



SEABC NEWSLETTER

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ISSUE No.
015

August 2011

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- 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.

Message from the President

August 2011

By Cameron Kemp, P.Eng.;
SEABC President



Engaging with Two Important Demographic Groups

As part of our analysis to better understand the makeup of our Association we have asked our webmaster, Stephen Pienaar, to give us a demographic of our membership.

He recently reported that we currently have 828 members including 255 student members. He went on to say that, including student members, approximately 32% of our total membership is under the age of 25. This group is the largest demographic slice taken in 10 year intervals starting at age 25. The balance of the membership is approximately evenly distributed in 10 year intervals with the exception of members older than 65 years (not surprisingly).

As I look around the table at the Board of Directors I see a group primarily comprised of “gray haired” or “no haired” men. While I believe it is appropriate to have the majority of the Board made up of experienced, senior individuals I believe we are under-represented at the Board level by younger people. As we have discussed our demographic profile, the Board is in agreement with me that we need to have a more direct conduit to the younger members of our profession.

As a result the Board has approved the creation of a new seat at the Board to be represented by the current Chair of the Young Members Group. Ilana Danzig, as the current chair of the Young Members Group, has been approached and has accepted our offer to join the Board of SEABC. We have already met with Ilana to seek her input as to how we could better engage with this younger group and she has come back to us with a number of ideas. The Board, once we reconvene in September, will consider these suggestions and, where they are in agreement, will act on them.

If you fall into this demographic slice and have ideas in this regard I encourage you to contact Ilana and give

her your suggestions. We will set up an e-mail address for her within the SEABC website shortly so look for it and send her your ideas.

The younger members of our Association represent its future and we believe they should have a greater say in how the Association represents its members.

As a bonus, Ilana is also our first female Board member and so is also a spokesperson for this demographic group as well.

I don't have a breakdown on the male/female membership split in our Association but my hunch is that it is still heavily male-dominated and that we are well behind other professions such as architecture, accounting, law, medicine, etc. Part of the Board's future focus will be spent on finding ways to encourage more women to enter our profession.

We welcome Ilana to the Board and look forward to her input and insights to our deliberations as a spokesperson for these two important demographic groups.

IStructE News

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



IStructE continues to add value to worldwide structural engineering, while prospering in challenging times. While commercial activities are less than in previous years, membership has continued to climb and the percentage of overseas members now exceeds 35% and is rising. President, Professor Roger

Plank recently noted that this was “a remarkable achievement which reflects well on the Institution and its members”.

Council Away Days

It was my privilege to attend the Council Away Days in July which were held at Dorney Lake, near Windsor, UK – the site of the 2012 Olympic rowing events. This excellent venue was only overmatched by the excellence of the various discussions that took place!

The first event that I attended was a meeting of the International Interest Group which focused on the thoughts of the worldwide delegates on these important topics:

- How the Institution can raise its profile?
- How the Institution can attract new members?
- How the Institution can retain the enthusiasm of its existing members?
- How the Institution can assist its international groups to reach out to other geographic areas in their regions?

It was notable how different the issues were in each of the geographic areas that were represented; however, plenty of good ideas were discussed and recorded for consideration in formulating IStructE's international strategy.

After the debate was a report on the very successful 6th Asia Pacific Forum on '*Structural Engineering in Extreme Events*', sponsored by IStructE and held in Queensland, Australia in July. Other reports were given on the Christchurch Earthquake and regional group activities. The meeting wrapped up with an informative presentation on 'The Management of Tall Buildings in the Middle East', which covered a range of spectacular building forms and the issues involved in achieving a successful building in the Gulf States. The Annual General meeting of the Institution followed to conclude the first day's business.

The next day consisted of a Council meeting which included two strategy sessions on Engineering and the Technical Challenges for the Professions; and the Five Year Business Plan Development. Both topics saw some lively debate with some very interesting suggestions on how IStructE might adapt in a changing world. The second session was preceded by a choice of three breakout topics in which delegates could participate:

- How should the Institution adapt to rising international membership that may eventually exceed 50%?
- Can the Institution add value by merging with other structural engineering organizations?

- Could the Institution benefit from having corporate members?

