

SEABC NEWSLETTER

CONTENTS

TITLE	PAGE
Message from the President	2
Vancouver Island Branch	
IStructE News	
Young Members Group	
Technical Committee Update	
First Place for BCIT Students	
Bridge Subcommittee	
Tynehead Update	8
SEABC/APEGBC Agreement Renewed	9
Education Committee	9
On the Web	
Forum Digest	
Ask Dr. Sylvie	
Advertising	
Mark Your Calendars	

Published by the Structural Engineers Association of BC

Executives / Board of Directors

President: Cameron Kemp Past President: David Davey Secretary / Treasurer: Surinder Parmar Other Directors: Renato Camporese, Paul Fast, Adrian Gygax, David Harvey, Stephen Pienaar, Andrew Seeton, Rob Simpson, Carlos Ventura, Bill Alcock, Cam Smith Communications Committee Chair: David Harvey CSE Organizing Committee Chair: John Pao Education Committee Chair: Cam Smith Structural Practice Chair: Leonard Pianalto Technical Committee Chair: Renato Camporese Young Members Group: Ilana Danzig Newsletter Editor: David Harvey Assistant Editor: Catherine Porter; newsletter@seabc.ca Webmaster: Stephen Pienaar; webmaster@seabc.ca

ISSUE No. May 2011 014

- SEABC's Newsletter is both edited and managed by The Communications Committee. newsletter@seabc.ca
- Submissions to the newsletter are encouraged and all members of the SEABC are asked to actively participate in contributing to our newsletter. Submissions letters to the Editor, questions and comments can be sent to: newsletter@seabc.ca
- SEABC editing staff reserve the right to include or exclude submitted material and in some cases edit submitted material to suit overall space requirements. If submittals are not to be edited, please advise editor at submission time.

May 2011

Message from the President

May 2011 By Cameron Kemp, P.Eng.; SEABC President

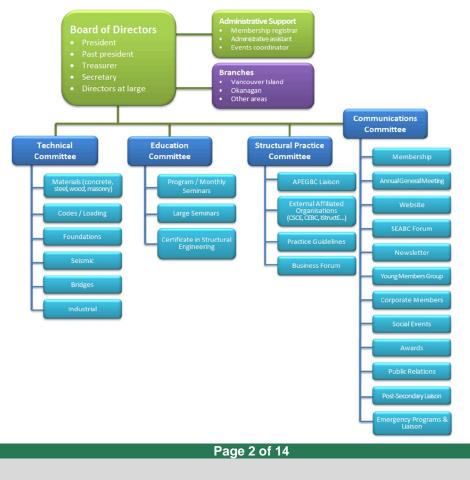


In my first message as the incoming president of SEABC I would like to acknowledge our outgoing president, David Davey, for his major contribution to the formation of the SEABC.

During his three-year term as our inaugural President David oversaw the formation of the SEABC from an idea to a fully functioning association with almost 900 members. Thank you, David! Well done! Given the strong start David and his group have given to our Association the question then becomes "Where to from here"? What should we focus on to make it better? This is your Association and we are here to serve you. Over the next few months the SEABC's Board will find ways to reach out to you and ask you how they feel about services you already receive and what we might do to increase our value to you. As a reminder the original organizational chart developed for the SEABC is as noted below. Most, if not all, of the noted subcommittees have been formed and are active.

The feedback that we have received has reinforced the value our members place on our ongoing technical education program through our Education Committee, our website as a repository of information relevant to structural engineers and our quarterly newsletter as a means to update our members on relevant news and to flag upcoming events and activities. Based on this feedback we will continue to strengthen these parts of our service offering.

We welcome your input with respect to the future development of the SEABC. If you would like to offer guidance or suggestions prior to our outreach program please drop an e-mail to: <u>president@seabc.ca</u> and I will convey your input to the Board. Remember, this is your organization. Let's continue to work together to make it a relevant, topical and valuable resource to our structural engineering members.



May 2011

Vancouver Island Branch

Thor A. Tandy, P. Eng, Struct. Eng.

Mission:



To provide a focal point for SEABC members on the Island to meet, discuss SEABC issues and take benefit in the form of exchange items of technical interest.

Future Webinars:

The Chapter will be obtaining membership in ASCE so that we can organize more participation in those webinars

2011 Branch Delegates:

Thor Tandy will steer the Branch with assistance from Brian McClure and Sharlie Huffman.

