

## **PROFESSIONAL SUMMARY**

Internationally experienced transportation planner and engineer with 6+ years of experience in areas of public transit, travel demand management, road safety and active transportation across Canada, the United States and the United Kingdom. Dual graduate degrees from MIT in transportation engineering and city planning.

## **EDUCATION**

**Master of Science in Transportation & Master of City Planning** June 2018  
**Massachusetts Institute of Technology (MIT)**

- Cumulative GPA: 4.9 out of 5
- MIT Presidential Fellow, 2015-2016 (awarded to top one hundred graduate applicants to MIT)
- Teaching Assistant for graduate course “Behavior & Policy: Connections in Transportation”
- Thesis: “Driving Change: How Workplace Benefits can Nudge Solo Car Commuters Toward Sustainable Modes”

**Bachelor of Applied Science in Engineering Science, High Honors** June 2015  
**University of Toronto**

- Cumulative GPA: 3.9 out of 4
- Enriched engineering program with emphasis on first-principles theory, design and communication
- Major in Infrastructure Engineering (Transportation Focus)
- Thesis: “High-Occupancy Vehicle Lanes and Social Welfare: Insights through Activity-Based Microsimulation”

## **RELEVANT EXPERIENCE**

**Special Projects Manager, Tower Transit Group – London, United Kingdom** May 2019  
to April 2020

- Served in an internal consulting role for international public transit operations firm based in London, Singapore and Australia
- Deployed to Singapore as final co-editor of a \$1 billion tender proposal for bus operations (under three-month secondment to Singapore subsidiary)
- Served as deputy manager of depot electrification project, introducing battery-electric buses into London’s fleet for the first time; developed project timelines, budget and critical paths
- Authored internal research paper at request of Group Chairman on international best practices of bus transit contracting models to identify and prioritize business expansion efforts
- Redesigned Training & Recruitment Department protocols to improve quantity and quality of driver job applications, resolving acute driver shortage in Fall 2019

**Research & Strategy, Autonomic Inc. (Ford Smart Mobility) – Toronto, Canada** July 2018

- Curated competitive intelligence across urban transportation, shared mobility and automotive sectors to guide strategy for start-up specialized in connected vehicle cloud technology (acquired by Ford Motor Company) to February 2019
- Researched and prepared marketing slide decks, customer case studies and industry white paper
- Liaised across teams at Ford to develop emissions reductions strategies using Autonomic software
- Consulted with municipal stakeholders as an industry expert on future of autonomous vehicles

**Research Assistant, MIT Transit Lab**September 2016  
to June 2018

- Researched behavioural impacts of workplace-based travel demand management programs
- Co-led the implementation of a campus-wide commuter benefits overhaul that reduced parking demand by nearly 10% within two years
- Designed and implemented a randomized controlled trial to reduce parking demand among eleven thousand employees on MIT campus
- Project manager and mentor to undergraduate research assistant
- Awarded grand prize at International Parking Solutions Competition in recognition of research

**Transit Planner, San Francisco Municipal Transportation Agency**

Summer 2016

- Managed public consultation process for bus transit priority project, including overseeing an intercept survey of 1,400 transit riders, drivers, pedestrians and business owners
- Led a team of 9 staff to build and implement a GIS-based tool that mapped deadhead bus routes for the purpose of streamlining non-revenue bus operations
- Worked one-on-one with the Director of Transit to conduct a review of international best practices on agency performance metrics

**Presidential Research Fellow, MIT**

2015 to 2016

- Conducted research with Professor Jinhua Zhao on sociology of time use
- Presented research at Association of Collegiate Schools of Planning Conference (Portland, OR) and Transportation Research Board Conference (Washington, D.C.)

**Transportation Systems Designer, IBI Group**

2013 to 2014

- Professional Experience Year (PEY) 14-month internship at IBI Group, an international consulting firm specializing in urban planning and transportation systems
- Projects involved urban master planning, traffic operations and road user safety
- Close working relationship with Toronto City Hall, presenting technical analyses to municipal agencies through policy memoranda and oral presentations

**Research Assistant, Department of Civil Engineering,  
University of Toronto**

2011 to 2013

- Transportation systems research, supervised by Professor Eric J. Miller
- Developed integrated urban microsimulation models for transportation-land use planning
- Worked with interdisciplinary team to design, write and validate forecast models of growth in housing market and travel demand for the Greater Toronto-Hamilton Area

## PEER-REVIEWED ARTICLES

Rosenfield, A., Attanucci, J., and Zhao, J. **"Evaluating Travel Demand Management Interventions Using a Randomized Controlled Trial at MIT."** *Transportation*, 2019.

