

Ontario  
and  
Atlantic  
Canada  
  
Fall 2011

# Continuing Technical Education

All About Boilers & Heat  
Distribution Systems - Halifax

Power Generation - Toronto, Halifax

Industrial Instrumentation and Modern  
Control Systems - Toronto, Halifax

Electrical Equipment - Toronto, Halifax

Practical Pump Technology - Toronto, Halifax

Practical Compressor Technology - Toronto,  
Halifax

Bidding Process & Effective Contract  
Management - Toronto

Electrical Hazards Prevention - St John's,  
Saint John

Electrical Generators and Excitation  
Systems - Toronto, Halifax

Restoration, Preservation & Rehabilitation  
of Heritage & Older Masonry Structures -  
Fredericton

Concrete Repair & Protection - Halifax

Uninterruptible Power Systems (UPS's),  
Industrial Batteries, Variable Frequency  
Drives, and Motors - Toronto, Halifax

Indoor Air Quality and the Role of  
HVAC Systems - Toronto

Effective Grounding & Bonding - Toronto

Bridge Inspection - Toronto

New National Building Code of Canada  
2010, Part 3 - St John's

Construction Project Management -  
Toronto



Your **ONE PLACE**  
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**DALHOUSIE  
UNIVERSITY**

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# All About Boilers & Heat Distribution Systems

Sept 29-30, 2011 - Halifax, NS **Time:** 8:30am-4:00pm  
**Course#:** 6429  
**Cost:** \$1050 +HST **CEU's:** 1.4  
**Instructors:** Art Irwin

Today, the majority of building owners are practicing various methods of energy management dealing with the heating boilers and the distribution of heat to all areas within the building envelope. Many have sophisticated control systems that schedule boiler operation based on outdoor temperature conditions and indoor requirements. A large void exists in these programs that do not include recommended operation and maintenance of equipment. Why do boilers fail well within the normal life expectancy time frame? There is a definite correlation between flame temperature and water temperature that causes severe sooting, accelerated internal corrosion resulting in costly equipment replacement. Combustion air sizing, freeze protection and many safeguards are not carried out because of lack of knowledge on the subject. Existing preventive maintenance procedures may not be presently addressing the real issues. This course explores the many myths attached to heating fuels. It also provides valuable problem solving strategies with a focus on the effects of poor design, improper sizing of boilers, the distribution piping, circulators and other components and how they lead to poor performance and increased operating costs.

**Please note:** This course is specifically designed to provide comprehensive and unbiased information on hydronic (hot water) boilers in the 453,000 Btu to 6,970,000 Btu range. (15 HP - 200 HP) which includes the majority of boilers in both industry and the private sector.

## Power Generation:

**Gas Turbines, Co-Generation, Combined Cycle Plants, Wind Power Generation, and Solar Power**

Oct 3-7, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6410  
Dec 5-9, 2011 - Halifax, NS  
**Course#:** 6411  
**Cost:** \$2395 + HST **CEU's:** 3.5  
**Instructor:** Philip Kiameh

**Computer Simulation ~ Selection, Applications ~ Operation & Maintenance ~ Performance Monitoring Power Augmentation ~ Economics ~ Profit Optimization ~ Revenue ~ Life Cycle Cost Analysis**

This program provides a thorough understanding of steam power plants, gas turbines, co-generation, combined cycle plants, wind and solar power generating plants. Topics such as compressors, gas and steam turbines, heat recovery steam generators, deaerators, condensers, lubricating systems,

instrumentation, control systems, transformers, and generators are covered in detail. The design, selection considerations, operation, maintenance, pay-back period, and economics of co-generation plants and combined cycles as well as emission limits, reliability, monitoring and governing systems will also be covered thoroughly. All the significant improvements that were made to co-generation, combined cycles plants, wind and solar power generating plants during the last two decades will also be explained.

## Industrial Instrumentation and Modern Control Systems:

**Selection, Applications, Operation and Diagnostics**

Oct 12-14, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6412  
Dec 12-14, 2011 - Halifax, NS  
**Course#:** 6413  
**Cost:** \$1495 + HST **CEU's:** 2.1  
**Instructor:** Philip Kiameh

This seminar provides a comprehensive understanding of the design, selection, and tuning of modern control systems, digital control, distributed control systems (DCSs), supervisory control and data acquisition (SCADA) systems, and smart technology. This is a MUST for those who use this instrumentation and control systems. It covers how this equipment operates and provides the guidelines and rules that must be followed for successful application.