Branch Demographic:

1) A group of approximately 15 members in the local Victoria, Gulf Islands area.

2) A central Island group centred on the Nanaimo, Port Alberni area.

3) A small North Island group.

ASCE Membership:

The Chapter is now a member of ASCE for 2011 and we are monitoring webinars of interest.

Proposed Events:

Seminar on the Christchurch EQ – Date TBC
General meetings.

Member Participation:

This looks to be a busy year for everyone so I encourage comment/suggestions/assistance from the local membership.

Contacts:

Victoria/Gulf Islands:

Central Island: North Island: Thor A. Tandy, Brian McClure, Sharlie Huffman Dan Fell Ralph Watts

IStructE News

By David Harvey, P.Eng, Struct.Eng.



The IStructE President, Professor Roger Plank, is now well into his presidential year. Roger has already received visitors from China and Hong Kong and represented the Institution at a number of events organised by other institutions. He has also presided over technical

presentations; the James Sutherland History Lecture: meetings of the Executive Board and Council; and visited many of the Branches in the United Kingdom and Ireland. During the visits he received a warm welcome, witnessed the variety of activities undertaken, and was able to speak first hand with a broad spectrum of members. Matters covered during the visits included meetings with members; site visits; social events; student prizes; a fellows forum; local projects; and media relations.

Roger has made two overseas trips to India, and the UAE/Qatar, during which he noted:

- The UAE has established a strong presence in a very short time
- There are good prospects in Qatar to establish a presence
- In the UAE, IStructE may play a role in the UAE in a plan to license engineers.
- India is developing rapidly and there is a real ambition to develop greater activity across the country.
- Indian employers are looking to professionally qualify their staff to gain a competitive edge.
- There is interest in holding presentations by IStructE members visiting India.

Page 3 of 14

May 2011

Institution membership standards are widely recognized abroad.

Ideas generated during Roger's visits included:

- How best to share local technical presentations whether as seminars or formal CPD courses.
- Sending young practitioners to present their experience to meet final year students.
- Holding student competitions followed by an informal social event.
- Establishing mentoring for Chartered Membership exam candidates.

Other suggestions to IStructE included:

- Organizing public meetings on high profile projects.
- Publishing typical career profiles of members.
- Expanding members directory to include areas of expertise.
- Holding technical meetings at lunch time rather than in the evening.
- Considering regional activities and events.
- Networking at IStructE Regional Groups.
- Promoting the value and recognition of IStructE Fellowship.

Roger's other activities have included informal meetings with other built environment organizations to discuss BIM, client service, and other matters of interest; attending a tribute for IStructE Past President Michael Dickson; and a visit to London's visitors from China and Hong Kong Olympic Park. During the visit Roger noted that the guide referred to each building architect and not the structural engineers – a reminder that we need to better promote our contribution to building landmark structures.

Upcoming signature events include Alan Mann's Gold Medal Address, *Sharing Knowledge*, and the 2011 Structural Awards.

It has been a busy year for Roger but he is working hard to meet with members – a task he greatly enjoys, and to unite the structural engineering profession across the world. Keep up the good work, Roger!

Young Members Group

By By Ilana Danzig, EIT, LEED AP



The Young Members Group has had an eventful few months. Due to the resounding success of a tour held in October of last year, the YMG hosted a second site tour of the BC Place Revitalization Project in February.

Once again the tour was led by Adam Patterson of Genivar, who shared his considerable knowledge of the entire project, including the extensive structural upgrades as well as the new roof.

The tour provided approximately 20 SEABC members with an up close and personal view of the landmark project as well as an opportunity to learn some of the unique structural engineering challenges faced by the design team. The tour covered many areas of the massive building including the impressive masts and network of cables for the new roof. Afterwards, a number of the tour goers stopped for a beverage to chat, network and continue to the discussions on the fascinating project.



B.C Place

This April, we once again participated in the 'Greater Vancouver Regional Science Fair' at UBC. We sponsored a \$250 prize for a science fair project related to structural engineering and were thrilled to award it to Christopher Matthews, a very eager Grade 7 student from Summit Middle School in Coquitlam.