Rosenfield, A., Lamers, J., Nourinejad, M., and Roorda, M.J. **"Investigation of Commercial Vehicle Parking Permits in Toronto."** *Transportation Research Record: Journal of the Transportation Research Board* (No. 2547), 2016, pp. 11–18.

Rosenfield, A., Chingcuanco, F., and Miller, E.J. **"Agent-based housing market microsimulation for integrated land use, transportation, environment model system."** *The 4<sup>th</sup> International Conference on Ambient Systems, Networks and Technologies*. *Procedia Computer Science Journal*, Volume 19 (2013). Pages 841-846.

## ACADEMIC THESES

**"Driving Change: How Workplace Benefits Can Nudge Solo Car Commuters Toward Sustainable Modes."**

Graduate thesis, Master of City Planning (M.C.P.) and Master of Science in Transportation (M.S.T.). Supervised by Prof. Jinhua Zhao and John Attanucci, 2018. Massachusetts Institute of Technology (MIT).

**"HOV Lanes and Social Welfare: Insights Through Activity-Based Microsimulation."** B.A.Sc. thesis, Engineering Science (Infrastructure). Supervised by Prof. Matthew Roorda, 2015. University of Toronto.

## PRESENTATIONS and CONFERENCE PAPERS

**"London Buses: Delivering Public Transit through the Private Sector."** Invited guest lecturer at the MIT Urban Mobility Lab. January 10, 2020.

**"How MIT Got a Handle on Parking: The Behavioural Impact of Commuter Benefits."** Invited guest lecturer at the University of Toronto Transportation Research Institute. February 1, 2019.

Rosenfield, A. **"Driving Change: Putting TDM Theory into Practice at MIT."** Invited guest speaker at City of Toronto *Commute Lab* event for large employers. January 22, 2019.

Rosenfield, A., Attanucci, J., and Zhao, J. **"Evaluating Commuter Benefits at the Massachusetts Institute of Technology."** Presented at the 98<sup>th</sup> Annual Meeting of the Transportation Research Board (TRB), Washington, D.C. January 13-17, 2019.

Rosenfield, A. **"Leveraging Behavioral Science to Reduce Car Commuting."** Invited panelist at *CommuteCon 2018*. February 7, 2018.

Rosenfield, A., Attanucci, J., and Zhao, J. **"Evaluating Parking Demand Management Interventions Using a Randomized Controlled Trial."** Presented at the 97<sup>th</sup> Annual Meeting of the Transportation Research Board (TRB), Washington, D.C. January 7-11, 2018.

Jones, S. and Rosenfield, A. **"Nudging commuters, big data and bold partnerships: A research-based approach to impacting commuter mode choice at MIT."** Presented at the Annual Conference of the Association for the Advancement of Sustainability in Higher Education (AASHE), San Antonio, TX. October 15-18, 2017.

Rosenfield, A., Attanucci, J., and Zhao, J. **“Randomized Controlled Trial to Reduce Parking at MIT.”** Presented at the 57<sup>th</sup> Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Denver, CO. October 12-15, 2017.

Rosenfield, A., Attanucci, J., and Zhao, J. **“Small Nudges, Big Data: Evaluating the Impact of MIT Commuting Benefits Program.”** Presented at the 11<sup>th</sup> International Conference on Transport Survey Methods (ISCTSC), Estérel, QC, Canada. September 24-29, 2017.

Rosenfield, A. and Zhao, J. **“Quality of Travel Time Use: Definition and Measurement.”** Presented at the 96<sup>th</sup> Annual Meeting of the Transportation Research Board (TRB), Washington, D.C. January 8-12, 2017.

Rosenfield, A. and Zhao, J. **“Making the Commute Count: Quality of Productive Travel Time Use.”** Presented at the 56<sup>th</sup> Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Portland, OR. November 3-6, 2016.