The breakout session on international membership looked at how IStructE is currently delivering services and how it might change its delivery methods and staffing structure to respond to increasing demands from its overseas membership. A number of regions with strong growth potential – notably China, India and the Middle East were examined and different forms of representation were discussed.

It was considered that some Institution presence outside of the UK is likely before long. To better service its remote members in both the UK and across the world, the delegates voiced strong support for better on-line services in general and CPD activities in particular. This will occur soon after the new web site goes live which is currently anticipated by the end of the year.

The breakout session on mergers was part of a general discussion on how to manage structural engineering's special interest groups within the Institution. IStructE has always had these – a good example is the Historic Structures Group. However, other organizations exist and serve particular niche markets – would it be of value to include some of these within IStructE's umbrella and allow the Institution to better represent structural engineering worldwide?

The breakout session on corporate membership paralleled much of the discussion on this subject that has occurred at SEABC. The session considered how the Institution might be of value to both employers of structural engineers and suppliers of engineering services. A particular discussion point was the benefits that each corporate group could accrue and how IStructE could service their interests. A key issue was to ensure that the core values of the Institution were kept separate from corporate influence.

I concluded that the event was extremely valuable and it is worthwhile assembling the representatives from across the world. It was clear that the Institution continues to be highly valued by its members and is attractive for structural engineers to join. The Institution is in excellent shape and the debate demonstrated that

there are many opportunities to advance its position as the premier global organization for structural engineers.

Structural Awards

The shortlist for the 2011 Structural Awards has recently been announced. From over one hundred worldwide structural engineering projects entered, a shortlist of 42 was selected. Several of the projects are entered in more than one of the twelve award categories, resulting in a total of 58 entries. The twelve category winners are then considered for the Supreme Award for 2011 Structural Engineering Excellence.

Established in 1968, the IStructE Structural Awards are the premier awards for worldwide structural engineering. Embracing all types of structures and sizes of projects, a winning award or commendation is highly prized, and the Supreme Award winners – so far there have only been seven – are shining examples of the very best our industry can achieve.

British Columbia is well represented. Local firm Fast & Epp has the Arena Stage at the Mead Center for American Theater shortlisted in the Award for Arts and Entertainment Structures; and has the Bridge of Dreams entered in three other categories. Fast & Epp's number of shortlisted projects is only exceeded by Arup and Buro Happold.

I was thrilled to once again be judging the awards this year. I really enjoy evaluating the entries which are consistently of a very high standard and I am looking forward to attending the awards ceremony in London on November 18th. I hope to see other members of SEABC there – it promises to be a blockbuster event!

www.istructe.org/events/structuralawards/Pages/default.aspx



Arena Stage – Mead Center



Bridge of Dreams

Young Members Group

By Ilana Danzig, EIT, LEED AP



The last few months we have seen some exciting changes to the Young Members Group. We put out a call for volunteers, and welcomed 3 new faces to the executive: Tyler Best, Chris Hatton and Shahrzad Talachian.

Our annual summer barbeque was spent planning some new and exciting initiatives that the YMG hopes to take on, including more involvement with BCIT/UBC students, some ideas for new seminars and tours, entry into the world of social networking and perhaps even an engineering competition. Stay tuned for further details!

In July, the SEABC Board of Directors voted to include the chair of the YMG as a director. This is an exciting step forward and an indication of the Board's commitment to the future of structural engineers in BC. I look forward to serving on the Board as a representative of the young and new members of SEABC.

On the seminar front, we held our first 'International Registration/Qualifications' seminar in June. Saqib Khan presented the process of becoming licensed as a Professional Engineer and Structural Engineer in the United States, followed by David Harvey, who discussed the Institution of Structural Engineers (IStructE), and how to become a member. Both speakers presented valuable information about the application process, the test requirements, and the benefits to members. The event was followed by a mixer at Library Square Pub where questions and lively discussion between the speakers and attendees continued over beverages.

One of the goals of the YMG is to better educate the public about structural engineering, specifically targeting students. Typically we sponsor a science fair prize each year for a project that relates to structural engineering and this year we decided to try something new in addition to the science fair. We applied to be presenters at the BC Science Teachers' Association's yearly conference, Catalyst, and our application was

accepted. Now the hard work starts as we plan a presentation about structural engineering, building from concepts in the highschool curriculum. We will be presenting a lesson plan that highschool science teachers can use to teach students about structural design and how structures respond to earthquakes. We very much look forward to this event which will be held in October.

