



Chair's Message

Madu Suthanan, P.Eng.
Chair, Scarborough Chapter – PEO



The year is coming to an end and I wish all our members an enjoyable Holiday Season and Happy New Year 2014. We are finishing a successful year of operation. I thank the Board of Executives, Councillors, Volunteers and members of Scarborough Chapter, without whose support we could not have achieved this success.

Our monthly BOE meetings had good attendance, including members-at-large and newly licensed engineers, and other volunteers actively participating.

Our 10th year of BBC was successfully completed on March 23, and our eighth year of Mathletics was completed successfully on October 5. Both these events were managed by volunteers new to the program and they did an excellent job. This exposed more of our volunteers to project management.

We had a very well attended Certificate Presentation Ceremony on June 12, at which 37 new engineers received their licences.

PEOSC organized a very successful "All Candidate debate" on July 23 for the Scarborough-Guildwood riding byelection scheduled for August 1. The event had wide TV and newspaper coverage. We are proud to say that Scarborough Chapter was awarded the annual Chapter GLP Award for 2013 at Queen's Park on October 9.

We organized a number of technical seminars that were well attended and appreciated by all present.

The Chapter AGM is scheduled for January 18, 2014. We request our members to take an active part in the management of the chapter, as well as become volunteers, on whom the chapters depend heavily for their performance.

The PEO council election is due in late January next year, and we request all our members to participate by casting their valuable vote. Please do not allow your vote to go waste.

We also welcome suggestions from you for how we can better serve you, our members. You may email us at: scarborough@peo.on.ca

Board of Executives 2013

Post	Name
Chair	Madu Suthanan, P.Eng.
Vice Chair	Dr. Jega Jeganathan, Ph.D., P.Eng.
Past Chair	N. Asogan, P.Eng.
Secretary	Syed Raza, P.Eng.
Treasurer	Ranee Mahalingam, M.Eng., P.Eng., FEC
Executive	David Dias, P.Eng.
Executive	Lan (Victor) Lin, P.Eng.
Executive	Miles Mailvaganam, P.Eng.
Executive	Raji Puthurath, P.Eng.

How to contact the board:

Email – scarborough@peo.on.ca.



Chapter Activities – Summary since July 2013

- Technical Seminar, July 25, 2013 – Ontario Roads, where are they leading.
- Technical Tour, August 17, 2013
- Annual Family BBQ, September 15, 2013
- Mathletics 2013 – October 5, 2013
- Technical Seminar, November 5, 2013 – West Toronto Diamond Interchange – Metrolinx GTS Project.
- Mechatronics 2013 – Postponed to 2014

Upcoming Events 2013 / 2014

- Aspiring Engineer Scholarship Presentation – December 7, 2013
- Volunteer Appreciation – December 7, 2013
- PEOSC Annual General Meeting AGM 2014 – January 18, 2014.

Details of events can be found on the chapter website – www.scarborough.peo.on.ca

Mathletics Competition – 2013

Syed Raza, P.Eng.
Secretary, PEOSC

The 2013 Annual Mathletics was held at Scarborough Civic Centre on Saturday, October 5. This year, 100 students registered in the Junior category, 42 in the Senior category.

Mathletics is a competition designed by engineers to demonstrate the application of mathematics in everyday life. The questions show the significance of mathematics in science and engineering. It provides an excellent opportunity to inspire young students to become future engineers and scientists.

Several dignitaries attended the event and spoke to the students, including Councillor Raymond Cho, PEO Councillor Dr. Santosh Gupta P.Eng., PEO Councillor Changiz Sadr, P.Eng., MPP Soo Wong, and PEO Vice President Thomas Chong P.Eng.



PEO Licensure Assistance Program – 2013

Lin (Victor) Lan, P.Eng.
2013 Project Manager

The PEO Licensure Assistance Program is a program that links engineering interns (interns) with professional engineers (guides) licensed with PEO to provide the interns with guidance and support as they progress toward professional licensure status. The 2013/2014 program launching and training session for Scarborough Chapter Licensure Assistance Program was held on September 28, 2013. This program will run for six months. There are 16 P.Engs (guides) and 29 EITs (interns) registered. More P.Engs are encouraged to come forward to help the EITs.