This seminar provides in depth coverage of the following: Feedback, Cascade, Analog, and Digital Control ~ Distributed Control Systems (DCS) ~ Supervisory Control and Data Acquisition Systems (SCADA) ~ Control Valves ~ Actuators ~ Smart Technology ~ Transmitters, Transducers, Positioners, and Controllers ~ Diagnostic Testing of Control Systems

## Electrical Equipment:

**Transformers, Inverters, Rectifiers, Motors, Variable Frequency Drives, Uninterruptible Power Systems, Generators, Circuit Breakers, and Fuses**

Oct 17-21, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6414  
Nov 28 - Dec 2 - Halifax, NS  
**Course#:** 6415  
**Cost:** \$2395 + HST **CEU's:** 3.5  
**Instructor:** Philip Kiameh

This seminar provides a comprehensive understanding of the various types of transformers, inverters, rectifiers, motors, variable frequency drives, uninterruptible power systems, generators, circuit breakers, and fuses. The seminar is focused on maximizing the efficiency, reliability, and longevity

Detailed course descriptions are available at [www.cte.dal.ca](http://www.cte.dal.ca)

of this equipment. These objectives can only be achieved by understanding the characteristics, selection criteria, common problems and repair techniques, preventive and predictive maintenance. This seminar is a MUST for anyone who is involved in the selection, application, or maintenance of electrical equipment. Participants will learn how this equipment operates and be provided with guidelines and rules that must be followed for successful operation. Basic design, operating characteristics, specification, selection criteria, advanced fault detection techniques, critical components, as well as all preventive and predictive maintenance issues are covered in detail. In addition the latest in technology in this field will be discussed.

## Practical Pump Technology

Oct 24-25, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6416  
Nov 21 - 22, 2011 - Halifax, NS  
**Course#:** 6417  
**Cost:** \$1150 + HST **CEU's:** 1.4  
**Instructor:** Philip Kiameh

**Basic Design ~ Specification ~ Selection Criteria ~ Sizing Calculations ~ Sealing Arrangements ~ Common Operational Problems ~ Diagnostics, Troubleshooting, and Maintenance ~ Pump Drivers**

Practical Pump Technology is a MUST for those who use this equipment. It covers how pumps operate and provides the guidelines and rules that must be followed for their successful application.

This seminar provides a comprehensive understanding of the various types of reciprocating, rotary, and centrifugal pumps. This includes piston pumps, plunger pumps, rotary pumps, screw pumps, two- and three-lobe pumps, cam pumps, vane pumps, bellows-type metering pumps, diaphragm pumps, canned motor pumps, and centrifugal pumps. The characteristics, selection criteria, sizing calculations, sealing arrangements, common problems, repair techniques, as well as the preventive and predictive maintenance of these pumps are covered in detail.



## Practical Compressor Technology

Oct 26-28, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6418  
Nov 23 - 25, 2011 - Halifax, NS  
**Course#:** 6419  
**Cost:** \$1495 + HST **CEU's:** 2.1  
**Instructor:** Philip Kiameh

**Basic Design ~ Specification ~ Selection Criteria ~ Sizing Calculations ~ Sealing Arrangements ~ Common Operational Problems ~ Diagnostics, Troubleshooting, and Maintenance ~ Vibration Analysis ~ Used Oil Analysis**

Practical Compressor Technology is a MUST for those who use this equipment. It covers how compressors and bearings operate and provides the guidelines and rules that must be followed for their successful application.

This seminar provides a comprehensive understanding of the various types of reciprocating, rotary, and dynamic compressors. This includes trunk piston, sliding crosshead piston, diaphragm, rotary screw, straight lobe, sliding vane, liquid ring, centrifugal, and axial compressors. Bearings are also covered thoroughly. The characteristics, selection criteria, sizing calculations, sealing arrangements, common problems, repair techniques, as well as the preventive and predictive maintenance of these compressors is covered in detail.