We have a busy few months ahead of us and some very exciting events. The volunteers on the executive are all doing a stellar job of providing the time, energy, and most of all, the enthusiasm required for this group to succeed and move forward.

If anyone has any ideas, feedback or comments on our progress, please email us at ymg@seabc.ca. I would also like to welcome all SEABC young and new members to join our group on LinkedIn, where we will be posting upcoming events and updates.

YMG Committee:

Ilana Danzig, EIT; Genivar

Tyler Best, EIT; Bush, Bohlman & Partners

Grant Fraser, EIT; Associated Engineering

Chris Hatton, BCIT

Dominic Mattman, EIT; Read Jones Christoffersen

Kevin Riederer, P.Eng; Read Jones Christoffersen

Michael Roberts, P.Eng; Section T Consulting

Shahrzad Talachian, EIT; Hatch Ltd.

Sustainability Design Education

By Mark Porter, P.Eng., Struct.Eng. LEED AP



In the February Issue of SEABC, the outgoing president David Davey P.Eng. authored his message around 'sustainability for the structural engineer', and whether it is our responsibility. He argued that indeed it is our responsibility and mentioned a number of areas we can meaningfully contribute; in choice of materials and designing for durability.

Some of the issues facing a structural engineer are technical and reliable information on the impacts of our

design decisions to the overall sustainability of a project. This understanding needs to include an appreciation of how our choice of structural system may impact other systems within the building or structure and the surrounding environment. It also needs to incorporate knowledge of the relative impacts that material choices will have on the footprint of the project. This footprint should include construction, operation and de-construction or re-use. In the ever increasing amount of information we have to absorb this can appear daunting without a handy guide or two and so I want to take the opportunity to pass on a couple.

In my trawling to find reliable information, I had a guide recommended to me for which I have been appreciative and I am taking this opportunity to pass on the recommendation; *'Sustainability Guidelines for the Structural Engineer'* (ISBN 978-0-7844-1119-3) published by the ASCE and SEI in 2010. Prepared by the Sustainability Committee of the SEI, the Guideline has been written on the premise of understanding and incorporating the concepts of sustainability into structural engineering standards and practices. The document is split into five sections: Sustainable Design and Construction; Sustainable Strategies; Building Materials; Infrastructure; and Case Studies. It touches on most subject matters in an informative way yet recognizes the need for future updates and encourages feedback. As a thorough briefing guide on most materials and project delivery decisions, this is by far the best that I have read.

Another resource that I have come across is a collection of academic papers published by Woodhead Publishing titled, *'Sustainability of Construction Materials'* (ISBN 978-1-84569-349-7). This is a much more in-depth look at the lifecycle impact of various materials used in construction around the world and is not so specific to North America; however, it still provides some useful information.

Finally I understand that IStructE is currently producing some guidelines, and often puts out papers within their journal related to the sustainable aspects of Structural Engineering. A search of the Institution's online library is well worthwhile.

Counterfeit Rebar

By Rob Simpson MBA, P.Eng., Struct. Eng. FEC, LEED AP



We have just received information about counterfeit rebar in current projects. If you have a project going now that uses rebar sourced from Tangshan Fuda Iron and Steel Co. and supplied through Salzgitter Mannesmann International (Canada) Inc. this rebar does not conform to CSA

G30.18. The steel provided for at least one project appears through testing to have been between 7% and 25% smaller in mass than required for all bar sizes on the project. All bars tested across all ranges of sizes in 112 tests exhibited mass well below the minimum required to comply with the Standard. What I find most concerning is that the mill certificates showed the rebar to be full area and full weight when in fact they were about 15% low on average.

Bridge Subcommittee Update

By Alfred Kao, P.Eng.



The committee met on June 21, 2011 with the main topic of discussion being a mandate for the committee. Members agreed that assisting the SEABC Structural Certificate Group would be an area where we could add value.

A follow-up meeting discussed the number and content of the bridge design courses that could be added to the curriculum, with a view to providing one course in January 2012 as part of the current program. A committee meeting will be scheduled for September to try and finalize details for the bridge courses.

If you're interested in participating on the committee or would like more information, please contact Alfred Kao at kaoa@ae.ca.

