



**Thursday October 25, 2018**

**8:00AM - 4:00PM**

**BREAKFAST, LUNCH AND REFRESHMENTS  
INCLUDED**

CHSI  
5110 Creekbank Rd, Mississauga, ON  
L4W 0A1

**Also available via Live  
Webcast!**

## WORKSHOP OVERVIEW

Accurate identification and marking of underground utilities is critical for successful, cost-effective, and timely completion of trenchless projects. Advancements, such as the use of Subsurface Utility Engineering (SUE), help in reducing unforeseen conflicts with existing utilities and thus reduce delays in construction schedules and project costs. This workshop provides an overview of various advancements in utility mapping technologies and standards. The attendees will learn how SUE techniques and standards can be used to mitigate risks for underground construction projects. The workshop will cover the SUE industry standards, such as CI/ASCE 38-02, CSA S250, TAC UR/UC. The case studies will demonstrate how the standards are being used to investigate and to create records for the process of construction risk mitigation. The viewpoints, needs and issues of all the stakeholder (municipal/client, contractor/service provider, and consultant) will be discussed.

### Course Outline

- The need for SUE (Subsurface Utility Engineering)
- Advancements in the trenchless industry
- Use of SUE in the trenchless environment
- Utility coordination and planning for trenchless projects
- Planning for digs using construction records
- Proper tender documents with SUE information – contractors' perspective
- Locating non-conductive utilities: impacts on costs and risk vs. reward
- How to improve current specifications and tender documents
- Current SUE technologies for trenchless construction
- CSA Standard 250 and the impact of trenchless technologies on accurate as-built drawings
- Trenchless construction and city planning: reducing risk and social costs
- Case studies: (1) planning with SUE data; and (2) outdated design practices

### Learning Objectives

The workshop participants will learn important elements and techniques of SUE (subsurface utility engineering). Depending on the project, they will be able to prepare proper tender documents and specify appropriate SUE techniques to reduce underground construction risk. They will be able to ensure that underground construction projects meet SUE standards, such as ASCE 38-02 and CSA S250 and follow best practices for mapping and managing records for underground infrastructure.

### Who Should Attend?

Municipal engineers, technologists, technicians, operators, engineering consultants, contractors, suppliers, and pipe manufacturers.

### What is Included?

- ✓ Canadian Construction Association Gold Seal Accreditation (1 Credit) or 0.7 CEU's from the Engineering Institute of Canada
- ✓ Course material
- ✓ Breakfast, Lunch, Refreshments

# Registration Form

## Underground Utility Location and SUE (Subsurface Utility Engineering)

CHSI, 5110 Creekbank Rd, Mississauga, ON L4W 0A1

### UPCOMING CATT EVENTS

INTEGRATING TRENCHLESS TECHNOLOGIES  
WITH TRADITIONAL OPEN CUT  
CONSTRUCTION  
NOV 1-2018

MANHOLE ASSESSMENT & REHAB  
NOV 8-2018

SIPP  
NOV 21 - 2018

NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_

PROV: \_\_\_\_\_

POSTAL CODE: \_\_\_\_\_

PHONE: \_\_\_\_\_

EMAIL: \_\_\_\_\_

### EARLY BIRD REGISTRATION

RECEIVED BY: **September 7**

\$375 Member (CATT/OSWCA/ GTSWCA)

\$550/NON-MEMBER

### REGULAR REGISTRATION

RECEIVED: **September 8 TO October 22**

\$475 Member (CATT/OSWCA/ GTSWCA)

\$650/NON-MEMBER

### ON-SITE REGISTRATION

RECEIVED AFTER: **October 22**

\$575 Member (CATT/OSWCA/ GTSWCA)

\$750/NON-MEMBER

Tax (HST 13%) \$ \_\_\_\_\_ Total \$ \_\_\_\_\_

### LIVE WEBCAST

I would like to attend via LIVE WEBCAST

### THE CENTRE FOR ADVANCEMENT OF TRENCHLESS TECHNOLOGIES

(CATT) was established in 1994 to help municipalities address their buried infrastructure challenges using new and less disruptive trenchless construction methods and infrastructure asset management practices.

Since 1994 CATT has been recognized as an international leader in buried infrastructure construction, condition assessment, renovation and asset management.

For more information on CATT and member benefits visit [www.catt.ca](http://www.catt.ca).

### METHOD OF PAYMENT - PLEASE PICK ONE

INVOICE COMPANY

CREDIT CARD (MasterCard, VISA, American Express)

CARD #: \_\_\_\_\_

EXP: /

NAME ON CARD: \_\_\_\_\_

CVC: \_\_\_\_\_

CHEQUE (Payable to "University of Waterloo, Attn: Centre for Advancement of Trenchless Technologies")

**COMPLETED REGISTRATION FORMS CAN BE FAXED TO (519) 746 6556 OR MAILED to Alice Seviara:**

**MAIL:** CENTRE FOR ADVANCEMENT OF TRENCHLESS TECHNOLOGIES  
Department of Civil and Environmental Engineering  
University of Waterloo, Waterloo, ON N2L 3G1  
ph 519 888 4770 f 519 746 6556 email:alice.seviara@uwaterloo.ca

**Note:** To prevent fraud never send credit card information via email.

Refund Policy: please visit [www.catt.ca](http://www.catt.ca) for details on CATT's refund policy.

### PLATINUM MEMBERS

DECAST

3M



Insituform  
an AEGION company



Inversa  
SYSTEMS

Robichaud  
NODIG SEWER SOLUTIONS

LiquiForce  
No-Dig Pipeline Rehabilitation

IPEX  
Committed to Excellence



CANADA  
PIPE

AQUAREHAB

HAMMERHEAD  
TRENCHLESS EQUIPMENT

### GOLD MEMBERS

CON CAST PIPE

ENBRIDGE

OEC

Atlas  
Dewatering Corporation

AECOM

EVANGELINE  
EXCAVATORS