Christopher looked at three different types of bridges, built models of each out of popsicle sticks and tried to

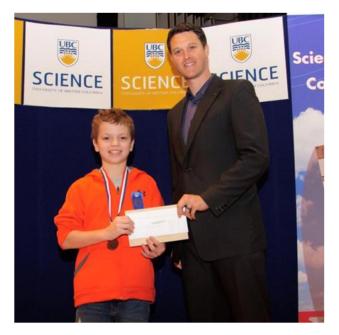
May 2011

determine which performed the best. It was clear he had done extensive research and was passionate about bridges.

It is great to see a young structural engineer in the making, and to have a part in encouraging that passion!



Christopher Matthews, winner of the science fair project.



Christopher Matthews receiving his award from Kevin Riederer.

In early May, we held our third annual Registration Assistance Seminar which Dr. Steven Kuan returned to lead. Steven did a fantastic job providing EIT's and engineers with useful information relating to P.Eng and Struct.Eng registration. Jason Ong from APEGBC was also in attendance to answer questions. We donated proceeds from our event to the Red Cross Disaster Relief Fund.

To further assist in Struct.Eng. Registration, we will be holding an 'International Qualifications / Registration Seminar' in June. This seminar will provide information on the international exams required to obtain Struct.Eng. registration such as the I.Struct.E, and the SE. This seminar is coming up soon so keep an eye out for the email!

Kevin Riederer, the chair of the group stepped down in March, and I stepped in as his replacement. Kevin is still very involved in the YMG, and has been doing a great job of showing me the ropes. All of the volunteers in the YMG committee provide the passion, hard work, and dedication to allow us to keep fulfilling our goals of networking, professional development, registration assistance, communication, and outreach.

Overall, we try to add value to the SEABC membership, particularly for new or young engineers. We encourage SEABC members to continue to contact us with feedback and suggestions for future events.

YMG Committee:

Ilana Danzig, EIT; Genivar Grant Fraser, EIT; Associated Engineering Dominic Mattman, EIT; Read Jones Christoffersen Kevin Riederer, P.Eng; Read Jones Christoffersen Michael Roberts, P.Eng; Section T Consulting

McElhanney Expands to Victoria with Structural Expertise

McElhanney provides integrated engineering, geomatics and environmental services in the fields of transportation, structures, land development, environmental sciences, drainage, water supply, sewage treatment systems, and resource development. The firm has completed projects throughout Canada, the United States and in over 70 other countries.

After a century of success, McElhanney has established a permanent presence in Victoria from its merger with Sargent & Associates Engineering Ltd. Sargent is a trusted provider of structural engineering services throughout Western Canada since 1998.

This merger will reinforce McElhanney's commitment to provide enhanced solutions to our clients and project partners in the industry. Operating as a McElhanney Company, Sargent & Associates will be led by founder Dennis Sargent, M.A.Sc., P.Eng. The strong multidisciplinary team in Victoria will also provide other specialized services including transportation planning, surveying, LiDAR and mobile mapping services, and environmental consulting.

> Tel: 250 370 9223 vancouver@mcelhanney.com www.mcelhanney.com/mcsl

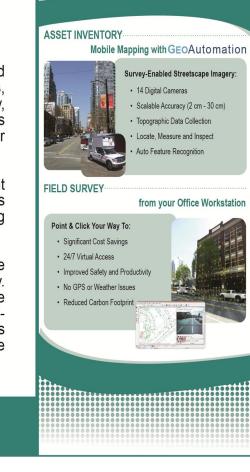
Technical Committee Update

By Renato Camporese, P.Eng. Struct.Eng. Chair SEABC Technical Committee



The 2010 edition of the National Building Code of Canada has been published and is now available to the public. The B.C. Buildings and Safety Standards Branch, in a March Bulletin, have advised that the next edition of the BC Building Code, adopting the 2010 NBC, will not be become effective

until the fall of 2012. This poses a dilemma for structural engineers who are bound by the code of ethics to "hold paramount the safety, health and welfare of the public..." and by current knowledge in the field; and by City and Municipal requirements which require conformance with the currently adopted code. How



Celebrating 100 years of quality service in Canada

www.mcelhanney.com/mcsl

should structural engineers proceed for the next 18 months until the new codes are adopted? SEABC is currently developing a 'best practices' guideline to assist structural engineers in this regard. It will be published shortly.