Technical Committee Update

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



A best practices guideline to deal with the late adoption of the 2010 NBC has been prepared and is undergoing final review by APEGBC and the Building and Safety Standards Branch. It is expected to be published shortly.

The work of the Guards Task Group is nearing completion. Robert Jirava, P.Eng. gave a presentation of the group's work at Robson Square on July 27th. It is hoped that the design guide will be completed shortly.

The analytical work for the Seismic Design of Basement Walls Task Group has now been taken over by Professor Mahdi Taibat, and two grad students. They have now prepared two papers on their work for presentation at conferences.

Additional analysis work is required before design recommendations can be finalized. This will include sensitivity analysis, cracked stiffnesses and flexural hinge demands. The task group is continuing to monitor this work and hope to have some results by the end of the year.

Summer vacations have taken a toll on the temporary structures task group. They are planning to continue their work in the fall.

BCIT Award

By Martin Bollo



BCIT Students Receive CSCE President's Award

The BCIT student chapter of the Canadian Society for Civil Engineering (CSCE) received the CSCE President's Award as the top student chapter in Canada for the

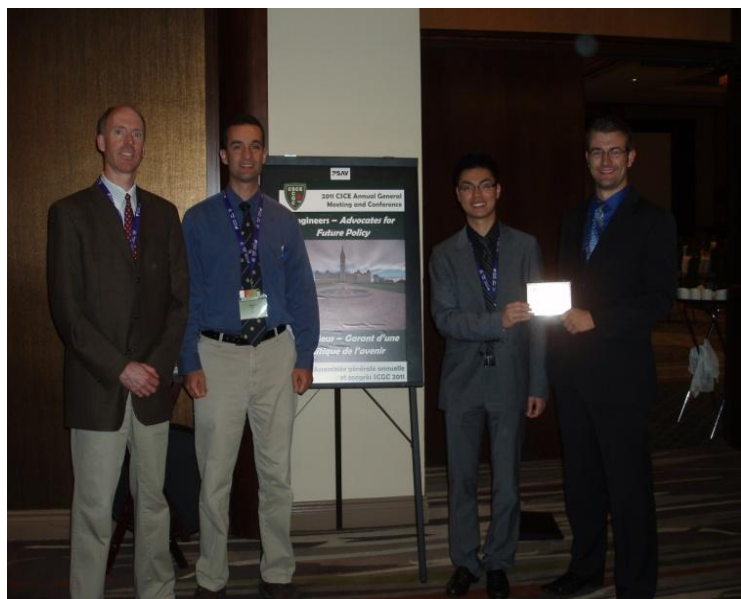
academic year 2010/11.

The award was presented at the CSCE National Conference in Ottawa on June 17, 2011. BCIT Civil Engineering students and CSCE Chapter Executive members David Marchand and Jeff Peng attended the awards luncheon at the Conference and received the 'President's Award' on behalf of the Chapter.

In the 2010/11 academic year the Chapter hosted technical seminars, participated in student competitions, raised money for charity, organized field trips, sent representatives to engineering-related conferences, hosted social events, and held a professional night.

Graduating 4th year student Jonathan Klop was this past academic year's SEABC liaison and participated in the SEABC Education Committee. The Chapter is grateful to the SEABC for its support and financial contributions.

Congratulations to the BCIT Chapter of the CSCE for being recognized as the top student chapter in Canada.



(L. to R.) BCIT Civil Engineering Program Head Paul Thurston, P.Eng., BCIT CSCE Faculty Advisor Martin Bollo, P.Eng., 2nd year Civil Engineering student Jeff Peng, and 3rd year Civil Engineering student Dave Marchand with the CSCE President's Award in Ottawa.

Education Committee Update

By Cam Smith
Chair, SEABC Education Committee



The Education Committee has been busy finalizing arrangements for the upcoming one-day seminar 'Performance-Based Plastic Design of Structures' presented by Dr. Subhash Goel, Professor Emeritus of the University of Michigan, scheduled for Friday, August 12th at UBC Robson

Square.

