been developed and is currently being applied to the students who enter the program from September 2002 onward. In the new curriculum, students are required to take at least two transportation engineering courses. Four additional transportation engineering elective courses are offered to the third and fourth-year undergraduate students in civil engineering program.

Department of Civil Engineering at UW offers the following undergraduate courses in transportation engineering:

Civ E 240: Engineering and Sustainable Development (Core)

Civ E 342: Transport Principles and Applications (Core)

Civ E 344: Urban Transport Planning (Elective)

Civ E 440: Transport Systems Analysis (Elective)

Civ E 443: Traffic Engineering (Elective)

Civ E 542: Pavement Design and Management (Elective)

With the enhanced curriculum, students gain exposure to transportation engineering earlier than before. Within the co-operative education program (co-op), UW students can explore the real world of transportation engineering through their practical work experience. Table 2 summarised the enrolment of the students in Civil Engineering and Transportation Engineering.

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**Table 2: Enrolments of Civil Undergraduate and Transportation Graduates Students at UW (2002-2003)**

Type of Students	Full Time	Part Time	Total
Undergraduate Civil Engineering Students *	401	0	401
Graduate Transportation Engineering Students **	24	2	26
<b>TOTAL</b>	<b>425</b>	<b>2</b>	<b>427</b>

*\* Undergraduate Civil Engineering students include all graduating classes from 2003 to 2007.*

*\*\* Graduate Transportation Engineering students only include M.A.Sc. and Ph.D. students. M.Eng students are not included as they specialise in more than one area of study.*

UW TSRG currently consists of four faculty members: Dr. Liping (Lee) Fu, Dr. Bruce Hellinga, Dr. Frank Saccomanno, and Dr. Susan Tighe. Dr. Hellinga is the student chapter advisor as well as the Associate Chair of Graduate Studies in the Department of Civil Engineering.

## 4.0. UW ITE Student Chapter Activities

The UW ITE executives have monthly meetings to discuss issues and events of the student chapter. In the calendar year 2002-2003, UW ITE Student Chapter's activities consisted of two main streams:

### 1. **Weekly TSRG Seminars:**

These seminars are aimed at sharing the research findings within TSRG. The seminars are held on a weekly basis, with each graduate student. The students present the findings of their research or of a recently completed papers or journal articles. Attendees have the opportunity to discuss variety of issues in transportation engineering with the investigators and faculty. The seminars are open to all the people who are interested in transportation and are advertised on the TSRG web page ([www.civil.uwaterloo.ca/transportation/](http://www.civil.uwaterloo.ca/transportation/)). The TSRG faculties generously sponsor refreshments for these sessions.

### 2. **Transportation Exploration Series:**

The purpose is to introduce transportation engineering to first and second year undergraduate students in Civil Engineering and Planning and to enhance the professional development to the upper year students, including graduate students. The series of events included the presentations by members of the CITE executives, field trip to the Traffic Control Centre in the City of Toronto, and the exhibition of the Transportation Engineering general public in both Exploration and Campus Day activities.

In the past year, UW ITE Student Chapter had a contact with other ITE Sections and Districts through participation in a variety of activities listed below.

#### • **ITE Toronto-Hamilton Section:**

- i. Forest Yang, a Master student at UW, won the Student Presentation Competition in the Graduate Category in March 2002.

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- ii. One undergraduate student and two graduate students participated in the Student Presentation Competition in the Graduate Category in March 2003.

- **Canadian ITE (District 7):**

- i. UW ITE Student Chapter co-organised two presentations on Transportation Engineering with CITE by inviting Ms. Joanna Musters, President of CITE, and Mr. Jim Gough, Vice-President of CITE.
- ii. Two UW ITE Student Chapter executives attended the CITE Annual Conference in Ottawa in 2002.
- iii. Two UW ITE Student Chapter executives will attend the CITE Annual Conference in Winnipeg in 2003.

Table 3 summarises all UW ITE Student Chapter activities in the academic year 2002-2003.

