



# CAN/CSA-S6-06

## Design of Aluminum Bridges and Footbridges

### The Content

This course presents the contents of Section 17 – *Aluminum Structures* of CAN/CSA-S6-06, *Canadian Highway Bridge Design Code* in force since October 2011 to engineers, professionals, technicians, teachers and students. The course starts with a detailed presentation of the main characteristics of structural aluminum and covers all the recommendations of Section 17. Additional material and application examples are also provided.

More and more aluminum highway bridges and footbridges are built around the world as engineers and decision makers discover the many advantages of aluminum. Canadian engineers can follow suit now that a code allows them to use this “new material” in an informed and secure way in applications that are still underused. Use of this material in the construction of bridges has specific technical advantages in Canada, the world’s third largest producer of aluminum, since it is located in a northern region.

To obtain a copy of [Section 17: www.shop.csa.ca](http://www.shop.csa.ca) and a copy of Denis Beaulieu’s *Design of Aluminum Structures*: [www.pral.ca](http://www.pral.ca).

### The Instructor

**Denis Beaulieu, Ph.D., Ing.**, was a professor of structural engineering and research chair in the Civil Engineering department of Université Laval for 32 years. He has carried out numerous research projects on steel and aluminum structures and authored several well known books on structural steel and aluminum used by practitioners as well as teaching staff. Denis Beaulieu was also Research and Technology Transfer Vice-Dean at the Science and Engineering Faculty of Université Laval for five years and Technology Transfer Vice-President at the Quebec Industrial Research Centre for four years. Denis Beaulieu is a CSCE past president.



### Course Outline

- Introduction
- Characteristics of Structural Aluminum
- Overview of Section 17
- Buckling of Thin Walls
- Traction Members
- Compression Members
- Flexural Members
- Webs in Shear
- Torsional Members
- Members Subjected to Combined Axial Force and Bending
- Built-up Members
- Composite Aluminum-Concrete Beams
- Trusses and Arch Bridges
- Decks
- Fatigue
- Splices and Connections
  - Bolted Connections
  - Welded Connections
- Pins, Rollers and Rockers
- Construction Requirements

## VENUES

### VANCOUVER

November 27, 2012  
**Sandman Hotel**  
Pacific Room  
180 West Georgia Street  
Vancouver, BC V6B 4P4  
604-681-2211

### EDMONTON

November 28, 2012  
**Days Inn & Suites W Edmonton**  
Linden Room  
10010-179 A Street  
Edmonton, AB T5S 2T1  
780-444-4440

### CALGARY

November 29, 2012  
**Glenmore Inn**  
McLeod Room  
2720 Glenmore Trail SE  
Calgary, AB T2H 2B5  
403-279-8611

### WINNIPEG

November 30, 2012  
**Holiday Inn Winnipeg South**  
Portage Ballroom  
1330 Pembina South  
Winnipeg, MB R3T 2B4  
204-452-4747

# REGISTRATION

To register online, please click : <https://csce.ca/register/s17e/>

7:45 Registration – 8:30 Start of Session – 10:00 Coffee Break – 12:00 Lunch – 15:00 Coffee Break – 16:30 End of Session

	By October 30, 2012		After October 30, 2012			
	BC, MB	AB	BC, MB	BC, MB	AB	AB
CSCE Members	\$425 + T = <b>\$476.00</b>	\$425 + T = <b>\$446.25</b>	\$475 + T = <b>\$532.00</b>	\$475 + T = <b>\$498.75</b>		
New Members	\$450+\$95+T = <b>\$610.40</b>	\$450+\$95+T = <b>\$572.25</b>	\$500+\$95+T = <b>\$666.40</b>	\$500 +\$95+T= <b>\$624.75</b>		
Non-members	\$525 + T = <b>\$588.00</b>	\$525 + T = <b>\$551.25</b>	\$575+tax = <b>\$644.00</b>	\$575 + T = <b>\$603.75</b>		
Students	\$100 + T = <b>\$112.00</b>	\$100 + T = <b>\$105.00</b>	\$100 + T = <b>\$112.00</b>	\$100 + T = <b>\$105.00</b>		

- ▶ **GROUP RATES** (5 and more) are available upon request.
- ▶ **NEWLY ENROLLING MEMBERS** pay a special introductory membership fee of \$95 plus tax and obtain a discount on all future CSCE events.

**Cancellation & Substitution** Cancellation requests received more than 14 calendar days before the start of the course will receive a full refund minus a \$100 administration fee.  
 Cancellation requests received within the 14 days prior to the start of the course will be non-refundable.  
 CSCE reserves the right to cancel any course and will, in such event, fully refund all registration fees.  
 Any registrant may substitute another person eligible for the same fee at any time prior to the start of the course.

**For group rates and any additional information, please contact:** Mahmoud Lardjane    mahmoud@csce.ca    514-731-7859

## CSCE MEMBERSHIP APPLICATION

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Name \_\_\_\_\_ Date of Birth \_\_\_\_\_ Sex \_\_\_\_\_

Indicate Desired Mailing Address

**Home Address** \_\_\_\_\_

T \_\_\_\_\_ F \_\_\_\_\_ E-mail \_\_\_\_\_

**Employer** \_\_\_\_\_ Bus. Title \_\_\_\_\_

Address \_\_\_\_\_

T \_\_\_\_\_ F \_\_\_\_\_ E-mail \_\_\_\_\_

Professional Registration/Memberships Held \_\_\_\_\_ Provinces \_\_\_\_\_

Are you a member of any other Engineering Societies? If so, give details \_\_\_\_\_

SOCIETY	PROVINCE(S)	MEMBERSHIP GRADE
_____	_____	_____
_____	_____	_____
_____	_____	_____

**TECHNICAL DIVISION MEMBERSHIPS** — Select up to three fields in order of preference, (i.e. 1, 2, 3)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Cold Regions           | <input type="checkbox"/> Eng. Mechanics/Materials Eng. | <input type="checkbox"/> Hydrotechnical   | <input type="checkbox"/> Computer Applications |
| <input type="checkbox"/> Structural             | <input type="checkbox"/> Transportation                | <input type="checkbox"/> Construction     | <input type="checkbox"/> Environment           |
| <input type="checkbox"/> Infrastructure Renewal |  | <input type="checkbox"/> Sustainable Dev. |  |

Signature \_\_\_\_\_ Date \_\_\_\_\_