A newly-developed direct-design methodology, Performance-Based Plastic Design (PBPD) uses pre-selected target drift and yield mechanisms as key performance limit states, and energy-based design forces for plastic design of members and connections to achieve the targeted drift and yield mechanisms. The presentation will include the step-by-step design procedure as well as design examples as applied to seismic design of steel and concrete structures. Additional information can be found on the SEABC website.

www.seabc.ca/events.php

Past seminars included the April 20th presentation 'Fibre Reinforced Polymer – Design Fundamentals, Considerations and Applications', by John Sherstobitoff of Ausenco Sandwell. This presentation covered the fundamentals of design, applications for repair and retrofit, applicable codes and guidelines, current research and testing, and construction considerations for FRP.

On May 18th Adam Patterson of GENIVAR Consultants presented "Buckling Inhibited Braces – Implementation for BC Place Upgrade". The evening's presentation included a review of the stadium's gravity and lateral load resisting system, why the design team selected buckling inhibited braces (BIBs) for the project, as well as an overview of the design and construction of BIB assemblies.

Other recent SEABC seminars included the May 31st presentation by Dr. Ken Elwood (UBC) & Mr. Patrick

Ryan (City of Vancouver), 'Christchurch Earthquake and Lessons for BC', and the July 27th presentation by Robert Jirava (RDJ Structural Designs Ltd.) 'SEABC Taskforce on Guardrails: Design Practice and Construction Issues'.

As mentioned in the previous newsletter, video recording and archiving of seminars and events is being done to better serve the SEABC Membership who may otherwise have been keen, but unable to attend in person. This service is available through the SEABC website, via *Member Login*, under the *Seminar Downloads* link) where presentation literature from previous seminars is made available.

www.seabc.ca/seminar_downloads.php

For those interested in taking the BC Codes and Practices Exam, a seminar is currently being planned potentially for late October before the exam date of November 25th, 2011. Although this is an APEGBC organized event, the SEABC will be assisting with the development of the program by helping to refine course topics as well as identifying potential speakers. More information on the seminar will be provided as it becomes available; information on the BC Codes and Practices Exam can be found on the APEGBC website.

www.apeg.bc.ca/reg/structeng.html

We appreciate feedback from our members; comments on past events, suggestions for future topics, or proposals for presentations are encouraged, so please do not hesitate to contact us at:-

education@seabc.ca.

Media Release

By Canadian Wood Council

**CWC Technical Note on Construction Site Fire Safety Mirrors Much of Proposed Surrey Guidelines
Re: Wood Frame Developer to adopt Fire Chief's recommendations**

The Canadian Wood Council (CWC) acknowledges and supports the recent announcement by the Remy project developer Oris Consulting Ltd., which has stated its plans to use new construction site fire safety recommendations contained in the Construction Fire Safety Plan Bulletin released on Friday, July 22, by Surrey Fire Chief Len Garis. Dana Westermarck, president of Oris Consulting Ltd., intends to use recommendations from the bulletin that are not already in place when rebuilding the project, which is expected to begin sometime in August.

The CWC also supports ongoing efforts to educate stakeholders on the minimum requirements and best practices for construction site fire safety. Chief Garis, also president of the Fire Chiefs' Association of British Columbia, worked with developers and fire protection professionals to publish the 'Construction Fire Safety Plan Bulletin', that specifically provides guidance to owners, contractors and workers on the requirements for establishing construction site fire safety plans in the City of Surrey. The bulletin will be shared with other local governments across the province in an effort to keep construction sites safer. It is intended as an addendum to one issued in 2009 by the Office of the Fire Commissioner on fire risk during construction.

According to Chief Garis:-

"This bulletin addresses fire risks in any jurisdiction, and describes construction fire prevention strategies at a more operational level."

The construction fire prevention recommendations and guidelines in the bulletin address leading causes of construction site fires, including arson and hot works, and call for sprinklers and fire doors to be installed and activated at an earlier stage in construction.

In light of the Remy construction site fire, which increased the focus on construction site fire safety, and to complement earlier CWC publications on this topic, CWC is developing and will soon release a compact 'Technical Note' document on the topic. The CWC Technical Note will discuss the different issues and mitigating factors considered to be critical for addressing construction site fire safety and will mirror many of the points outlined in the Surrey bulletin.