**Table 3: Summary of UW ITE Student Chapter Activities (2002-2003)**

<b>Month</b>	<b>Events</b>
<b><i>Spring 2002</i></b>	
May	CITE Conference at Ottawa
June	Re-establishment of UW ITE Student Chapter
July	Planning for autumn membership drive and activities
August	(Final Exams)
<b><i>Fall 2002</i></b>	
September	Membership Drive Presentation by: Joanna Musters, CITE President
October	--
November	Field Trip: Traffic Control Centre at City of Toronto
December	(Final Exams)
<i>Fall 2002</i>	<i>Organised 10 TSRG Weekly Seminars</i>
<b><i>Winter 2003</i></b>	
January	Transportation Research Board (TRB) Conference @ Washington DC
February	Membership Drive Presentation by: Jim Gough, CITE Vice President
March	Campus Day 2003
April	(Final Exams)
<i>Winter 2003</i>	<i>Organised 4 TSRG Weekly Seminars</i>

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<b>Spring 2003</b>	<b>UPCOMING</b>
May	Field Trip: Grand River Transit Center at City of Kitchener
June	CITE Conference at Winnipeg

The following section provides more details of the major activities undertaken by UW ITE Student Chapter during the academic year 2002-2003.

## ***September 26, 2002***



### **A Career in Transportation Engineering**

As the first event of our Transportation Exploration Series, UW ITE invited Ms. Joanna Musters (President of the CITE), to speak to UW undergraduate/graduate students on “A Career in Transportation”. In her presentation, she demonstrated a number of advantages of a career in transportation engineering (e.g., traffic engineering is one of the top eight most secure career tracks). The event attracted more than 60 undergraduate students from the Department of Civil Engineering and the School of Planning.

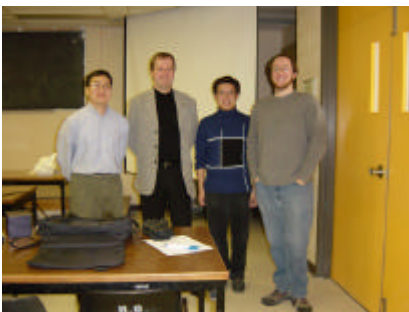
## ***November 21, 2002***



### **Tour to Traffic Control Centre at City of Toronto**

UW ITE organised a tour to the traffic control centre (TCC) at City of Toronto. Attendees were welcome by Mr. Bruce Zvaniga, Manager of TCC, who then gave an overview of TCC. Ms. Margaret Fredericks, Manager of TCC operators, assisted his presentation by explaining the day to day story of freeway traffic monitoring in Toronto. A total of 14 students participated in this tour.

## ***February 6, 2003***



### **A Career in Transportation Engineering**

To introduce the student chapter to a new group of students, returning from the autumn work term, UW ITE invited Mr. Jim Gough, Vice President of CITE, to speak to UW undergraduate students on the topic of “A Career in Transportation”. The event attracted more than 30 undergraduate students from the Department of Civil Engineering and the School of Planning.



**March 10-12, 2003**



## **UW Annual Exploration/Campus Day 2003**

UW ITE and TSRG presented a session entitled “Smart Transportation” as a part of the Exploration 2003 event. Exploration Day is an evening event that invites elementary school children and their families to UW and shows them the world of engineering. The purpose of the event is to highlight some of the interesting careers that are possible using science and math skills.

UW ITE designed a promotion poster, “What is Transportation Engineering?,” to advertise our speciality to general audience. The poster and the ITE Video “*A Career in Transportation*” were exhibited as part of our presentation.

Also many prospective students visited UW to learn about the university and specific programs of interest in transportation. Explorations attracted more than 100 children and their family members. It was a success and UW ITE Student Chapter is proud to co-host this promotion event.

## 5.0 Promotional Campaign & Problems Encountered

UW ITE Student Chapter advertised our activities through various means.

- Posted the posters to promote the UW ITE activities in several areas of campus frequented by students who may potentially be interested in transportation.
- Sent announcements by e-mail to all the UW ITE members.
- Made class announcements for both undergraduate and graduate students during classes.
- Created the UW ITE Student Chapter website to provide up-to-date information on the upcoming activities organised by the chapter and useful links to other transportation-related websites, including job postings for transportation professionals.
- Redesigned the web site and logo of TSRG to promote transportation engineering to an advanced level.
- Organised weekly TSRG seminar with reserving the venue and purchasing refreshments for the seminar speakers and audience.