## Bidding Process & Effective Contract Management

Oct 24-25, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6441  
**Cost:** \$1050 + HST **CEU's:** 1.4  
**Instructor:** Rishi Kumar

The majority of contracts are negotiated by competitive bidding/contracting procedures. All too often shortcomings in the application of these procedures lead to delays, extra costs, disputes and, sometimes-legal actions. In seeking to avoid such pitfalls, this seminar provides a comprehensive but compact procedure/process to competitive bidding. Properly prepared contractors, subcontractors, engineers, and developers can avoid anticipated liability, poor quality/reduced performance/disputes and receive payment for work performed. Weakness in effective contract management generally stems from the absence of correct process and procedures. This seminar will define the practical and other issues involved in bidding/contracting management along with the obligations of each participant in these activities and how the disputes related to construction contracts both in public and private sectors can be addressed.

## Electrical Hazards Prevention

CSA Standard Z462-08  
Workplace Electrical Safety

Oct 31-Nov 1, 2011 - St John's, NL **Time:** 8:30am-4:00pm

**Course#:** 6406

Nov 3-4, 2011 - Saint John, NB

**Course#:** 6407

**Cost:** \$1050 + HST

**CEU's:** 1.4

**Instructor:** Les Stoch

This seminar will provide participants with the required knowledge to identify electrical hazards including shock, fire and arc-flash and what is required to prevent them. Safe electrical installations and operating procedures are discussed. The seminar reviews the basics of electricity, how it is produced, distributed and used. Based on CSA Standard Z462-08, the dangers of electrical shock, fire and arc-flash are reviewed with real life examples and what is necessary to avoid harm. Authoritative sources for further information are identified and discussed. Too many electrical accidents and fires occur each year, causing unnecessary injuries, fatalities and property damage. The information provided in this workshop will help the participants identify the causes, what to do about them, how to manage the risks and work safely in an electrical environment. Participants will become aware of electrical safety regulations and other essential information. This workshop is intended for managers and workers who need to understand and manage electrical safety in the workplace.

## Electrical Generators and Excitation Systems:

**Selection, Applications, Operation, Diagnostic Testing, Refurbishment, Troubleshooting and Maintenance**

Oct 31-Nov 2 - Toronto, ON **Time:** 8:30am-4:00pm

**Course#:** 6420

Nov14-16, 2011 - Halifax, NS

**Course#:** 6421

**Cost:** \$1495 + HST

**CEU's:** 2.1

**Instructor:** Philip Kiameh

Maximum efficiency, reliability, and longevity of the various types of generators, exciters, voltage regulators, and protective systems are of great concern to many industries. These objectives can only be achieved by understanding the characteristics, selection criteria, common problems and repair techniques as well as preventive and predictive maintenance. This seminar is a MUST for anyone who is involved in the selection, application, or maintenance of generators.

The seminar covers how this equipment operates and provides guidelines and rules that must be followed for successful operation. Basic design, operating characteristics, specification, selection criteria, advanced fault detection techniques, critical components, refurbishment, as well as all maintenance issues are covered in detail. In addition, the latest in technology in this field will be discussed.

## Restoration, Preservation & Rehabilitation of Heritage & Older Masonry Structures

**A two-day course which focuses on the current state-of-the-art for masonry conservation, including investigation, diagnosis and correction of deficiencies, defects and deterioration**

Nov 1-2, 2011, Fredericton, NB

**Time:** 8:30am-4:00pm

**Course# :** 6426

**Cost:** \$1050 + HST

**CEU's:** 1.4

**Instructor:** Paul Jeffs

Over the last few decades, professional conservation of masonry has become recognized as a "stand alone" discipline requiring very specialist knowledge and expertise, particularly for historically valuable and architecturally significant structures. This two-day course will evaluate traditional masonry construction materials and techniques and highlight the importance of understanding the impact they had and have on durability aspects. Additionally, the program will examine the many advances in technology that have occurred over recent years, together with how these can provide considerable benefit to those involved with masonry structures. The presenter's own experiences as a specialist consultant and a "troubleshooting" investigator will be used for many of the topics that will be covered over the two days. Various deterioration mechanisms will be identified, together with the way in which failure to understand them can impact on the development of an effective conservation strategy. Actual examples will be used to highlight failures, defects or deterioration that can often be caused by the selection of incorrect materials and techniques. The program is ideally suited for Owners, Property and Facility Managers, Engineers, Architects, Consultants, Inspectors and Technicians, Contractor's Supervisors and Foremen, Materials Suppliers' Sales and Technical Personnel and Trainees. In fact, the course is ideally suited for anyone who wishes to understand the basic requirements for effective and long-lasting conservation of masonry structures.