The vulnerability of any building in a fire situation is higher during the construction phase, when compared to the susceptibility of the building after it has been completed and occupied. The CWC Technical Note and the new recommendations from Chief Garis reinforce the importance of compliance with provincial fire code regulations related to fire safety planning and the need for cooperation between all stakeholders in establishing the plan. Both documents will be helpful for builders and developers in their adoption and implementation of specific fire safety procedures and approaches to reduce the potential risk and impacts of a fire on any of their construction sites.

CWC, through its Wood *WORKS!* B.C. program, and in addition to the release of its new publication, will also be presenting technical seminars on this subject during a fall wood seminar program.

For more than 50 years, the CWC has been at the forefront of wood-related code issues - most notably those related to fire. The organization's work has resulted in a better understanding of wood's capabilities and its place in the Code. The CWC was one of several stakeholders consulted by the provincial government before it approved revision of the B.C. Building Code to permit six-storey wood frame construction.

For more information please contact:

Natalie Tarini
Communication Manager
Canadian Wood Council
ntarini@cwcc.ca
613.747.5544 ext. 225

News Flash

By David Harvey

Nelson Flyover

After a year of furious activity, the new directional interchange at the S-curve on Highway 91 was officially opened by Malcolm Brodie, Mayor of Richmond, and other dignitaries, on August 21st. The unseasonable rainfall dampened the shiny new pavement, but not the enthusiasm of the opening ceremony attendees.

The Nelson interchange is needed to accommodate port expansion in Richmond and provides a direct connection between Nelson Road and Highway 91 west. The project was driven by community pressure to remove commercial traffic from Westminster Highway and to accommodate anticipated traffic generated by the port. Funding partners were the Province of BC; the Port of Vancouver; the City of Richmond; and the Federal Government's Infrastructure Stimulus Fund.

The most significant challenges were the tight project delivery timeframe; the \$25M funding allocation; the area's compressible subsoils; and the need to minimize the interchange footprint to reduce the ALR land-take.

This placed the 130 m long four-span Nelson Flyover on a highly skewed crossing and a curved-in-plan alignment. The one-lane ramp has a 9 m wide superstructure consisting of twin steel plate girders and a composite concrete deck. Unusually, the deck features full-width precast stay-in-place deck panels with cast-in-place concrete topping to facilitate construction above traffic.

To speed delivery, steel girders, precast deck panels, bearings, expansion joints, and pipe piles were pre-ordered by the project. In addition, advance site preparation work such as peat removal, site preloading, and test pile installation was carried out during the detail design phase.

To avoid potential post-seismic liquefaction-induced ground displacements, the bridge approach embankments were built using lightweight expanded polystyrene blocks which minimize ground bearing pressures. Large diameter pipe piles were used to provide adequate seismic capacity in the weak subsoil.

The flyover was designed by Associated Engineering; the highway designer was by Urban Systems Ltd; and geotechnical design was by Thurber Engineering Ltd.



Nelson Flyover on Opening Day.

Earthquake in Virginia

Taken from EERI Website

At 1:51 EDT on Tuesday, August 23rd, a M5.8 earthquake with its epicenter in Northern Virginia shook most of the east coast with people reporting shaking between Georgia and Canada. There were no reported fatalities or serious injuries. The 5.8 earthquake caused minimal damage but resulted in significant business interruptions from New York City in the north to Richmond, Virginia, in the south.

Unreinforced masonry walls, gable walls, and chimney collapses were the most common failures, with some historic buildings losing architectural parapets. Ceiling tile failures and falling furniture in one Virginia school and objects falling from shelves in homes and businesses added to the damage and disruption. The earthquake resulted in the automatic shutdown of the nuclear reactors at the North Anna Power Station (7 miles from epicenter) which used backup generators to keep spent nuclear fuel cooled. The earthquake tied up phone and internet connections, disrupted rail lines, and caused extensive traffic delays. A day after the event many public buildings and Washington, D.C., area schools remain closed. The earthquake surprised many and according to news reports, caused widespread confusion between the public and emergency personnel on how to respond.

EERI will use this event to remind earthquake professionals, federal agencies, members of Congress and the public that earthquakes are not just a West Coast problem. The importance of preparedness needs to be underscored.