The University of Waterloo presents unique challenges to the organisation of the UW ITE Student Chapter due to the nature of the co-operative education many students, including all undergraduate Civil Engineering students. Students are on-campus for only four months at a time and alternates between four-month study terms and four-month work terms. Because of this, many of the students to whom ITE was first introduced in September were away from campus throughout the winter, and will return in May. Therefore, this February, we had to re-introduce ITE to a whole new group of students who had been away for work terms. We will overcome this challenge through our consistent and targeted promotion, and the alternating appointment of undergraduate students representatives.

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## 6.0 Financial Report

The main source of funding for the UW ITE Student Chapter is from the general seminar/meeting funds of the TSRG. The expenditures for organising the student chapter activities include speakers' gifts and seminar refreshments. Other expenditures, such as printing of advertisement posters, were not included in the financial record. Table 4 is the financial statement of the UW ITE Student Chapter's operation in the academic year 2002-2003, as of March 20, 2003.

**Table 4: Financial Statement of UW ITE Student Chapter Activities (2002-2003)**

Date	Description	Amount
<b>Guest Speaker Event: Ms. Joanna Musters</b>		
26-Sep-02	Pizza	\$ 51.75
26-Sep-02	Beverages	\$ 28.06
26-Sep-02	Photocopy for membership forms	\$ 8.63
26-Sep-02	UW Mug (Gift for the Speaker)	\$ 13.79
26-Sep-02	Catering: includes sandwiches, cookies, etc.	\$ 300.00
<b>Tour to the Traffic Control Center, Toronto</b>		
20-Nov-02	UW Mugs (Gifts for the Speakers)	\$ 36.53
25-Nov-02	Membership Mailing Fee	\$ 1.50
<b>Guest Speaker Event: Mr. Jim Gough</b>		
6-Feb-03	Beverages	\$ 26.74
6-Feb-03	UW Mug (Gift for the Speaker)	\$ 16.09
6-Feb-03	Water for Speaker	\$ 1.10
27-Feb-03	Membership Mailing Fee	\$ 1.50
<b>TOTAL:</b>		<b>\$ 485.69</b>

## 5.0 Conclusions/Future Goal

This year has been an active year for UW ITE Student Chapter since its re-establishment in June 2002. The student chapter has organised a total of 14 TSRG weekly seminars, 2 speaker's events, and 2 field trips. In addition, UW ITE organised the Explorations/Campus Day promotional event for TSRG, launched a UW ITE web site and enhanced the TSRG web-site.

The UW ITE Student Chapter has successfully co-ordinated many social/academic events in the past year. The student chapter has fulfilled the tasks by:

- Promoting transportation engineering to students and general public
- Enhancing the knowledge of transportation engineering
- Networking with transportation professionals
- Co-ordinating social events to promote ITE and encouraging co-operation among students within the TSRG

In coming year, UW ITE Student Chapter will continue to satisfy these aspirations and will organise more seminars and field trips to enhance students' interest in Transportation Engineering.

TSRG faculty members have supported our activities. They have consistently provided both financial and moral support as we have worked over the past year to re-establish the UW ITE Student Chapter. We are most thankful for their assistance.

**Appendix A**  
**Roster of UW ITE Student Chapter Members**

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## Appendix A-1: Roster of UW ITE Student Chapter Members