Rosenfield, A., Lamers, J., Nourinejad, M., and Roorda, M.J. **“Investigation of Commercial Vehicle Parking Permits in Toronto.”** Presented at the 95<sup>th</sup> Annual Meeting of the Transportation Research Board (TRB), Washington, D.C. January 10-14, 2016.

Rosenfield, A., Miller, E.J., and Roorda, M.J. **“High-Occupancy Vehicle Lanes and Social Welfare: Insights through Activity-Based Microsimulation.”** Presented at the 14<sup>th</sup> International Conference on Travel Behaviour Research (IATBR), Windsor, UK. July 19-23, 2015.

Rosenfield, A., Chingcuanco, F., and Miller, E.J. **“Modelling Residential Land Use in the Integrated Land Use, Transportation, Environment (ILUTE) Model System.”** Presented at the 2<sup>nd</sup> Virtual Conference of the Canadian Regional Science Association (CRSA). November 20, 2013.

Rosenfield, A., Chingcuanco, F., and Miller, E.J. **“Agent-based housing market microsimulation for integrated land use, transportation, environment model system.”** Presented at ABMTRANS International Workshop on Agent-based Mobility, Traffic and Transportation Models, Methodologies and Applications. Halifax, Nova Scotia, June 26, 2013.

Rosenfield, A. and Miller, E.J. **“Modelling Residential Land use in ILUTE: An Agent-Based Microsimulation.”** Presented at the University of Toronto Undergraduate Engineering Research Day Conference. Toronto, Ontario, August 15, 2012. *Runner-up, best podium presentation.*

Rosenfield, A., Chingcuanco, F., Paintal, G. and Miller, E.J. **“Development and Validation of ILUTE Integrated Urban Model System.”** Presented at the University of Toronto Undergraduate Engineering Research Day Conference. Toronto, Ontario, August 17, 2011. *First-place, best poster presentation.*

### **OTHER PUBLICATIONS and ARTICLES**

Parking Professional Magazine. **“Finding Parking Solutions: Last Year’s Competition Winner on his Ideas and Big Win.”** International Parking Institute. November, 2017.

Rosenfield, D., and Rosenfield, A. **“Achieving zero traffic deaths and a quieter trauma room at SickKids.”** Op-Ed. Printed in the Toronto Star. June 6, 2017.

## **TEACHING**

- Teaching Assistant, *Behavior & Policy: Connections in Transportation*** 2018
- Graduate course offered by Professor Jinhua Zhao at MIT Department of Urban Studies & Planning
  - Assisted in development of course materials, delivered multiple lectures and graded student assignments

## **AWARDS**

- Best Poster, Association for Commuter Transportation (TRB)** 2019
- Recipient of award for best poster presentation at the 98<sup>th</sup> Annual Meeting of the Transportation Research Board in the area of transportation demand management
- Second Place, Safer Neighbourhoods Hackathon** 2018
- Team at Autonomic was awarded second place for a solution to accelerate Vision Zero using big data from connected vehicles
- Fellowship, Eno Center for Transportation Future Leaders Development Conference** 2018
- Recipient of Eno Fellowship, awarded to 20 top transportation graduate students across the United States; nominated on behalf of MIT Department of Urban Studies & Planning
- Grand Prize, 2017 International Parking Solutions Competition** 2017
- First place awarded by the International Parking Institute for presenting a pitch to reduce single-occupant vehicle use through workplace-based behavioral incentives
- Nominee, U.S. Department of Transportation Outstanding Student of the Year Award** 2017
- Nominated by MIT (ultimately ineligible due to US citizenship requirement)
- Parsons Graduate Scholarship, Transportation Association of Canada (TAC)** 2016
- Recipient of national TAC Graduate Scholarship, awarded for academic performance, extracurricular involvement, and career potential in field of transportation
- Edward H. Linde Presidential Fellowship, Massachusetts Institute of Technology (MIT)** 2015
- Full-tuition fellowship award for outstanding record of academic achievement
  - Awarded to top one hundred applicants to MIT
- AMEC Scholarship, Transportation Association of Canada (TAC)** 2014
- Recipient of national TAC Undergraduate Scholarship, awarded for academic performance, extracurricular involvement, and career potential in field of transportation
- National Scholarship, Canadian Institute of Transportation Engineers (CITE)** 2014
- Sole recipient of 2014 CITE HDR Undergraduate Scholarship, awarded for academic achievement
  - and professional potential in the field of transportation engineering and planning
- Engineering Science Research Opportunities Program Fellowship (ESROP)** 2012
- University of Toronto research fellowship awarded to top Engineering Science students for outstanding academic performance and research potential