Detailed course descriptions are available at [www.cte.dal.ca](http://www.cte.dal.ca)

## Concrete Repair & Protection. Getting it Right the Second Time!

**A two-day course which focuses on the latest advances and state-of-the-art knowledge**

Nov 3-4, 2011 - Halifax, NS **Time:** 8:30am-4:00pm  
**Course# :** 6427  
**Cost:** \$1050 + HST **CEU's:** 1.4  
**Instructor:** Paul Jeffs

Over the last decade, professional repair and protection of concrete structures has become recognized as a “stand alone” discipline requiring specialist knowledge and expertise. This course has been developed to cover the latest advances in materials and techniques and the current state-of-the-art. The presenter’s own experiences as a concrete materials consultant and a “troubleshooting” investigator will be used for many of the topics that will be covered over the two days. Various concrete deterioration mechanisms will be identified, together with the way in which failure to understand them can impact on the development of a repair and protection strategy. Actual examples will be used to highlight failures, defects or deterioration that can often be caused by the selection of incorrect materials and techniques. Additionally, the program will examine the many advances in technology that have occurred over recent years, together with how they can provide considerable benefit to the concrete repair and protection industry - and ensure that we get it right the second time!

This course will be of special interest and a major benefit to all those involved in the design, specification, construction, repair and protection of reinforced concrete structures, including government agencies, specifiers, architects, engineers and consultants, inspectors and technicians, as well as the contracting team. The program will also be of interest to materials suppliers’ sales and technical personnel and trainees.

## Uninterruptible Power Systems (UPS’s), Industrial Batteries, Variable Frequency Drives, and Motors:

**Selection, Applications, Operation, Sizing, Diagnostic Testing, Troubleshooting and Maintenance**

Nov 3-4, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6422  
Nov 17-18, 2011 - Halifax, NS  
**Course#:** 6423  
**Cost:** \$1150 + HST **CEU's:** 1.4  
**Instructor:** Philip Kiameh

Maximum efficiency, reliability, and longevity of uninterruptible power systems (UPSs), rectifiers, inverters, industrial batteries, variable frequency drives, and motors are of great concern to many industries. These objectives can only be achieved by understanding the characteristics, selection criteria, sizing

requirements, common problems and repair techniques, preventive and predictive maintenance. This seminar is a MUST for anyone who is involved in the selection, applications, sizing, or maintenance of UPSs, industrial batteries, variable frequency drives, and motors.

The seminar covers how this equipment operates and provides guidelines and rules that must be followed for a successful operation, selection, sizing, and maintenance. Basic design, operating characteristics, specification, selection criteria, sizing, advanced fault detection techniques, critical components, as well as all maintenance issues and the latest technology are covered in detail.

## Indoor Air Quality and the Role of HVAC Systems

**Learn how to identify IAQ problems, maintain good indoor air quality and the importance of HVAC Systems related to IAQ**

Nov 14-15, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6440  
**Cost:** \$1050 + HST **CEU's:** 1.4  
**Instructor:** Rishi Kumar

Everyone prefers staying well. Still, building occupants are getting sick, and more of them are blaming their illness on the indoor air quality (IAQ) where they work, attend school, or receive medical or dental attention. This seminar will enable the participant to gain knowledge of IAQ and develop skills in how to assess building for IAQ, how to recognize IAQ problems and what type of corrective action can be taken quickly. The seminar will also provide participants with practical guidelines for the design, installation, operation and maintenance or evaluation of heating, ventilating, and air conditioning (HVAC) systems. A thorough discussion of the tools used to evaluate the performance of ventilation system range from merely educating four of the five senses of the human body to the use of sophisticated and expensive equipment such as those required for tracer testing and how to achieve good indoor air quality (IAQ) will be provided.



Detailed course descriptions are available at [www.cte.dal.ca](http://www.cte.dal.ca)

## Effective Grounding & Bonding

### Correct Applications for Safe Electrical Installations

Nov 17-18, 2011, Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6408  
**Cost:** \$1050 + HST **CEU's:** 1.4  
**Instructor:** Les Stoch

For various reasons, electrical system grounding and bonding procedures are not very well understood. This seminar provides up-to-date theory, practice and knowledge necessary for design, construction, safety, operations and management of electrical facilities. The seminar offers a comprehensive coverage of grounding and bonding procedures, electrical code requirements, substation and safety grounding, sensitive electronic equipment and lightning protection. Practical case studies are used to reinforce knowledge of the grounding and bonding principles studied during the seminar. Participants will learn to identify and avoid electrical hazards caused by incorrect grounding and bonding methods; reduce electrical equipment problems and failures by employing safe and correct grounding and bonding methods; become more familiar with electrical code requirements, and maximize safety in the operation of all types of electrical facilities. This workshop is intended for engineers, technologists, managers, electrical contractors and consultants involved in the design, installation, inspection, maintenance or operation of electrical facilities.