Aspiring Engineer Scholarship – 2013

Dr. Jega Jeganathan, Ph.D., P.Eng.
2013 Project Manager

Each year, PEO is pleased to award two scholarships, for one male and one female

graduating high school student, each worth \$500. Consolation scholarships are also awarded for four students by the PEO Scarborough Chapter from the selected interviewees. The awards will be presented to the winners during the Volunteer Appreciation Event in December 2013.

Technical Tour – Sir Adam Beck Generating Station

Dr. Jega Jeganathan, Ph.D., P.Eng.

Scarborough Chapter organized a technical tour on August 17, 2013 to visit Sir Adam Beck II Generating Station and a Vineyard in Niagara Region for chapter members and volunteers. Around 40 members and volunteers participated.

The Generating Station (SAB 2) is the largest hydroelectric generating station in Ontario. The visitors learned about Ontario Power Generation's operations in Ontario and the recently completed Niagara Tunnel Project. All the visitors visited the public tour area at SAB 2 on the generation floor.

The second part of the field trip was a tour of the Ravine Vineyard Historic Estate Winery. Visitors learned about the fascinating history of the beautiful family run winery.



Family BBQ - 2013

N. Asogan, P.Eng.
2013 Project Manager

The Annual BBQ was held on September 15 at Bluffers Park. It's a family event and a fun day to mingle with the families of PEOSC members. The participants had a great time.



Technical Article: Greenroads – A Sustainable Solution to Roadway Projects

Rooban Markandu, M.Eng., P.Eng.

Total Canadian transportation energy demands are the second largest end-use sector in the country, based on Natural Resources Canada statistics (2006).

In 2006, the on-road passenger transportation sector consumed about 13 per cent of total end-use energy consumption in Canada. The energy consumed to construct a 1 km of a single-lane road is greater than the energy consumed in over 30 North American households for a year. Still, constructing new roads and re-constructing or widening existing roads is inevitable, due to growing traffic demands and aging of existing roads.

Sustainable development allows for present needs to be met without compromising future generations' ability to meet their own needs.

There are various sustainable solutions in practice now, some of which are mandatory local municipality requirements. Today, different roadway projects use different sustainable practices. However, there is a definite need for a sustainable rating system that is quantifiable.

Greenroads Rating System is the first of its kind to quantify sustainable attributes of a roadway project. A "greenroad" is defined as a roadway project that has been designed and constructed to a sustainability level that is substantially higher than current common practices.

Greenroads, a voluntary third-party system, seeks to recognize and reward roadway projects that exceed public expectations for environmental, economic, and social performance. The system defines 11 project requirements that are essential for a roadway project to qualify for a sustainability certification.

In addition to the project requirements, there are 37 voluntary credits – each assigned a point value from one to five, depending on their impact on sustainability. The total point value from these voluntary credits is 108. Greenroads Rating System also recognizes sustainable practices not defined by the rating system by providing up to 10 points for custom credits. To be Greenroads certified, a roadway project must meet all the project requirements, as well as earn a minimum of 32 voluntary credits.

Greenroads also offers four levels of certification, including Certified, Silver, Gold and Evergreen. These certification levels are based on the points earned from voluntary credits and they recognize the sustainability commitment achieved by a roadway project.

The benefits of using the Greenroads Rating System include:

1. *Lower initial costs* – As the system emphasizes effectiveness in project execution and innovation to reduce waste during construction, total project costs are expected to be low. For example, encouraging recycling or reusing of old materials is a common practice in the Greenroads Rating System.
2. *Lower lifecycle costs* – Materials, technologies, and systems used in the Greenroads Rating System result in a reduced lifecycle costs.
3. *Lower user costs* – Traffic emission reduction, transit and high occupancy vehicle access, bicycle and pedestrian access, and safety audits are all part of the Greenroads Rating System. These will ensure that costs for users, such as traffic delay costs and accident costs are less on the Greenroads Rating System.
4. *Local economical development* – The Greenroads Rating System promotes locally sourced materials, promoting more jobs to strengthen the local economy.
5. *Higher property values* – Smart and durable roadway infrastructure will mean a favourable place to live and do business. This will lead to higher property values.
6. *Healthier communities and residents* – Multi-modal corridors will improve mobility and accessibility, leading to healthier communities.
7. *Reduced environmental impacts* – The Greenroads Rating System encourages protection and improvement of sensitive habitats. There is also less stormwater run-off with the rating system, meaning less negative impact to the environment.