**Research Fellowship, Department of Civil Engineering, University of Toronto** 2011

- Funding awarded for undergraduate research project with Professor Eric J. Miller

**Vladimir J. Elgart Entrance Scholarship, University of Toronto** 2010

- Awarded for outstanding academic achievement and extracurricular involvement in secondary school

**COMMUNITY INVOLVEMENT and VOLUNTEER WORK**

**Tutor, *On Your Mark Academic Support Program*** 2018 to 2019

- Weekly tutor for a group of elementary and high school students from low-income and new immigrant families of Portuguese and Spanish-speaking heritage

**President, MIT Transportation Student Group** Jan to Dec 2017

- Led student government for all Masters and PhD students in Transportation at MIT
- Managed professional development initiatives, social events and student recruitment
- Led successful student advocacy efforts for program reforms

**Fellow, Graduate Student Leadership Institute** 2017

- Participant in seven-week leadership development program through MIT Sloan Business school; selected through application and interview process

**Volunteer Advocate, *Graduate Student Apartments Now*** 2017

- Grassroots advocacy group organized to encourage MIT to invest in student housing to ease burden on Cambridge housing market & provide affordable student residence
- Organized rallies and meetings with local and state politicians, students and local community
- Testified before Cambridge City Council

**Student Representative, MIT Transportation & Parking Committee** 2016 to 2018

- Appointed by MIT President L. Rafael Reif; re-appointed by chair
- Advocate on behalf of student body for transportation issues
- Volunteered to work on subcommittee advancing MIT low-carbon commuting efforts

**Peer Reviewer, TRB Committee on Travel Behavior and Values** 2016 to present

- Volunteer peer reviewer for papers submitted to Transportation Research Board Annual Meeting
- Area of expertise includes transportation-land use modeling and travel behavior research

**Peer Mentor, MIT Department of Urban Studies and Planning** 2016 to 2018

- Volunteer for Peer Application Support Service (PASS), assisting students of color, international and queer applicants with MIT admissions process

**Social Chair, MIT Transportation Student Group** 2015 to 2016

- Organize student outreach events & professional development opportunities

**Music Director, *Skule Nite Orchestra*, University of Toronto** 2014 to 2015

- Conductor and artistic director of orchestra for the Faculty of Engineering student musical and comedy revue
- Lead composer and musical arranger

**Treasurer, Institute of Transportation Engineers, University of Toronto Chapter** 2014 to 2015

- Elected to executive committee as Financial Officer
- Oversee chapter fiscal operations and event planning

**Faculty Council, Standing Committee on Community Affairs and Gender Issues** 2013 to 2014

- Appointed as student representative for 2013-2014 academic year
- Committee addresses issues of student outreach and experience

***NSight* Engineering Science Mentorship Program** 2012 to 2015

- Volunteer peer mentor
- Helped first year Engineering Science students with transition to university
- Ran orientation week events, led student volunteers

**Music Education and Performance**

- French horn player in various community orchestras 2010 to present
- Pit orchestra member in MIT Musical Theatre Guild 2015 to 2017
- Instructor and Counsellor, National Music Camp of Canada 2010 to 2014
- Associate of the Royal Conservatory of Music (ARCT) Diploma in Piano Performance 2010
- Winner of 2010 North Toronto C.I. Concerto Competition

**Competitive Road Cycling** 2007 to present

- Member, MIT Cycling Road Team
- Ontario Cup Road Race participant

**TECHNICAL SKILLS**

- Transportation analysis (Emme 4, Paramics, VISSIM and Synchro)
- Database systems (postgresql)
- Computer programming (C#, C, VBA, Python, R and MATLAB)
- Geographic Information Systems (ArcGIS and QGIS)
- Office (Latex, Excel, Access, Word and PowerPoint)