## Bridge Inspection

Nov 17-18, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6190  
**Cost:** \$1050 + HST **CEU's:** 1.4  
**Instructor:** Harold Kleywegt

Recent bridge collapses in Quebec and Minnesota have heightened public anxiety regarding bridge safety. The first line of defence in ensuring bridge safety is adequate bridge inspection. The Johnson Inquiry into the collapse of the Blvd. de la Concorde Bridge in Laval, Quebec was critical of bridge inspection practises. A seminal paper from the US has cast considerable doubt on the efficacy of how bridges are inspected. This bridge inspection course is specifically designed to sensitize all players involved in bridge asset management as to existing weaknesses with current bridge inspection methodology. Equally, it will suggest improved inspection practises that will facilitate more meaningful and focussed field data from bridges. The course borrows heavily on the instructor's personal experience, and is rich in visual content through hundreds of example images. The objectives of this course are to: re-acquaint participants with inspection terminology; improve understanding of bridge material weaknesses; help recognize inherent weaknesses in bridge detailing; learn to differentiate between consequential and inconsequential problems; appreciate shortcomings with conventional inspection reporting practises, and overcome shortcomings with improved inspection techniques.

## New National Building Code of Canada 2010, Part 3

Explore new concepts for development, presentation, evaluation, and acceptance of Alternative Solutions

Nov 21-22, 2011 - St John's, NL **Time:** 8:30am-4:00pm  
**Course#:** 6428  
**Cost:** \$1050 + HST **CEU's:** 1.4  
**Instructors:** Ralph Bartlett,  
Ian MacDonald, Ben Coles

Alternative solutions for compliance with Part 3 Fire Protection and Occupant Safety in the National Building Code of Canada 2010 (and associated Provincial Building Codes) are a proven method for achieving an acceptable means for fire and life safety in buildings. In recognition of the direction that the National Building Code of Canada is moving, this seminar will explore concepts related to the development, presentation, evaluation, and acceptance of performance-based alternative solutions. This course will be specific to Fire Protection and Occupant Safety as defined by the NBC.

This new course has been developed for designers, builders, and authorities. It is recommended that attendees possess a working knowledge of the NBC's Part 3 Acceptable Solutions.

## Construction Project Management

Dec 12-13, 2011 - Toronto, ON **Time:** 8:30am-4:00pm  
**Course#:** 6439  
**Cost:** \$1050 +HST **CEU's:** 1.4  
**Instructors:** Rishi Kumar

For organizations, managing construction projects successfully reduces time-to-market and time-to-profitability. With a variety of project organizational structures and multiplicity of contractual arrangements on the increasingly complex projects, developing competent project managers/leaders is of critical importance. For individuals, managing construction projects effectively is a way to take control of multiple priorities, keep deadlines, stay on budget, handle the unexpected and keep control in the face of chaos. Participants in this seminar will learn how to plan and control a project from its initial justification through engineering, design and procurement to the final construction and commissioning. The emphasis of this seminar is how proper planning and preparation is a vital tool for monitoring the actual progress of the project, with or without the use of specialized computer programs.

**J Ralph Bartlett, P.Eng., PE**, is the President of RJ Bartlett Engineering Ltd, a consulting firm specializing in fire protection engineering, building and fire code consulting, and investigative engineering. Mr. Bartlett received his degree in fire protection engineering from the University of Maryland in 1982. He has participated on various committees with the Canadian Standards Association, National Research Council, and Underwriter's Laboratories of Canada. Mr. Bartlett has made presentations on a wide variety of fire protection topics to groups such as hospital engineers, fire prevention officers, architects, and engineers.

**Ben Coles, P.Eng.**, is a Project Coordinator with RJ Bartlett Engineering Ltd. in Fredericton, New Brunswick. Mr. Coles has been practicing in this field since 2003. He holds degrees in Mechanical (B.Sc., UNB) and Fire Protection (M.Sc., WPI) engineering and is currently pursuing his MBA in Engineering Management (UNB). Mr. Coles is involved with multiple APEGNB committees at the provincial and branch levels, and has assisted in the preparation and delivery of various fire protection related seminars across Canada.