EERI is organizing a team of East Coast members to document what happened in the event, tentatively focusing on four major theme areas: the response and performance of the nuclear power plant in North Anna, Virginia, including the automatic shutdown procedures; the importance of preparedness and the consequences of not knowing what to do, including building closures, evacuations, communications problems, etc.; the effects of ground shaking on buildings and infrastructure, including structural, nonstructural and geotechnical damage; and economic losses, including damage to several important national monuments as

well as business and societal interruption costs. If you are interested in participating in this documentation, please contact Marjorie Greene at EERI mgreene@eeri.org

EERI will establish a virtual clearinghouse at www.eeri.org where members and others can post observations on the event. A few members will each take responsibility for one of the theme areas identified. Each team member will summarize observations related to their theme, which will then be compiled in a brief report. This work will be done in coordination with several other partner organizations, including the US Geological Survey, GEER and NIST. The report will be distributed widely, including to Congress and federal agencies in addition to EERI members.



Workers begin repairs Wednesday on the Mineral, Va., City Hall after it was damaged by Tuesday's 5.8 earthquake.



An angel, carved from Indiana limestone, lies shattered on the roof of the National Cathedral in Washington after Tuesday's earthquake.

On the Web

By Stephen Pienaar, P.Eng; SEABC Webmaster



While development of the SEABC's online services slowed down during the summer months, there is still progress...

Directory of Structural Engineering Firms

The new Directory of Structural Engineering Firms is planned to go live by the end of summer. In the meantime, while the software development is in progress, we are accepting applications from members. If you have not yet submitted your company for inclusion in the Directory, we would like to invite you to do so at:-

www.seabc.ca/corporate.

The new Directory of Firms will feature prominently on the SEABC website. Its goal will be to help the general public to find structural engineers for specific tasks. In order for the Directory to display relevant search results, the application form enquires about the specific skills and operations of your firm. Please be thorough and accurate when submitting your application.

Resource Sharing with iStructE

The Communications Committee has been in discussion with IStructE regarding sharing of online resources such as seminar recordings, course material, and other technical documents. We did not reach any specific agreement because IStructE is currently devoting their energy to implementing a new content management system—a huge, huge undertaking. For the time being, (and possibly for several more months), IStructE welcomes SEABC members to access their webinars at www.istructe.org/knowledge/webinars. No login is 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

Here is a summary of the current discussions on the SEABC Forum; maybe something piques your interest?

- Maureen M. forwarded an interesting article on a recent incident of a fire during the construction of a six-storey wood-frame building. [Read more >](#)
- Michael R. takes a tongue-in-cheek look at a Tae Bo class causing resonance frequency shakes! [Read more >](#)
- Andrew S. has a question about the **load testing and rating of crane-supporting structures**. [Read more >](#)

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 www.seabc.ca/forum and start using the Forum today.

Ask Dr. Sylvie

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

See also the list of CISC technical resources at: www.cisc-icca.ca/content/technical/default.aspx

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Mark Your Calendars



Site Registration Option: Use the [SEABC Forum](#) to arrange a get-together with other SEABC members and share the costs of a single site registration

ASCE Live interactive Web Seminars

ASCE Live interactive Web Seminars

- **Lessons From Failures of Building Envelope**
September 7. [More info...](#)
- **A General Overview of ASCE 7-10 Changes to Wind Load Provisions**
September 8. [More info...](#)
- **Design of Building Floors for Concentrated Loads**
September 9. [More info...](#)
- **Geosynthetic Reinforced Mechanically Stabilized Earth Walls**
September 19. [More info...](#)
- **LRFD for Geotechnical Engineering Features: Earth Retaining Structures - Cut Walls**
September 30. [More info...](#)

- **Design of High-Rise Steel Structures: The Basics**
October 5. [More info...](#)
- **Deterioration and Repair of Concrete**
October 7. [More info...](#)

ASCE Seminars

Design of Foundations for Dynamics Loads

September 28-30, 2011 - Boston, MA

This seminar will provide a better understanding to practicing engineers and architects of the design and evaluation of shallow and pile foundations subjected to dynamic loads such as rotating machines and seismic events. Topics to be discussed include: Basic principles of soil dynamics and geotechnical earthquake engineering... [more info...](#)

Design of Buildings in Coastal Regions ~Newly Updated

September 29-30, 2011 - Austin, TX

The recent extremely active hurricane seasons, the impact of Hurricane Katrina in Louisiana and Mississippi, Hurricane Ike in Texas, and the devastating tsunami in southeast Asia have brought increased focus on the natural hazards in a coastal region. Engineers and architects providing professional services in these regions need to stay abreast of the latest special design requirements... [more info...](#)