## **GRADUATE COURSE WORK**

- Transportation Systems Analysis: Performance and Optimization (1.200) *Carolina Osorio, MIT*
- Transportation Systems Analysis: Demand and Economics (1.201) *Moshe. E. Ben-Akiva, MIT*
- Urban Transportation Planning (1.252) *Frederick Salvucci & Mikel Murga, MIT*
- Introduction to Spatial Analysis (11.205) *Sarah Williams, MIT*
- GIS Workshop (11.520) *Sarah Williams & Michael Foster, MIT*
- Transportation Research Design (11.S950) *Jinhua Zhao, MIT*
- Demand Modeling (1.202) *Moshe. E. Ben-Akiva, MIT*
- Transportation, the Environment, and Livable Communities (1.253) *Frederick Salvucci & Joe Coughlin, MIT*
- Comparative Transportation and Land Use (1.251) *Chris Zegras, MIT*
- Behavior and Policy: Connections in Transportation (11.478) *Jinhua Zhao, MIT*
- Gateway: Planning Action (11.201) *Jason Jackson & Chris Zegras, MIT*
- Introduction to Housing, Community and Economic Development (11.401) *Justin Steil, MIT*
- Planning Economics (11.202) *Ingrid Gould Ellen, MIT*
- Negotiation and Dispute Resolution in the Public Sector (11.255) *Lawrence E. Susskind, MIT*
- Land Use and Environmental Law (SUP-655), *Jerold S. Kayden, Harvard University*
- Sustainability-Oriented Innovation and Entrepreneurship (15.385), *Jason Jay, MIT Sloan*

## **SELECTED PROJECT WORK**

### **Employer Commuter Management Platform: Entrepreneurship Exercise (MIT Sloan School of Management, 2017)**

- Developed concept, value proposition and preliminary business model for a workplace-based travel demand management platform
- Demonstrated proof-of-concept through MIT Transit Lab Research with Boston area employers including surveys and randomized controlled trial (RCT) experiment

### **Zoning Ordinance Amendment: Parking Requirements in Cambridge (Harvard University, 2017)**

- Term paper for Land Use Law class involved the drafting of a legal amendment to the Cambridge Zoning Ordinance
- Proposed amendment, drafted in consultation with Cambridge City staff, adjusted parking requirements to be commensurate with reduced car ownership and usage while accommodating residual projected demand

### **Malaysia Sustainable Cities Practicum (MIT and Universiti Teknologi Malaysia, 2017)**

- Spent one month in Malaysia establishing research agenda on issues of sustainable urban development
- Engaged with local civil society to identify pressing issues on (a) environmental impact of land reclamation, (b) implications of UNESCO world heritage status in George Town, (c) transboundary water rights and (d) urban transportation challenges



## **The Wealth of First Nations: Successes and Challenges of On-Reserve Economic Development in Canada (MIT, 2016)**

- Co-authored research paper with Joanne Wong examining factors contributing to economic growth for First Nations reserves across Canada
- Conducted case studies of three reserves informed by expert interviews

## **Mission Street Transit Improvements: Public Consultation (SFMTA, 2016)**

- Authored a pedestrian intercept survey to gauge perceptions of controversial transit project
- Managed team of 22 surveyors to conduct a total of 1,400 interviews
- Published analysis, written up in major news outlets

## **Managing Growth in Midsize Chinese Cities: A Case Study of Jinan (MIT, 2016)**

- Investigated urbanization and motorization trends in China's most populous regions
- Conducted comparative research of Chinese versus western development and issued recommendations for sustainable transportation policy and land use management

## ***The Final Countdown: The Role of Pedestrian Countdown Timers on Traffic Safety (MIT, 2016)***

- Collaborated with City of Cambridge to investigate impact of timers on red-light running
- Temporarily altered traffic signal timings to conduct before-after observations of driver behavior
- Researched behavioral motivations for compliance with traffic laws

## **Massachusetts Climate Change Policy: Strategies for Transportation Sector (MIT, 2016)**

- Presented a policy package of market-based and regulatory interventions to reduce greenhouse gas emissions from transportation sector
- Advocated for strategic investment in clean technologies and adoption of Pigouvian taxation

## **Allston I-90 Interchange: Balancing Environmental Impacts with Transportation Benefits (MIT, 2016)**

- Evaluated proposals for realignment of Massachusetts Turnpike in context of existing rail corridor and sensitive parkland
- Issued recommendations to Secretary of Transportation in consideration of state and federal environmental law (Section 4(f))