Over the past five years, more than 100 projects have been used as case studies to test and refine the Greenroads Rating System. There are many projects that have already been certified, or are currently under review, in the United States. Greenroads is a relatively new system to have much momentum in Canada, but its use will promote sustainability on our future roadway projects.

GLP Activities at PEO SC

N. Asogan, P.Eng.
PEOSC GLP Chair

July 23, 2013 – Organized a “All Party Debate” for Scarborough Guildwood byelection. Eight candidates of 10 participated at the debate. Chapter and PEO members and members of the general public, totaling 89, participated over breakfast. Event was well covered by local news media and TV.

Aug, 25, 2013 – GLP Chair N. Asogan and Chapter BOE Executive Lan (Victor) Lin attended a BBQ and Corn Roast event organized by Soo Wong, MPP Scarborough Agincourt.

Oct. 9, 2013 – GLP Chair N. Asogan and GLP Member Madu Suthanan participated at the PEO Queen's Park day MPP reception.

Oct. 19, 2013 – Chapter participated in the 27th Renaissance Conference. Workshops in Transportation, Home Ownership and Youth Education were offered. Mitzie Hunter, MPP for Scarborough Guildwood, Bas Balkissoon, MPP for Scarborough Rough River, Hon. Brad Duguid, Minister of Training, Colleges and Universities and MPP Scarborough Centre, and Soo Wong, MPP Scarborough Agincourt, led the workshops.

Oct. 23, 2013 – Chapter participated in re-launch event for the SNAP Scarborough newspaper, where political dignitaries of Scarborough participated.

Awards & Recognition

Scarborough Chapter won the fourth annual Chapter GLP Award. PEO SC was selected for the award for the successful organization and hosting of the “All Party Debate” in July 2013 involving the candidates in the Scarborough Guildwood byelection. GLP chair N. Asogan received the certificate on October 9 at PEO's Queen's Park Day MPP reception.



At Queen's Park Day MPP reception: From left to right are PEO Councillor Rakesh Srivastava, P.Eng., PEO Vice President Thomas Chong, P.Eng., Scarborough Chapter GLP Chair N. Asogan P.Eng., MPP Scarborough Centre Brad Duguid, Councillor Dr. Santosh Gupta P.Eng., and Scarborough Chapter Chair Madu Suthanan, P.Eng.

2014 Council Elections – Call for Candidates

PEO members are invited to become candidates for the positions of President-elect, Vice President, Councillor-at-Large and Regional Councillor (one for each of PEO's five regions) on PEO council.

PEO's council comprises elected professional engineers, as well as members and non-members (i.e. LGAs) appointed by the office of the Attorney General of Ontario, to provide the overall direction for the association and the profession. Council positions are filled for one- or two-year terms, depending on the position.

Please visit the Run for Council page on PEO's website for more information about the positions on council and how to become a candidate.

http://www.peo.on.ca/index.php/ci_id/2006/la_id/1.htm

Nominations for council positions will be accepted until December 6, 2013 at 4:00 p.m.

Notice of PEO SC AGM 2014 – Call for Candidates

When: January 18, 2014

Time: 4:30 p.m. to 7:30 p.m.

Latest details can be found on the chapter website:

www.scarborough.peo.on.ca

All officers and executives will be elected at the Annual General Meeting. In accordance with the chapter bylaws, section 8, the chapter board consists of:

- four elected officers – Chair, Vice Chair, Treasurer and Secretary;
- the immediate Past Chair – not elected; and
- four elected executives.

If you are interested in serving the chapter board, please submit the Nomination Forms to the Search Committee Chair – N. Asogan, P.Eng., before January 4, 2014 at agm@peoscarborough.ca.

Nomination forms are available on the PEO SC website – see under AGM 2014. Please consult chapter bylaws for eligibility criteria.

Editor: Syed Raza, P.Eng.

We welcome our readers' contributions:

- Articles of engineering interest, and subjects of interest to the engineering community (within guidelines of PEO).
- Suggestions for future events – seminars/technical visits/ workshops, etc.
- Suggestions for improvement of newsletter/website.

Contact: editor@peoscarborough.ca; website:

www.scarborough.peo.on.ca.