Name	Program	Degree	Term	Grad	E-Mail
Jeremy Taylor	Civil	B.A.Sc.	1A	2007	jwtaylor@engmail.uwaterloo.ca
Aaron Grin	Civil	B.A.Sc.	2A	2006	apgrin@engmail.uwaterloo.ca
Al Vandergaay	Civil	B.A.Sc.	2A	2006	akvander@engmail.uwaterloo.ca
Alex Tam	Civil	B.A.Sc.	2A	2006	atam@engmail.uwaterloo.ca
Benny Hon	Civil	B.A.Sc.	2A	2006	byfhon@engmail.uwaterloo.ca
Brendan Greenbury	Civil	B.A.Sc.	2A	2006	bgreenbu@engmail.uwaterloo.ca
Chris Suffern	Civil	B.A.Sc.	2A	2006	casuffer@engmail.uwaterloo.ca
Dixon Lau	Civil	B.A.Sc.	2A	2006	secondcup@sinaman.com
Ed McGriskn	Civil	B.A.Sc.	2A	2006	ejmcgris@engmail.uwaterloo.ca
Edy Abourjaili	Civil	B.A.Sc.	2A	2006	emabourj@engmail.uwaterloo.ca
Elijah Yang	Civil	B.A.Sc.	2A	2006	eeeyang@engmail.uwaterloo.ca
Jess Pauls	Civil	B.A.Sc.	2A	2006	jessepauls@hotmail.com
Jogke van Leeuwen	Civil	B.A.Sc.	2A	2006	jvanleeu@engmail.uwaterloo.ca
Josh Smith	Civil	B.A.Sc.	2A	2006	jrsmith@engmail.uwaterloo.ca
Kitty Chan	Civil	B.A.Sc.	2A	2006	kwmchan@engmail.uwaterloo.ca
Loretta Leung	Civil	B.A.Sc.	2A	2006	lleung@engmail.uwaterloo.ca
Mechelle Pope	Civil	B.A.Sc.	2A	2006	mcpope@engmail.uwaterloo.ca
Michael Harrington	Civil	B.A.Sc.	2A	2006	mharring@engmail.uwaterloo.ca
Steve Routledge	Civil	B.A.Sc.	2A	2006	swroutle@engmail.uwaterloo.ca
Wendy Abrahams	Civil	B.A.Sc.	2A	2006	wjabraha@engmail.uwaterloo.ca
Andrew Loong	Civil	B.A.Sc.	3B	2004	klaloong@engmail.uwaterloo.ca
Darren Samonte	Civil	B.A.Sc.	3B	2004	dtsamont@engmail.uwaterloo.ca
David Schlihauf	Civil	B.A.Sc.	3B	2004	civil_boy@hotmail.com
Farhad Khan	Civil	B.A.Sc.	3B	2004	f2khan@engmail.uwaterloo.ca
Gigi Wu	Civil	B.A.Sc.	3B	2004	cywu@engmail.uwaterloo.ca
Kaman Pang	Civil	B.A.Sc.	3B	2004	kpang@engmail.uwaterloo.ca
Kelvin Lo	Civil	B.A.Sc.	3B	2004	kkalo@engmail.uwaterloo.ca
Langston Lai	Civil	B.A.Sc.	3B	2004	gobyu@yahoo.com
<b>Mary Kang</b>	<b>Civil</b>	<b>B.A.Sc.</b>	<b>3B</b>	<b>2004</b>	<b>m2kang@engmail.uwaterloo.ca</b>
Rebecca Huang	Civil	B.A.Sc.	3B	2004	huang_rebecca@hotmail.com
Sonia Wong	Civil	B.A.Sc.	3B	2004	hy2wong@engmail.uwaterloo.ca
Steve Saxton	Civil	B.A.Sc.	3B	2004	sasaxton@engmail.uwaterloo.ca
Jeff Gordon	Civil	B.A.Sc.	4B	2003	jkgordon@engmail.uwaterloo.ca
Ken Chan	Civil	B.A.Sc.	4B	2003	kkhchan@engmail.uwaterloo.ca
Matthew Brouwer	Civil	B.A.Sc.	4B	2003	mabrouwe@engmail.uwaterloo.ca
Xiaoxia (Tina) Wang	Civil	M.A.Sc.	1	2005	x9wang@engmail.uwaterloo.ca
Rickensen Daniel	Civil	M.A.Sc.	2	2004	rdaniel@engmail.uwaterloo.ca
Aamer Shakoor	Civil	M.A.Sc.	2	2005	ashakoor@engmail.uwaterloo.ca
Jun Zhu	Civil	M.A.Sc.	2	2005	j4zhu@engmail.uwaterloo.ca
Luis Miranda-Moreno	Civil	M.A.Sc.	2	2005	lfmirand@engmail.uwaterloo.ca
Mauricio Alamillo De Ibarrola	Civil	M.A.Sc.	2	2005	malamil@engmail.uwaterloo.ca
Xiaoming (David) Lai	Civil	M.A.Sc.	2	2005	x2lai@engmail.uwaterloo.ca
James Smith	Civil	M.A.Sc.	3	2004	jtsmith@sympatico.ca
Jeff Henderson	Civil	M.A.Sc.	3	2004	jmhender@engmail.uwaterloo.ca
Renato Capurco	Civil	M.A.Sc.	3	2004	rcapu@engmail.uwaterloo.ca
Xingyi (Mike) Wang	Civil	M.A.Sc.	4	2003	x27wang@engmail.uwaterloo.ca
Changjin (Richard) Wei	Civil	M.A.Sc.	5	2003	c2wei@engmail.uwaterloo.ca
<b>Nixon Chan</b>	<b>Civil</b>	<b>M.A.Sc.</b>	<b>5</b>	<b>2003</b>	<b>tnchan@uwaterloo.ca</b>
Qing (Cherry) Liu	Civil	M.A.Sc.	5	2003	qliu@engmail.uwaterloo.ca
<b>Ryan McNally</b>	<b>Civil</b>	<b>M.A.Sc.</b>	<b>5</b>	<b>2003</b>	<b>rmcnally@engmail.uwaterloo.ca</b>
Congming (Rena) Ren	Civil	M.A.Sc.	6	2003	rencming@hotmail.com
Mohammad Karim	Civil	M.A.Sc.	6	2003	mkarim@engmail.uwaterloo.ca
Hamid S Mohamand	Civil	M.Eng.	1	2004	hsohman@engmail.uwaterloo.ca
Javed Iqbal	Civil	M.Eng.	1	2004	jiqbal@uwaterloo.ca
Liaqal Ali	Civil	M.Eng.	1	2004	liaqual75@hotmail.com
Moustafa Kassab	Civil	M.Eng.	1	2003	mkassab@engmail.uwaterloo.ca
Muhammad Tarig Mahmood	Civil	M.Eng.	1	2004	tarig678@hotmail.com
Rofi Uddin Ahad	Civil	M.Eng.	1	2004	rofimsc@hotmail.com
Saeed Ahmad	Civil	M.Eng.	1	2004	s4ahmad@engmail.uwaterloo.ca
Syed Ahmed	Civil	M.Eng.	2	2003	sadahmed@uwaterloo.ca