**Arthur A. (Artie) Irwin** has extensive experience in the heating, ventilation and air conditioning industry. During his private sector career, Art administered heating sales for shopping centres, universities, high-rise apartment and office complexes and municipal water distribution equipment. As an energy consultant, he continues to serve on several provincial and national code and standards writing committees which in the past included Energy Mines and Resources Canada, the Heating, Refrigerating and Air Conditioning Institute, National Research Council, Canadian Standards Association and Canadian General Standards Board. He is a member of the Nova Scotia Fuel Safety Board and member of the Technical Advisory Committee of the Nova Scotia Homebuilders. For the past 22 years, he has been a monthly guest on CBC Radio, Maritime Noon, answering energy related questions from callers across Atlantic Canada and beyond. He performs many energy assessments on HVAC systems, carries out heating design and the preparation of specification writing for both new and existing structures. Art continues to write for National trades publications.

**Paul Jeffs**, PJ Materials Consultants Limited, is an independent consultant who for more than 20-years has specialized in providing technical advice and services for the design, construction, restoration and protection of concrete and masonry structures. Prior to forming PJ Materials Consultants Limited, he was employed for over 25 years within the construction industry around the world. Paul currently serves on the Canadian Standards Association Technical Committee (Associate) and the High Performance Sub-Committee for New Parking Structures (CAN/CSA S-413). He is a current member of the National Research Council's Working Group on Repointing Mortars, has provided materials related expertise as a consultant for numerous industries and has authored many technical papers. Paul provides courses across Canada on such topics as concrete practice and technology, concrete and masonry structure condition assessments, concrete repair and protection, the restoration of heritage and masonry structures, and the construction of concrete slabs on grade.

**Philip Kiameh, M.A.Sc., B.Eng., P.Eng.** has taught courses to thousands of engineers and technical professionals across North America and Europe. He has performed research on power generation equipment with Atomic Energy of Canada Limited at their Chalk River and Whiteshell Nuclear Research Laboratories. He also has more than 25 years of practical engineering experience with Ontario Power Generation (formerly, Ontario Hydro - the largest electric utility in North America). While in Ontario Hydro, Philip worked as Training Manager, Engineering Supervisor, System Responsible Engineer and Design Engineer. He was responsible for the operation, maintenance, diagnostics, and testing of gas and steam turbines, generators, motors, transformers, inverters, valves, pumps, compressors, instrumentation and control systems as well as supervising engineers, setting up

preventive maintenance programs, writing Operating and Design Manuals, and commissioning new equipment.

Mr. Kiameh was awarded his Bachelor of Engineering Degree "with distinction" from Dalhousie University, Halifax, Nova Scotia, Canada. He also received a Master of Applied Science in Engineering (M.A.Sc.) from the University of Ottawa, Canada. In addition, he is a member of the Association of Professional Engineers in the province of Ontario and has authored four books including: *Power Generation Handbook: Gas Turbines, Steam Power Plants, Co-generation, and Combined Cycles and Electrical Equipment Handbook* both published by McGraw-Hill.

**Harold Kleywegt, P.Eng.**, is principal and Managing Director of Keystone Bridge Management Corp. He is a graduate of the University of Waterloo (B.A.Sc. 1976) and the University of Guelph (M.Sc. 1978). Harold has 27 years full-time experience in the management, rehabilitation design, maintenance, construction and inspection of both highway and railway bridges. He was instrumental in the development of the Ontario Bridge Management System and has actively managed 500 provincial bridges in Ontario. He has given numerous presentations on bridge management practises and has been a guest lecturer at Queen's University, Kingston. He was a presenting author at The International Association for Bridge Maintenance and Safety (IABMAS) conference in Seoul, Korea, July 2008.

**Rishi Kumar, P.Eng., PMP, CMC**, is a President and CEO of Global Educational and Consulting Services (GECS) and is an approved education provider by Engineering Institute of Canada (EIC) and International Association of Continuing Education and Training, Washington, DC (IACET). Since 1996, he has conducted over 400 public and in-house seminars and published and presented over 25 technical management related papers all over the globe. Presently, Mr. Kumar is serving as a Sr. Vice-President, Operations for PMI Lakeshore chapter and served in the past as a Director-Marketing and Professional Development portfolios. Mr. Kumar is actively involved with Professional Engineers Ontario (PEO) and has served on various committees.