The work of the Guards Task Group is nearing completion. Robert Jirava, P.Eng. will be making a presentation on this topic on June 8th. Additional details will be provided shortly.

The Seismic Design of Basement Walls Task Group, have been continuing the analytical work commenced by Ernie Naesgaard last year. Under the direction of Professor Mahdi Taibat, grad. student, Alireza Ahmadnia, has refined the soil-structure model and completed the analysis of a 4-level basement wall designed to the requirements of the 1995 NBC, (which was based on earthquake levels with a 10% probability of exceedance in 50 years).

The intent of the study was to assess whether a wall designed to this level of earthquake would be safe

May 2011

when subjected to the current design earthquake with a 2% probability of exceedance in 50 years. A paper summarizing the results of this analysis will be presented at an Earthquake Engineering Conference in Corfu, Greece later this month.

The question of how best to design basement walls for the larger seismic retaining pressures however has yet to be answered. The task group is continuing to work on this issue with results expected by the end of the year.

The temporary structures task group have prepared a rough draft of a demolition guideline. The group is meeting later this month to continue development of the document.

First Place for BCIT Students

By Jonathan Klop

The CSCE club at BCIT is proud to announce a first place finish for BCIT Civil Engineering students in the



ACI FRP Composites Competition at the ACI Congress in Tampa, Florida.

Two teams consisting of 2nd and 4th year civil engineering students participated in the April 2011 event. The objective of this competition was to design and build a fibre-reinforced polymer (FRP) concrete

structure (beam or truss) within the specified dimensional constraints, which was then tested with a mid-span point load. The evaluating criterion was the strength-to-cost ratio.

BCIT Civil Engineering Faculty member Dr. Rishi Gupta accompanied the teams as an advisor. His expertise in the field of FRP composites proved to be a valuable asset to the participating students; Iraj Manshadi, Ilario Ghilarducci, Sarah Wilson, Shaun Loader, and Darcy Palombi. The winning design was a "strut-and-tie" type truss structure with concrete compression struts and a horizontal FRP bar as a tension tie.

The competition was attended by over 50 schools from the United States, Mexico Canada, and as far away as India. Some of the major universities at the completion were Penn State University, the University of Houston, Queens University, and the University of Toronto.

The CSCE club executives and participating students sincerely thank SEABC for their generous sponsorship of this event.



L-R: Shaun Loader, Iraj Manshadi, Dr. Rishi Gupta, Sarah Wilson, and Darcy Palombi (missing: Ilario Ghilarducci)

Bridge Subcommittee Update

By Alfred Kao, P.Eng.



The next meeting of the SEABC Bridge Committee is scheduled for 2:30 pm Tuesday June 21 at Klohn Crippen Berger, 500 - 2955 Virtual Way, Vancouver, BC, one block NE of the Renfrew Station on the Millennium Line.

If you would like to join the committee or would like to receive future updates, please contact Alfred Kao at Associated Engineering, (604) 293-1411 or kaoa@ae.ca.

May 2011

Tynehead Update

By Shane Cook P.Eng.



Rapid progress has occurred recently at the Tynehead pedestrian bridge site – see *Triple-Jump for Tynehead,* Issue 11, August 2010. The contractor has completed the substructure and the superstructure arches are being assembled on site.



The first Tynehead arch is positioned by two cranes.

The steel superstructure and bearings, complete with railings and metal decking are lifted into position by two cranes. The northern arch which crosses the Kinder Morgan right-of-way was erected in late April and everything went smoothly. Installation of the arches above the freeway is being carried out at night.



Night-time erection of the centre span.

The centre arch was erected in early May and required a night-time detour of the westbound highway lanes through the city. Once again everything went well but there was not much time to spare.

Erection of the southern arch occurred on May 16; the contractor gained experience from the previous lift and had a little more time in hand. The erection of each arch is followed by casting of the concrete topping. Prior to erecting each arch the LED lighting system is tested. Following approval by the City Arts Council, a lighting scheme was developed which will take advantage of the bridge's prominent location. Look out for some interesting bridge colours in Surrey later this year.



