

RECENT ADVANCES IN BRIDGE ENGINEERING AND STRUCTURAL HEALTH MONITORING

Course Description

The objective of this 2-day course is to acquaint consulting, government and research engineers, instructors and graduate students with the latest advances that have taken place in the field of short and medium span bridges with special emphasis on the monitoring of their health by means of state-of-the-art electronic and photonic sensors and the use of fibre reinforced polymers in the design and rehabilitation of bridges.

The course will be complemented by a recently published book *Recent Advances in Bridge Engineering* written by Aftab Mufti, Baidar Bakht and Leslie Jaeger, who have been active in research in bridge engineering for several decades. A CD containing the latest versions of five analysis and design computer programs is appended to the book. The course will provide hands-on training in the use of these programs. The price of the book (\$70 plus tax) is included in the registration fee at a 30% discount.

PROGRAM

- Introduction to Structural Health Monitoring and Civionics Engineering
- Philosophy of bridge design, vehicle loads and bridge weighing-in-motion systems
- Bridge testing, structural health monitoring systems and data interpretation
- Arching in concrete deck slabs under static and dynamic loads. Field Examples of design of SHM system for Bridge Decks
- Simplified and rigorous methods of bridge analysis
- New forms in timber bridges
- Soil-steel bridges with shallow and deep corrugated metal plates
- Fibre reinforced polymers in design and rehabilitation of concrete and timber bridges. Also, discussion on SHM system for innovative structures.
- Sensor needs in SHM of bridges
- Aesthetics of Bridges

TORONTO

Days Inn Hotel
Toronto Downtown
30 Carlton Street
Toronto, ON M5B 2E9
416-977-6655

SASKATOON

Radisson Hotel
405 29th Street E
Saskatoon, SK S7K 6X6
306-665-3322

CALGARY

The Blackfoot Inn
9540 Blackfoot Trail SE
Calgary, AB T2H 2B5
403-259-1709

EDMONTON

Campus Tower Suite Hotel
11145 87 Avenue
Edmonton, AB T6G 0Y1
780-439-6060

VANCOUVER

Plaza 500 Hotel
500 West 12th Avenue
Vancouver, BC V5Z 1M2
604-873-1811

Toronto, April 28-29, 2009
Saskatoon, April 30, May 1st, 2009
Calgary, May 12-13, 2009
Edmonton, May 14-15, 2009
Vancouver, May 21-22, 2009

SPEAKERS

Baidar Bakht, P.Eng., D.Sc., FCSCE, FCAE

President, JMBT Structures Research Inc., and Adjunct Professor of Civil Engineering at the universities of Toronto and Manitoba

Aftab Mufti, P.Eng., Ph.D., FCSCE, FCAE

Professor of Civil Engineering, University of Manitoba, and President of ISIS Canada Research Network

In addition to the above two speakers, one of the following will lecture depending upon the location of the course

John Newhook, Ph.D., P.Eng.

Associate Professor of Civil Engineering, Dalhousie University

Shamim Sheikh, Ph.D., P.Eng.

Professor of Civil Engineering, University of Toronto

Gamil Tadros, Ph.D., P.Eng.

SPECO Engineering Ltd.

This course is
endorsed by



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GROUP (5 and more) and student rates are available upon request.

JOIN CSCE now at the introductory fee of \$95 + taxes and pay the CSCE member fee at all CSCE activities held during the coming year.

Please e-mail, fax or mail this form along with your payment to:

Mahmoud Lardjane
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Canadian Society for
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W., Suite 201
Montreal, QC H3Z 1N1
e-mail: mahmoud@csce.ca
F: (514) 933-3504

Any registrant may substitute another person eligible for the same fee at any time. Full refund will be issued when a written notice of withdrawal is received 2 weeks before the event. An administrative fee is deducted at this time. We regret that there will be no refunds issued past this date. In the event that CSCE must cancel the program, the participant will receive a full refund for workshop fees.

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RAB REGISTRATION

- ☐ Toronto – April 28–29, 2009 ☐ Calgary – May 12–13, 2009 ☐ Vancouver – May 21–22, 2009
☐ Saskatoon – April 30–May 1, 2009 ☐ Edmonton – May 14–15, 2009
7:45 Registration – 8:30 Start of session – 4:30 End of session

Name _____ Date _____
Company _____
Address _____
e-mail _____ Tel _____ Fax _____
CSCE Membership Number _____
(1) My Professional Specialty is _____
(2) At the end of the session, I will evaluate it as a success if it responds to my following objective(s)

I authorize CSCE to send my participation record to EIC for CE units registration. ☐ YES ☐ NO

PAYMENT

Please check as appropriate to you. Dates refer to receipt of registration materials by CSCE. Payment must be received to confirm your place. Refreshments, lunch, course materials and book are included.

Registration Fees	Early Registration On/before April 7, 2009	Open Registration After April 7, 2009
CSCE Member	\$670 (+ tax \$33.50) = \$703.50 <input type="checkbox"/>	\$720 (+ \$36) = \$756.00 <input type="checkbox"/>
Newly Enrolling CSCE Member	\$790 (+ \$39.50) = \$829.50 <input type="checkbox"/>	\$840 (+ \$42) = \$882.00 <input type="checkbox"/>
Non-CSCE Member	\$770 (+ \$38.50) = \$808.50 <input type="checkbox"/>	\$820 (+ \$41) = \$861.00 <input type="checkbox"/>

Registrant Signature _____ Registration Date _____

Method of Payment (Check as appropriate to you)

☐ VISA ☐ MASTERCARD ☐ CHEQUE ENCLOSED (payable to Canadian Society for Civil Engineering)

Credit Card Number _____ Expiry Date _____

CSCE MEMBERSHIP APPLICATION

Name _____ Date of Birth _____ Sex _____

Indicate Desired Mailing Address

☐ **Home Address** _____

T _____ F _____ E-Mail _____

☐ **Employer** _____ Bus. Title _____

Bus. Address: _____

T _____ F _____ E-Mail _____

Professional Registration / Memberships Held Province _____

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

SOCIETY _____ PROVINCE(S) _____ MEMBERSHIP GRADE _____

ACADEMIC RECORD/WORK EXPERIENCE (Please submit C.V. & photocopies of certificates or transcripts)

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

___ Cold Regions ___ Eng. Mechanics/Materials Eng. ___ Hydrotechnical ___ Computer Applications
___ Structural ___ Transportation ___ Construction ___ Environmental
___ Infrastructure Renewal ___ Sustainable Dev.

MEMBERSHIP GRADES

Member: normally holds a recognized educational qualification in Civil Engineering at the level recognized by a provincial Association of Professional Engineers and whose competence has been established by at least four years of professional experience. **Associate Member:** normally holds an engineering degree from a recognized university but has not yet acquired the qualifications for member status related to the extent of professional practice. **Professional Affiliate:** technologists, technicians and other persons working in the field of Civil Engineering. **Graduate Student Member:** those engaged in full time postgraduate studies at a recognized Canadian university may be eligible.

Signature _____ Date _____