Earthquake-Induced Ground Motions ~Newly Updated

September 29-30, 2011 - San Francisco, CA

This seminar presents a step-by-step evaluation of site-specific ground motions for assessment and mitigation of seismic risk. The evaluation of site-specific ground motions requires some knowledge of geology, seismology, geotechnical engineering and structural engineering. Professionals in any of these fields possess some knowledge of the related fields, but usually gaps are left... [more info...](#)

Financial Management for the Professional Engineer

September 29-30, 2011 - St. Louis, MO

This seminar teaches the design professional how to read and interpret the income statement, including gross revenue, net revenue, direct and reimbursable expenses, indirect expenses, net profit before taxes, depreciation, gross profit and net profit after taxes. It examines the primary benchmarks of performance: multiplier, utilization rate, direct personal expense ratio... more 1.4 CEUs

This course is also available as an online course. [more info...](#)

Seismic Design of Highway Bridges

September 29-30, 2011 - Denver, CO

This seminar is tailored to bridge configurations applicable to the entire country including cast-in place, steel and precast bridges. Additional topics include seismic loading, seismic response analysis, plus design and retrofit concepts. Learn more about the newly developed LRFD Seismic Design Criteria for Highway Bridges

and its application to typical bridges... [more info...](#)

Structural Condition Assessment of Existing Structures

September 29-30, 2011 - Minneapolis, MN

October 13-14, 2011 - Las Vegas, NV

This seminar is an intensive overview of material evaluation practices and procedures used for assessing the structural condition of existing structures. Learn the latest techniques and procedures for assessing the physical condition of buildings, bridges and other structures, including assessment approach, structural material and system assessment, non-destructive examination... [more info...](#)

Wind Loads for Buildings and Other Structures ~Newly Updated

September 29-30, New York City Metro Area

This seminar addresses wind effects, provides guidelines for assessing design wind loads for buildings and other structures, and offers a discussion of the advantages of wind tunnel testing. This seminar is based on the ASCE publications "Minimum Design Loads for Buildings and Other Structures (ASCE 7-10)" and "Significant Changes to the Wind Provisions of ASCE 7-10."... [more info...](#)

SEABC Course Offerings

September 2011 Course Offerings

- C4-2 Advanced Concepts in Earthquake Engineering and Seismicity (classroom and live webcast)
- C8 Geotechnical Aspects of Foundation Design (classroom only)
- C9 Computer Structural Analysis (classroom and live webcast)
- E1 Masonry Design of Buildings (classroom and live webcast)

The September 2011 Term will run on Tuesdays and Thursdays from from September 13 to December 8. Classroom sessions will held be in the Alma Van Dusen Room of the Vancouver Public Library, 350 West Georgia, Vancouver.

More Information and Registration

- Course outlines: For overviews of course content, dates and times, please refer to the attached course outlines, or download them from the [SEABC website](#).
- Course fees: Classroom \$375, live webcast \$600 (please see note from the CSE Program Executive Committee below).
- Registration: Online registration is available on the [SEABC website](#). If you prefer to pay by cheque, download an application form from the [SEABC website](#). Registration closes at noon on the day of the first lecture (September 13 or 15) or once a class is full.

The following discounts are available:

- SEABC members: \$50 per course reduction in tuition.
- "Early Bird" registration: \$50 per course reduction in tuition for online registrations received and mail-in registration postmarked on or before August 12.

Interim Tuition Fee Discount

In response to the current economic recession, the Certificate in Structural Engineering Program Executive Committee has passed a motion to temporarily reduce tuition fees. Other options, such as instituting a bursary program, were considered by the Committee, but it was felt that a temporary, across-the-board reduction in fees would help support all of our students who, over the past eight years, have made our program such a success. This interim fee schedule also includes an increased discount for the SEABC membership.

*John Pao, P.Eng., Struct.Eng.
Chair, CSE Program Executive Committee*

For more information on the CSE Program please see the [SEABC website](#). Please address any questions you may have to Fran Abbühl (CSE Executive Secretary) at fran.abbuhl@seabc.ca.