Arch Errection Completed

Page 8 of 14

May 2011

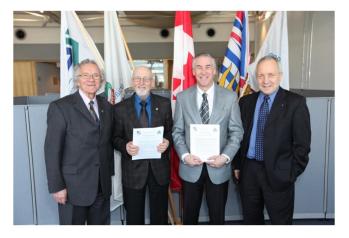
SEABC/APEGBC Agreement Renewed

By David Harvey, P.Eng, Struct.Eng

SEABC recently renewed its operating agreement with APEGBC. The agreement covers joint activities between the two organizations, and allows SEABC the flexibility it needs to be involved in the technical and educational aspects of structural engineering while acknowledging APEGBC's regulatory authority. The agreement was first signed in 2008 when SEABC was created and is scheduled to be re-signed every three years. No significant changes were needed in preparing the 2011 agreement.

Newly installed SEABC President Cameron Kemp commented:

"Signing this agreement is my first official duty since being elected as SEABC President. I am pleased to be renewing our agreement with APEGBC which has significantly benefitted both organizations over the past three years. I look forward to continuing cooperation with APEGBC during my term as President".



Pictured at the signing ceremony at the APEGBC offices are (left-to-right): Derek Doyle, APEGBC Chief Executive Officer; Frank Denton, APEGBC President; Cameron Kemp, SEABC President; and David Harvey, SEABC Director.

Education Committee Update

By Andrew Seeton P.Eng., M.A.Sc. SEABC Education Committee



2011 SEABC Annual General Meeting

The Education Committee coordinated logistics for the 2011 SEABC AGM, held March 7th at Sutton Place Hotel in Vancouver. The event was well attended by over 80 members who enjoyed a 3-

course meal as they heard an update on SEABC activities from outgoing President David Davey. The minutes from the business portion of the meeting are archived on the SEABC website.

A special presentation was made to Fran Abbuhl, who served many years as Secretary to the Vancouver Structural Engineers Group Society and the SEABC Education Committee. John Pao, (Chair, SEABC Certificate in Structural Engineering Program), gave an overview of the proposed MEng in Civil Engineering Design which would be a collaboration between CSE and UBC.

Incoming President Cameron Kemp recognized SEABC's Inaugural President and first Lifetime Member, David Davey, for his invaluable contributions in leading SEABC through its formative years.



Photo: Incoming President Cameron Kemp (left) with SEABC's Inaugural President and first Lifetime Member, David Davey (right).

The evening's keynote speaker was David Campbell, P.Eng. of Geiger Engineers (New York). David delivered a fascinating account of the design and construction of the BC Place roof replacement project. The new retractable roof is the largest of its kind in the world and the first of its type in North America.

SEABC gratefully acknowledges the following sponsors of the evening:

Allnorth Consultants Ltd Associated Engineering Berris Mangan Chartered Accountants Canadian Wood Council Geiger Engineers Glotman Simpson Consulting Engineers Masonry Institute of BC PROKON Software Consultants

Door prizes were awarded consisting of complimentary SEABC seminar registrations (won by Shannon King and Scott Lopston) and a 1 year full license of the PROKON Structural Analysis and Design software suite (won by Tom Abbuhl).

Evening Seminar: Fiber Reinforced Polymer

A free evening seminar was held on April 20, 2011 at UBC Robson Square in Vancouver. Speakers John Sherstobitoff and Primo Cajiao, of Ausenco Sandwell, shared their vast knowledge of FRP applications to structural engineering. The presentation included an overview of FRP fundamentals and applications, as well as a detailed case study example. The seminar was attended by 60 SEABC members – those who missed it will be able to view the video recording to be posted at:

www.seabc.ca/seminar downloads.php

Upcoming Events

Check the SEABC website for details on the following upcoming events:

- May 18: Evening seminar on Buckling Restrained Braces, presented by Adam Patterson (Genivar).
- May 31: Free Public Seminar on the 2011 Christchurch, NZ Earthquake, presented by Dr. Ken Elwood (UBC) and Mr. Pat Ryan (City of Vancouver).
- July 27: Evening Seminar on the work of the SEABC Task Force on Guardrails, presented

by task force leader Robert Jirava (RDJ Structural Designs Ltd).

 August 12: Full day seminar on Performance-Based Plastic Design of Earthquake-Resistant Steel Structures, presented by Dr. Subhash Goel (University of Michigan).

Did You Know?