## **Regulating the Vehicle: How States can Lead (MIT, 2016)**

- Proposed new transportation revenue stream through the introduction of pay-as-you-drive car insurance and taxation tied to vehicle-miles traveled
- Argued how regulatory environment of California could allow the state to lead on environmentally-responsible transportation policy

## **Multi-Modal Transportation Study, Boston Seaport Innovation District (MIT, 2015)**

- Worked with a multi-disciplinary team to review traffic and transit performance in Boston's Seaport District
- Identified challenges and opportunities associated with future development, and recommended infrastructure and policy changes to allow the region to continue its economic growth while managing congestion

### **Traffic Impacts of a Casino in Everett, Massachusetts (MIT, 2015)**

- Co-authored a memorandum critiquing the traffic analysis in an environmental impact study of a proposed casino near Boston
- Provided recommendations to improve the regional study process associated with transportation impacts of large-scale trip generators

### **Planning for Kendall Square Growth (MIT, 2015)**

- Co-authored a report outlining the challenges of massive growth in Cambridge's Kendall Square on the subject of congestion, affordable housing and livable streets
- Applied a four-step travel demand modeling approach to compare the impacts of development proposals

### **Gone with the Wind: Urban Street Canyons & Air Quality in New York City (MIT, 2015)**

- Term project in GIS Workshop, analyzing air pollution dispersion patterns in Manhattan
- Developed street canyon intensity index to estimate how building density alters wind patterns

### **HOV Lanes and Social Welfare (University of Toronto, 2015)**

- Undergraduate thesis: modeled the social and economic impacts of carpool lanes in Ontario
- Conducted scenario analyses of road configurations to minimize congestion in a multi-modal transport system
- Developed policy recommendations for sustainable transportation demand management

### **Bike Sharing & Beyond: Two-Wheeled Sustainability in Toronto (University of Toronto, 2014)**

- Capstone Design Project: Developed an expansion plan for Toronto's bicycle sharing program
- Examined demographic and employment trends of downtown Toronto neighborhoods to maximize program outreach
- Geometric design of on-street cycling facilities at Bay Street & Queen Street West cross-sections in Toronto

### **Travel Time Study, Ministry of Transportation of Ontario (IBI Group, 2013-2014)**

- Analyzed emergent congestion trends on Toronto's highway and arterial road network
- Collaborated with municipal and provincial agencies to prepare and present technical findings

### **2015 Toronto Pan American/Parapan American Games Transportation Planning (IBI Group, 2013-2014)**

- Developed travel demand management strategies to mitigate games-related traffic congestion
- Drafted policy memoranda for distribution to senior government officials
- Designed Monte Carlo simulation model to predict inter-venue travel times

### **2012 Travel Time Study for Ontario Ministry of Transportation (IBI Group, 2013-2014)**

- Co-authored study employing GPS floating car surveys and crowd-sourced GPS traffic data to analyze traffic patterns on highways and arterial roads in the Greater Toronto Area

- Provided data analysis support to assess the impacts of physical and operational improvements

**Traffic Operations Analysis and Signal Coordination (IBI Group, 2013-2014)**

- Developed new traffic signal timing plans for Weston Road and Sheppard Avenue in Toronto
- Built and used *Synchro* models to assess existing conditions and identify deficiencies
- Involved in field investigations, model development and alternative assessment

**Road User Safety Reviews (IBI Group, 2013-2014)**

- Conducted an assessment of collisions involving motorists, cyclists and pedestrians along Highway 17 in Deep River, Ontario and along Cawthra Road in Mississauga, Ontario
- Proposed remedial measures to the Ministry of Transportation of Ontario (MTO) and City of Mississauga

**Integrated Land Use, Transportation, Environment (ILUTE) Model (University of Toronto, 2011-2012)**

- Contributed to the development, testing and validation of a microsimulation model of the Greater Toronto-Hamilton Area with Professor Eric J. Miller and a team of student researchers
- Designed computer simulations of population demographic evolution over a 20-year time frame (coded in C#) and validated results against historical data from 1986 to 2006
- Co-authored a model of residential land use and housing market dynamics, showcased at a 2013 international conference on agent-based transportation modelling

**AFFILIATIONS**

<b>International Parking and Mobility Institute (IPI)</b>	2017 to present
<b>Institute of Transportation Engineers (ITE)</b>	2011 to present
<b>Professional Engineers Ontario</b>	2010 to present