*Note: Shaded rows indicate UW ITE executives.*

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## Appendix A-1: Roster of UW ITE Student Chapter Members (Cont'd)

Name	Program	Degree	Term	Grad	E-Mail
Young-Jin (Peter) Park	Civil	Ph.D.	1	2007	y2park@engmail.uwaterloo.ca
HiroYuki Takada	Civil	Ph.D.	2	2006	htakada@engmail.uwaterloo.ca
Jae Hyun Noh	Civil	Ph.D.	2	2006	jhnoh@engmail.uwaterloo.ca
Anania Mbabazi	Civil	Ph.D.	8	2004	ambabazi@engmail.uwaterloo.ca
<b>Chris Lee</b>	<b>Civil</b>	<b>Ph.D.</b>	<b>8</b>	<b>2004</b>	<b>chclee@uwaterloo.ca</b>
Arif Mehmood	Civil	Ph.D.	11	2003	amehmood@uwaterloo.ca
Ghada Hamouda	Civil	Ph.D.	12	2003	gmhamoud@engmail.uwaterloo.ca
Melissa Bunn	Geological	B.A.Sc.	2A	2006	mbunn@engmail.uwaterloo.ca
James Tancon	Planning	B.E.S.	4A	2003	jrtancon@fes.uwaterloo.ca
Matt Chandy	Planning	B.E.S.	4A	2003	chandymj@hotmail.com
Shane Cooney	Planning	B.E.S.	4A	2003	sccooney@fes.uwaterloo.ca
Tim Pausnes	Planning	B.E.S.	4A	2003	tpausnes@hotmail.com
Mat Vaughan	Planning	B.E.S.	4B	2003	vinnyvaughan@hotmail.com
Geoff Keyworth	Planning	M.E.S.	Grad	--	gkeywort@fes.uwaterloo.ca

*Note: Shaded rows indicate UW ITE executives.*