The complete Soil-Structure Interaction Seminar webcast, recorded June 25 & 26 2010 at UBC, is now available for viewing by SEABC members!

www.seabc.ca/seminar_downloads.php

On the Web

By Stephen Pienaar, P.Eng; SEABC Webmaster



I am pleased to announce new online services for members and report on some exciting things in the works...

New Public Directory of Structural Engineering Firms

The mission of the SEABC Corporate Committee is to serve the interests of the corporate members of the Association. Even though the definition of "Corporate Membership" is still being debated, the Committee has started work by organising breakfast meetings. It is now taking the next step of establishing a Directory of Structural Engineering Firms.

SEABC is receiving enquiries from members of the public on an almost weekly basis. Somebody wants to have handrail designed, a seismic assessment performed, have a structural renovation done, etc. The new Directory of Firms will feature prominently on the SEABC websites and help the public to find a structural engineer who can perform the work needed. After the public, the biggest beneficiaries will likely be small practitioners. However, the Directory will be open to all our members, regardless the size of their firms.

We invite all members to submit their company details for listing in the Directory. Please point your web browser to <u>www.seabc.ca/corporate</u> and submit the application form. The application form enquires about specific skills and operations of your firm. Please be thorough and accurate, and coordinate with your

May 2011

colleagues to ensure that your firm submits only one application.

Resource Sharing with IStructE

The Communications Committee is currently in discussion with IStructE to investigate avenues for sharing online resources such as seminar recordings, course material, and other technical documents. We aim to move forward with this in the not too distant future.

More Seminar Recordings

The Educations Committee recently made the following recordings available online:

- Sustainable Structures: Evening seminar held on February 16.
- Soil-Structure Interaction: Two-day seminar held in June 2010.

To view the recordings, go to <u>www.seabc.ca/seminar_downloads.php%20</u> (member login required).

Suggestions

We welcome your comments for improving our website and online member services. Please send your suggestions to webmaster@seabc.ca or post it on the SEABC Forum.

Forum Digest

By Stephen Pienaar, P.Eng, SEABC Webmaster

Below is a summary of current topics of discussion on the **SEABC Forum**:

- David H's topic on the Christchurch earthquake continues to draw comments. The IPENZ facts sheet has been downloaded more than 100 times! <u>Read more ></u>
- Air your opinion on the questions raised by Michael R regarding Vancouver's readiness for the next big earthquake. <u>Read more ></u>
- Donald J has a question about the **design of** laterally unsupported members with S16-09.

David H posted an interesting reference to research on **eco-friendly concrete**. <u>Read</u> <u>more ></u>

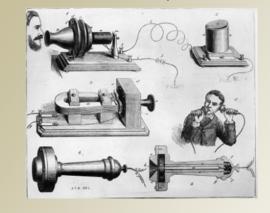
May 2011

 Wood WORKS! Reports on a fire during construction of six-storey wood-frame building. <u>Read more ></u>

Your SEABC membership automatically grants you access to the SEABC Forum. If you are not using the Forum yet, you are missing out on an exciting online service. Help us build a **support network** for the local structural engineering community and establish an **invaluable resource of information**. Please do not delay, log in at <u>www.seabc.ca/forum</u> and start using the Forum today!

New Phone Number

True to its character of innovator, the SEABC has acquired a dedicated phone number. Yes, we have discovered the telephone!



We are proud to announce the immediate availability of our new phone and fax number:

+1-85558-SEABC (+1-855-587-3222)

Calls and faxes to this number are toll-free. Given that we have no full-time staff, we use a virtual telephone assistant to direct your calls to the relevant person. Please do leave a message if the person is not available.

Page 11 of 14

May 2011

VOLUNTEERS NEEDED

The success of the SEABC's activities rely heavily on volunteer effort. Help is always welcome. Right now, we have specific needs in the following areas:

The **Educations Committee** is looking for members to help plan and execute seminars. Candidates should preferably be intermediate to senior structural engineers that have a good grasp of the current technical and practice issues. If you are able to contribute your time and experience, please contact Cameron Smith at education@seabc.ca.

The **Young Members Group** is looking for young structural engineers (under the age of 35) who are passionate about structural engineering and interested in getting involved. The YMG wants to build on past successes and create more value in SEABC membership. They are looking for someone with ideas and who wants to help organise and execute seminars, tours, outreach and networking events. If you are interested, please email Ilana Danzig at ymg@seabc.ca with a little bit about yourself and any ideas you may have.