Rishi served as a Vice-President-Engineering, Procurement and Construction (EPC) at Global Technologies and Manufacturing and as a Director of Operations responsible for production, engineering, procurement, quality and logistics of AZZ-Blenkhorn and Sawle Ltd. Rishi obtained his M.Sc. in Mechanical Engineering in 1976 from University of Calgary, Calgary, Alberta. Since 1976, he has held many senior positions in utility, auto industry, research & development, service and consulting sectors in program and portfolio management of various capital projects. He has authored and co-authored technical and business papers on a variety of topics and has presented them at numerous national and international conferences and symposiums.

**Ian MacDonald, P.Eng., CFEI**, is the General Manager of R.J. Bartlett Engineering Ltd. in Fredericton, New Brunswick. Mr. MacDonald has been practicing in this field since 1985 and has participated on various committees with the Canadian Standards Association, National Research Council, Society of Fire Protection Engineers and Underwriters' Laboratories of Canada.

**Les Stoch** is President of L. Stoch and Associates, offering electrical engineering services, professional development and training. His industry experience includes 21 years with Ontario Hydro as an Electrical Inspection Manager and Engineer. Mr. Stoch obtained his Electrical Engineering Degree from Sir George Williams University (Concordia) in Montreal. He is a member of Professional Engineers of Ontario, the American Society for Quality, the Ontario Electrical League and the International Association of Electrical Inspectors. He served for eight years on the Provincial Advisory Committee, which develops Ontario's Electrical Safety Code. He writes regular columns on the Canadian Electrical Code for the Electrical Business Magazine and IAEI News.



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Dalhousie University College of Continuing Education has been helping organizations achieve success through customized, in-house training for over 30 years. Whether the topic is IT, Engineering, Quality Assurance or General Management, we have the expertise to help your organization adapt, compete and succeed.

## REGISTRATION INFORMATION

### To Register or for More Information

- Tel: 1.800.565.1179 or 902.494.6079 (8:00 am-4:30 pm AST)
- Fax: 902.494.6875
- Email: [cte@dal.ca](mailto:cte@dal.ca)
- Online: [www.cte.dal.ca](http://www.cte.dal.ca)

### Location - Halifax Seminars only

- Dalhousie University College of Continuing Education, 1459 LeMarchant St. Suite 2201, Halifax, NS B3H 3P8

### Parking - Halifax Seminars only

Parking passes (\$11.00 per day) should be purchased in advance from our Registration Office (902.494.6079 or 1.800.565.1179) a minimum of 10 business days prior to your course start date. Passes will be mailed out with your registration confirmation. Parking fees are non-refundable.

Please note that parking is very limited on the Dalhousie campus. As parking spaces are not reserved, we recommend that you arrive on campus by 8:00 am to obtain a parking spot. We suggest that you park at either the Sir James Dunn or Hancock Hall parking lots. A Dalhousie parking lot map will be sent with parking passes.

### Accommodations

- |                           |                |                              |                |
|---------------------------|----------------|------------------------------|----------------|
| • Lord Nelson, Halifax    | 1.800.565.2020 | • Hilton Saint John          | 1.800.561.8282 |
| • Atlantica Halifax Hotel | 1.888.810.7288 | • Delta Fredericton          | 1.888.462.8800 |
| • Sheraton Hotel NL       | 1.888.870.3033 | • Delta Toronto Airport West | 1.800.737.3211 |

### Continuing Education Units

Continuing Education Units (CEUs) will be awarded for participation in these courses. One CEU is equivalent to 10 classroom hours or 10 professional development hours (PDHs). The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

### Cancellation Policy

If a withdrawal is made up to 10 business days prior to the start of the course, the full fee will be refunded. If a refund is requested after that date, a 20% administration charge will be deducted. You may substitute another to attend at no additional cost. If the course is cancelled for any reason, we will contact the registrants and provide a full refund. The university's liability is limited to the return of the registration fee. If a speaker is not available, due to unforeseen circumstances, another speaker of equal ability and expertise will be substituted.

Participants withdrawing from a certificate program course should notify the College of Continuing Education, in person or in writing, indicating the reason for withdrawal. Participants may be allowed to apply part of the fee paid to another course offered by the College of Continuing Education.

### For more information call:

# 1.800.565.1179 or 902.494.6079

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