



## » CONFERENCE 09



From Left Vice President Jason Ingham, President Dene Cook, and keynote speaker Tor Ole Olsen

### Keynote speaker - Tor Ole Olsen

Conference 09 keynote speaker Tor Ole Olsen heads Norwegian consultancy Dr.techn.Olav Olsen, a world leader in offshore concrete structures. In a wide-ranging address, Mr Olsen described offshore structures on a general and conceptual level, saying typically they were gravity based (GBS), in that they sat on the seabed. However they float during construction and installation, and some float permanently, calling for anchoring and proper hydrodynamic response.

He discussed some examples, in particular, Beryl A, and the Gullfaks C platform, and outlined the challenges of arctic conditions.

"The offshore concrete platforms are a niche product in a market dominated by steel structures," he said. "Concrete platforms will only be considered when several characteristics attached to the concrete concept apply."

He said the challenge was to develop concepts that were competitive in challenging situations, to demonstrate they could be designed, built and delivered efficiently and safely, and that they would meet the expectations and requirements of the operators and the public authorities. The company is also working on a gravity-based offshore windmill.

### Sandy Cormack Award

The Sandy Cormack Award for the best paper presented at the Conference was awarded to Auckland University students Sumit Anand and Jedediah Martin.

"Push Over: An artistic vision of concrete construction" investigated the relationship between modern seismic design in

concrete, contemporary art and the concern for social, economic and environmental sustainability within global politics. The result of their project, which included the work of artist Simon Glaister, was installed at the St Paul Street Gallery in August. The recipients receive a certificate and \$500 each.

### Technical Programme Overview

The building and construction sector contributes five percent of GDP and employs 7.5 percent of the country's workforce, said Minister of Building and Construction Maurice Williamson when he opened the technical programme.

Geoff Dangerfield of the NZ Transport Agency discussed the delivery of transport infrastructure, saying the Government had allocated \$11 billion to state highway improvements over the next decade.

A paper on the Department of Building and Housing and structural engineering issues, was followed by papers on Bridge 45, a multi-spanned bridge; New Zealand's first multi-story PRESSS building; and strengthening bridges.

The session on aggregates covered recycled aggregate and its use in ready-mix concrete production, pumice aggregates for structural lightweight and internally-cured concrete, glass aggregate, and methods for determining the quality of fine aggregates, sands and basecourses.

Papers discussed Mangere Bridge, the Manukau Harbour crossing, the New Lynn rail trench, and the pretensioned prestressing steel corrosion risk in concrete bridge stock.

A session on double tee supports was followed by papers on steel fibre reinforced concrete, meeting future aggregate demand, and Golden Bay Cement's service centre. The day finished with Ken Ring's paper titled "Long-term weather forecasting."

Papers on the final day covered precast concrete, wall-to-floor interaction for buildings designed with self-centring precast wall systems, an artistic vision of concrete construction (which won the Sandy Cormack Prize), and opportunities for precast concrete.

Presented concurrently were papers on Allied Concrete's batching plant, the uptake of CO<sub>2</sub> in crushed concrete, then Tor Ole Olsen discussed concrete in the oil and gas industry. The session finished with a paper on formliners, moulds and photo engraved technology.

The conference wrapped up with papers on steel fibres in precast segment linings in the Hobson Bay sewer tunnel; Quay Park One - a multi-storey office building; and the Rotokawa geothermal turbine tabletop support structure.

## Thanks to patrons, sponsors, trade exhibitors

The Conference 09 organising team thanks the patrons and sponsors of Conference 09, and acknowledges the support of trade exhibitors. The conference patrons were: Golden Bay Cement, Holcim (New Zealand), and Sika (NZ), while the sponsors were: Allied Concrete, Firth Industries, Grace Construction Products, Mapei NZ, and Technical Welding Services (1998).

Conference Secretary Allan Bluett says the conference relies on patrons, sponsors and trade exhibitors as their contribution enables registration fees to be kept to a minimum.

"We really appreciate their participation. Although there were slightly fewer trade exhibitors than last year, the response was very positive and it was wonderful to see businesses supporting their industry conference."

## Conference 2010

Next year's NZ Concrete Industry Conference will be held from 7 – 9 October at the Wellington Convention Centre, Wellington.

# 2009 CONCRETE AWARDS

**The 2009 Concrete Awards were presented amid applause and congratulations during the formal dinner at Concrete Conference 09.**

Concrete Award 2009 went to the Alan MacDiarmid Building at the Victoria University of Wellington.

The building, which also won the Technology Award, features technology designed to reduce seismic damage and is the first multi-storey building in New Zealand to use unbounded post-tensioned tendons and rocking joints based on US-based PRecast Seismic Structural Systems (PRESSS) research.

Concrete Society Secretary Allan Bluett says the Awards attracted a record number of entries and their high quality presented the judges with difficult decisions.

"Members of New Zealand's construction industry can be proud of the quality of the projects entered in the awards."

The award winners and commended entries, which feature in a **Building Today** supplement being circulated to the industry this week, are:

**Concrete Award 2009:** Alan MacDiarmid Building

**Technology Award:** Alan MacDiarmid Building  
Commended: IRD Building

**Monte Craven Architectural Building Award:** Ford Building  
Commended: Christchurch Airport Control Tower, Nauhria Precast Office Building

**Infrastructure Award:** Tauranga Harbour Link: Stage 2  
Commended: Ormiston Road Cable Stayed Bridge

**Residential Award:** Reynolds Majsa House  
Commended: The Rocks, Tilt Panel House

**Landscaping Award:** SH20 Walmsley Off Ramp Rock Wall  
Commended: Momo Seating, Christchurch

# AGM & ELECTIONS

**The Conference marked a changing of the guard for the Concrete Society. Newly elected President Dene Cook, who was formerly Vice President, says the Concrete Society has a unique role within the concrete industry as a learned society.**

"It has delivered considerable information to its members through seminars and publications. It is our intention to continue to build upon the platform laid down by those who have served before us."

Meanwhile, Vice President Jason Ingham, who has stepped up from his role as a Councillor, says he hopes to serve the Society well, and looks forward to delivering a successful conference in 2010.

## President's Report

Outgoing Concrete Society President Chris Munn noted that the last year had been marked by a sharp change in activity due to the severe economic reversal.

He said that the development of standards had been progressing, and acknowledged organisations which released staff to carry out tasks for the Society. The membership base was sound, and the popularity of the 2008 Concrete Industry Conference indicated the content met the needs of attendees.

Last year two seminar series, 'Concrete at the Plant' and 'Specialty Concrete', were held, however deadline slippage led to a third series being dropped. This highlighted the difficulty of running the organisation on a voluntary basis.

He said the Council had a strong mix of competent and experienced industry people, with some new recruits. He thanked everyone for their enthusiasm and willingness to participate and looked forward to continued support into 2009.

The President's full report, including the financial report, can be viewed on the Concrete Society website [www.concretesociety.org.nz](http://www.concretesociety.org.nz)

## PRESSS DESIGN SEMINARS EARLY 2010

The PRESSS design seminars (Precast Seismic Structural Systems) which were to have been held nationwide late this year will now be held in February and March 2010.

Dr Stefano Pampanin, a Senior Lecturer at the University of Canterbury who will lead the seminars, has researched PRESSS-type structures. A handbook and computer software will be given to attendees. PRESSS Technology, which allows structures to resume their original position after earthquakes have stopped, was used in the construction of this year's Concrete Award winner. The seminar venues and dates will be included in the next newsletter.