CONCRETE INSTITUTE of AUSTRALIA

CIA - NSW Branch Newsletter

April 2016

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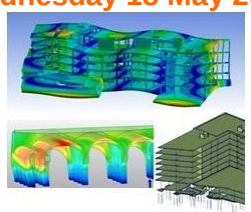
2016 EVENTS

Wednesday 18 May 2016



Finite Element Analysis NSW Branch Seminar

14 June 2016

OneSteel Mill Tour

NSW Branch Site Visit

20 July 2016

Sydney Rail Projects - Breakfast

NSW Branch Seminar

From the President

So far, we have had two successful seminars on "Upgrading Existing Structures" in February and "Future of Concrete" in April and also a Boral Lab tour in March. We were impressed by the number of people who attended these events. We are very grateful for your support of our technical events.

Our focus now is on young engineers and students, and CIA is busy planning new initiatives for our younger generation members. Our younger members are the future of the Concrete Institute and we would like to reach out to them and get them more involved in our agenda.

Our next technical event topic is "Finite Element Analysis of Concrete Structures - Software & Practice" on May 18th. But before that we would like to welcome you all to our SRIA-CIA joint seminars on "Seismic Design and Detailing for RC Building" which will be held first in Canberra on 26th April and then in Sydney on 10th May.

Pedram Mojarrad

NSW Branch President

17 August 2016

Managing Corrosion & Durability

NSW Branch Seminar

Click here for the latest information on events.

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Using Natural Intelligence

Recently there has been much discussion in the media about the future of artificial intelligence, including proposals for driverless cars, and news of the success of Google's DeepMind computer at beating a human master at the game of Go. Those of us who interact with computers on a more mundane level, such as face or voice recognition, may however remain a little sceptical that progress will match the hype.

On the other hand, there is an aspect of computer development that receives little attention; the fact that every computer is connected to a computing device that can outperform even DeepMind in nearly all areas requiring analysis of highly complex data. That is, the human brain.

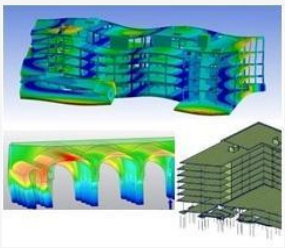
In the field of engineering design there is a tendency to regard computers as either a tool for the automation of routine tasks, or as a means to carry out highly complex analyses for research purposes. In my opinion though the most valuable engineering applications of computers lie in between these two extremes. In almost every design project there is scope for refining designs to suit the particular needs of the project. This is a task that demands the input of human engineers with a knowledge of both fundamental principles, and the specific requirements of each project, but the mathematical power of computers allows the completion of analysis techniques that would have been impossible with human calculation alone. Far from being just a black box, providing garbage out in response to garbage in, computer analysis combined with human intelligence can provide a deeper understanding of engineering analysis problems.

At the upcoming Concrete Institute seminar on Finite Element Analysis I will be looking at how this approach can be used to improve on simple code based predictions of structural deflections in a practical context.

Doug Jenkins
Interactive Design Services
Immediate Past President
Concrete Institute of Australia

Event Preview

Finite Element Analysis of Concrete Structures



Wednesday 18 May
4.45 - 8.00 pm
Ryde-Eastwood Leagues Club, West Ryde

In this seminar four industry speakers will address design of concrete structures using Finite Element Analysis (FEA). They will take a close look at the underlying theory of Finite Elements, the computer programs which are used to model it, interpretations of results, incorporation into design of concrete structures and practical applications. In addition comparison between FEA and alternative design methods will be evaluated. Individual project examples will also be illustrated.

This seminar is a must for any engineer involved in the design of concrete structures or any student interested in knowing the latest design industry practices.

For more information and to register, go to the **event page** on our website.

Events Review

NSW Events in 2016

2016 has started well for NSW Branch with its interesting events calendar.

- "Upgrading Existing Structures" was well received by over 80 people.

- The always-popular "Boral Laboratory Tour" was enjoyed by all who attended. If you missed this tour, watch out for it on our calendar next year.

- "Future of Concrete - High Performance/Low Carbon" was very informative for our Members and guests on 6 April.

We hope to see you at one of our upcoming events, they're great for networking and CPD!

Did you know?

Seismic Design Seminars

CIA National and SRIA are presenting a series of seminars on "Seismic Design and Detailing for Reinforced Concrete Buildings".

Canberra

Tuesday 26 April 2016 - 3.30 to 7.30 pm

Sydney

Tuesday 10 May 2016 - 3.30 to 7.30 pm

For more information and to register go to the Concrete Institute **website**.

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http://www.xypex.com.au/

If you have any questions about NSW Branch activities or the Concrete Institute in general please contact

Tiere Morgan
NSW Membership Services Officer
Concrete Institute of Australia

Email - **nsw@concreteinstitute.com.au**
Phone - 02 9955 1744