



## SASAN SAIDIAN

MIEAust CPEng NER APEC Engineer IntPE(Aus)

- Two decades of industry experience in the design and construction of light steel framing
- Director, Cold-Formed Steel Engineers Australia
- Academic researcher at Western Sydney University

# Australian Standard AS4600-2018

## WORKSHOP SUMMARY

This workshop provides a theoretical background to the behavior of thin-walled members and presents methods and tools that engineers employ for the analysis and design of cold-formed steel.

The content of the course is tailored for both practitioners with previous experience and for engineers who are interested in extending their knowledge in cold-formed steel. The workshop delivers concise information about buckling analysis of thin-walled structures, stiffness and strength predictions for cold-formed steel members and light steel framing design. Several exercises are included, focusing on typical day-to-day design implementations. THIN-WALL-2 elastic buckling analysis software is practiced through the course.

**Laptops, Calculators and Australian Standard AS4600-2018 Required:** THIN-WALL-2 must be installed on laptops, prior to the workshop. Upon registration, information regarding THIN-WALL-2 will be sent to all attendees.

## PROGRAMME (8.30 - 9.00 Registration)

### 9.00 - 10.30 Session 1

- INTRODUCTION
- BEHAVIOUR & DESIGN OF THIN-WALLED MEMBERS

- Applications
- Advantages
- References
- Design Tools
- Global, Local and Distortional Instabilities
- Plate Theory and Post-Buckling Reserve
- The Effective Width Method of CFS Design
- Exercise #1: Compressive Axial Strength of a Square Hollow Section via EWM

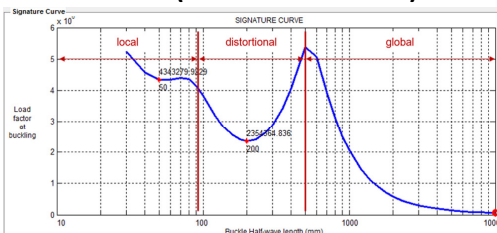
### 10.30 - 11.00 Morning Tea

### 11.00 - 12.30 Session 2

- BUCKLING ANALYSIS

- The Finite Strip Method of Stability Analysis
- The "Signature Curve"
- Exercise #2: Buckling Analysis of a Lipped Channel in Bending (Computerized & Manual)

### 12.30 - 1.30 Lunch (Provided at Venue)



### 1.30 - 3.00 Session 3

- THE DIRECT STRENGTH METHOD OF CFS DESIGN

- What is DSM?
- DSM vs. EWM
- Exercise #3: Wall Stud Design via DSM (ULS & SLS)

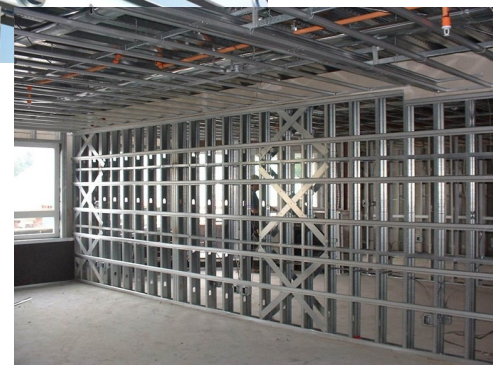
### 3.00 - 3.30 Afternoon Tea

### 3.30 - 5.00 Session 4

- DESIGN CONSIDERATIONS FOR WEBS
- CONNECTIONS

- Failure Modes of Webs
- Webs in Shear
- Web Crippling
- Exercise #4: Stud-to-Track Connection Capacity
- Bolted Connections
- Screwed Connections
- Exercise #5: Stud Splice Design

### 5.00 - 5.15 Certificate of Attendance & Feedback sheets



## AUSTRALIAN STANDARD AS4600-2018, LAPTOPS & CALCULATORS REQUIRED

### COURSE COST

- 1 day course – \$890 pp

### DATES, VENUES & REGISTRATION

- Registration form (back of catalogue)
- Visit our website [www.etia.net.au](http://www.etia.net.au)

### FURTHER INFORMATION

- Office (02) 9899 7447
- Mobile 0413 998 031
- Email [registrations@etia.net.au](mailto:registrations@etia.net.au)