If you feel drawn to any of the other SEABC activities, please inquire at info@seabc.ca.



May 2011



CISC published Ask Dr. Sylvie articles in Advantage Steel up until Edition 34 available at: <u>www.cisc-icca.ca/content/publications/</u> <u>publications.aspx</u>

See also the list of CISC technical resources at:

www.cisc-icca.ca/content/technical/default.aspx

Advertising

If you would like to advertise in our newsletter and our website, our pre-paid rates per edition are \$270, \$360 or \$450 plus HST for a quarter, half, or full page advertisement, respectively.

50-word "Available for Employment" ads are free.

Please address advertising enquiries to: <u>newsletter@seabc.ca</u>

Please support our advertisers

Mark Your Calendars

Seminars

Guardrails (includes summary of work by SEABC Taskforce on Guardrails):

Robert Jirava, P.Eng., Struct. Eng. July 27, 2011 Room C300, UBC Robson Square, 800 Robson St. Vancouver BC Refreshments 6:00pm, Presentation 6:30pm

ASCE Live interactive Web Seminars

Antiquated Structural Systems May 24. <u>More info...</u> An Introduction to Life Cycle Cost Analysis for Sustainability and Green Building Design May 26. <u>More info...</u> Designing Buildings with Overhead Cranes June 7. <u>More info...</u> Design of Building Foundations: Practical Basics June 10. <u>More info...</u>

Site Registration Option: Use the <u>SEABC Forum</u> to arrange a get-together with other SEABC members and share the costs of a single site registration

Page 13 of 14

May 2011

Seminar Recordings

Soil Structure Interaction

This seminar offered a guided tour through the various ways of accounting for soil-structure interaction (SSI) from analysis of the total soil-structure system to analysis of various approximate models of the system. The focus was on buildings and bridges, with both shallow and deep foundations. The seminar highlighted the benefits of including SSI analysis, from the perspective of improved understanding of actual system behaviour as well as improved efficiencies in structural designs that can be achieved.

Presenters included prominent members of the engineering community and academia. The seminar was presented by SEABC and co-sponsored by UBC Department of Civil Engineering and The Canadian Society for Civil Engineering Vancouver Section.

The seminar recording includes the presentations of both days, organised by topic. To view the seminar or select topics, open your web browser at <u>www.seabc.ca/seminar-</u> <u>downloads</u> and log in using your membership number and password. (If you have not activated your online profile before, you will need to do so before logging in.)

Department of Civil Engineering THE UNIVERSITY OF BRITISH COLUMBIA

Presents:

Free Public Seminar: Christchurch Earthquake and Lessons for BC



UBC Seismic expert **Dr. Ken Elwood** was in Christchurch New Zealand when the M 6.3 earthquake rocked the city and led to 184 confirmed deaths and an estimated \$20 billion (NZ) in damage. Deputy Chief Building Official **Pat Ryan** was part of a team sent from the City of Vancouver to both learn from and assist in the recovery efforts in Christchurch. Join with us as they share their observations from experiencing the earthquake first-hand and assisting with building assessments in the immediate aftermath through to the ongoing response issues around dealing with damaged buildings, business and social impacts and challenges of recovery in the city. Discover the important lessons for Vancouver and Canada.

Tuesday, May 31, 2011 Refreshments 6:00 pm, Presentation 6:30-8:00 pm

Room C300, UBC Robson Square, 800 Robson Street, Vancouver, BC

Seating is limited. Pre-registration is recommended at www.seabc.ca/Christchurch.

For more information: visit www.civil.ubc.ca

Co-sponsored by: UBC Faculty of Applied Science & Structural Engineers Association of British Columbia (SEABC)







UNGINEERS

SAVE THE DATE September 22-23, 2011

SEAW SEAO SEAI SEABC

Hosted by Spokane & South Central Chapter SEAW

Featured Speaker Ronald O. Hamburger, S.E., Senior Structural Principal Simpson Gumpertz & Heger "Next Generation of Performance Based Design"

Location Red Lion Inn at the Park - Spokane, Washington

EARN UP TO 10 PDH'S, INNOVATIVE TECHNICAL TOPICS PROFESSIONAL NETWORKING, YOUNG MEMBER'S FORUM

Contact seaw@seaw.org to participate.





PACIFICAD

