

Cold-Formed Steel Design

WHY YOU & YOUR EMPLOYEES SHOULD ATTEND THIS SEMINAR

Cold-formed steel is one of the most vibrant and exciting developments in steel construction, with New Zealand and Australia being amongst the world leading countries in this form of construction. Cold-formed steel is used in New Zealand for portal frame structures, houses and medium rise buildings. The design of cold-formed steel is completely different than hot-rolled steel due to thin section thicknesses and the associated need to consider buckling behaviour.

This seminar will first provide the theoretical background to the design of cold-formed steel members using both the effective width method as well as the direct strength method, both referenced in AS/NZS 4600-2018. The former is an older method which demands lots of calculation, whereas the latter is the newer design method which brings the benefits of computer calculations as well as ease of calculation. Design examples for standard members are provided. Next, connection details for the structural forms that are most commonly used in New Zealand will be covered. Finally, applications to portal frame, houses and medium rise buildings are discussed.

THIS SEMINAR WILL COVER

- Direct Strength Method provided by AS/NZS4600 needs engineering judgments on the buckling behaviour of the elements that will be introduced and discussed in this seminar.
- Direct Strength Method demands computer modelling in THINWALL, CUFSM, or other finite strip method software which will be covered in this seminar.
- There will be worked examples presented during the seminar such that participants will be prepared to use Effective Width method and Direct Strength method with more confidence as soon as they get back to their office.
- Connection designs and their concepts will be discussed in the portal frame and building designs which are useful for practicing engineers.
- New findings in the area of cold formed steel designs will be introduced and discussed.

OTHER BENEFITS

- The opportunity to network with industry peers
- The seminar notes will become a reference for the office
- This is the most cost effective way of acquiring this knowledge

WHO SHOULD ATTEND

- Structural Engineers, Architects, Students, Contractors, Building Certifiers, Local Authorities

PROGRAMME

1.00 – 1.30 pm Registration, tea and coffee

1.30 – 2.30 pm Session 1

- What is cold-formed steel and recent trends and innovations
- Buckling behaviour of cold-formed steel
- Effective width method
- Direct strength method

2.30 – 3.30 pm Session 2

- Column design
- Beam design
- Shear design
- Web crippling design

3.30 – 4.00 pm Afternoon tea

4:00 – 4.45 pm Session 3

- Connection detailing
- Portal frames

4.45 – 5.30 pm Session 4

- Houses
- Medium rise buildings

VENUES

Dunedin	Monday 17 February 2020 Dunedin Centre: 1 Harrop Street, Dunedin
Christchurch	Wednesday 19 February 2020 Sudima Christchurch Airport: 550 Memorial Avenue, Christchurch
Nelson	Friday 21 February 2020 Rutherford Hotel: Trafalgar Square, Nelson
Wellington	Monday 24 February 2020 James Cook Hotel Grand Chancellor: 147 The Terrace, Wellington
North Harbour	Wednesday 26 February 2020 QBE Stadium: Stadium Drive, Albany, Auckland
Taupo	Friday 28 February 2020 Wairakei Resort: 640 Wairakei Drive, Taupo

Hamilton **Monday 2 March 2020**
FMG Stadium Waikato,
128 Seddon Rd Frankton, Hamilton

Queenstown **Friday 6 March 2020**
Millennium Hotel: Cnr Frankton Road & Stanley Street, Queenstown

Auckland **Monday 9 March 2020**
Ellerslie Event Centre: Ascot Avenue (Ellerslie Racecourse), Greenlane, Auckland

SPEAKERS PROFILES

James Lim is an associate professor at the University of Auckland. He has been a full-time academic since 2007, working at the University of Strathclyde, Glasgow, and Queen's University, Belfast, before joining the University of Auckland in 2014. His research is dominated in trying to understand fundamental structural behaviour, for which he employs a combination of full-scale testing and finite element modelling. His expertise is mainly focused on cold-formed steel, particularly cold-formed steel portal frames. He spent five years working at the Steel Construction Institute (The SCI), where he extended his research interests to include hot-rolled steel, composite construction and fire. To date, he has authored around 85 journal papers and supervised eleven PhD students to completion, four of whom are pursuing full-time academic careers.

Pouya Pouladi has been a full-time PhD candidate in the Department of Civil and Environmental Engineering at the University of Auckland since 2017. He has been doing comprehensive research on cold-formed steel portal frames. He employs, both experimental and finite element investigation in his research. At the same time, he has designed a cold-formed steel design course and he is teaching it at the University of Auckland in cooperation with AP James Lim and AP Charles Clifton. Pouya graduated from the University of Tehran with a master's degree in structural engineering. He has also three-year design experience back in Iran, focusing on the seismic design of multi-storey steel and reinforced concrete buildings.

INVESTMENT DETAILS

Seminar fees include course notes and afternoon tea

Members \$360 (GST exclusive) per person

Non-members \$440 (GST exclusive) per person

REGISTRATION FORM - Tax Invoice: GST Registration Number 45-364-682

Name(s): _____

Company: _____

Postal Address: _____

Postcode: _____

Phone: _____ Mobile: _____

Email: _____ :

PLEASE INDICATE WHICH SEMINAR AND VENUE:

- | | | |
|--|---|---|
| <input type="checkbox"/> Dunedin , Mon 17 Feb 2020 | <input type="checkbox"/> Christchurch , Wed 19 Feb 2020 | <input type="checkbox"/> Nelson , Fri 21 Feb 2020 |
| <input type="checkbox"/> Wellington , Mon 24 Feb 2020 | <input type="checkbox"/> North Harbour , Wed 26 Feb 2020 | <input type="checkbox"/> Taupo , Fri 28 Feb 2020 |
| <input type="checkbox"/> Hamilton , Mon 2 Mar 2020 | <input type="checkbox"/> Queenstown , Fri 6 Mar 2020 | <input type="checkbox"/> Auckland , Mon 9 Mar 2020 |

PAYMENT DETAILS:

No. of member registrants [] at \$414.00 GST inclusive = \$ _____

No. of non-member registrants [] at \$506.00 GST inclusive = \$ _____

Total= \$ _____ I have enclosed our cheque of \$ _____

Or prefer to pay by credit card: Visa MasterCard Amex

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NOTE: Full payment must be received prior to each seminar.