

MainTrain

Toronto 2016

Sustainable, Effective, Evolving

CONFERENCE PROGRAM
SEPTEMBER 19 TO 22

Maintenance, Reliability and Asset Management



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Welcome to MainTrain 2016

Message from PEMAC President Rob Lash

On behalf of the PEMAC Board of Directors and the PEMAC organization, I would like to extend a warm welcome to the 2016 MainTrain Conference here in the dynamic and diverse city of Toronto. We hope that you enjoy not only the conference, with its extensive technical programs and exhibits, but also all this wonderful city has to offer.

This conference addresses various areas of Asset Management through both presenter's and attendee's involvement in keeping with this year's theme to be "Sustainable, Effective, Evolving".

We hope you enjoy the content of the conference and have ample opportunity to network with international and national colleagues. Thank you to all of the presenters and attendees for your contributions to the conference, and to our colleagues on the MainTrain organizing committee.

I also would like to thank our sponsors and exhibitor's that have helped to make this conference possible.

Robert Lash, President, PEMAC



About PEMAC

Vision

PEMAC is a national not for profit association providing global leadership, education and certification in asset management practices.

Mission

PEMAC's mission is to improve its member's professionalism, safety, performance, and outside recognition, by providing specialized education and certification, undertaking research, providing forums for the exchange of information and acting as a public voice for its members and the profession.

PEMAC's membership is comprised of over 1300 maintenance, reliability and asset management practitioners.

For more information about PEMAC, visit www.pemac.org. Be sure to follow us on LinkedIn, Facebook and Twitter @PEMACexec for the latest updates as well.



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Message from PEMAC Executive Director **Cindy Snedden**

PEMAC is delighted to welcome participants, both familiar and fresh, from across Canada and around the world to Toronto for our 18th conference, MainTrain 2016.

The MainTrain 2016 conference delegates represent organizations that carry out a very interesting array of activities which are vital to humanity including (but not limited to): Astronomical Research; Facilities Management; Food and Beverage Processing; Forest Products Manufacturing; Municipal Infrastructure Management; Ore Production, Refining and Distribution; Petroleum Products Production, Refining and Distribution; Power Generation and Distribution; and Steel Manufacturing. The operations of these organizations tend to be either capital intensive, mechanically intensive or have high consequence of failure - often all three.



Considering that list, it is clear that through their daily work, professionals in maintenance, reliability and asset management roles have a direct impact on development of prosperous and sustainable cities, regions and nations. To highlight this fact, the MainTrain committee has chosen, "Sustainable, Effective, Evolving" as its theme. Your attendance at a conference designed to discuss the challenges and the opportunities for advancement in maintenance, reliability and asset management, indicates that you take your professional responsibility seriously and that you are interested in contributing to a "Sustainable, Effective, and Evolving" planet in a very meaningful way.

It sounds serious and it is. But each year at MainTrain we experience the reality that learning while connecting with a surprising array of individuals who share similar challenges to us across industries is also fun, encouraging and inspiring. I hope you will sit down beside someone unfamiliar each breakfast, lunch or dinner and let your questions flow.

Much is owed to the MainTrain committee and their supporting PEMAC staff for all the effort required to unite us in a common purpose for these four days. Thank you also to presenters, sponsors and exhibitors who have taken the time to organize and contribute their varied experiences, thoughts, tools and techniques.

I am confident that all participants will have an edifying time at MainTrain 2016.

Sincerely,

Cindy Snedden, P.Eng

PEMAC Executive Director



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Message from the conference chair, **Sridhar Ramakrishnan, P.Eng., MMP**

On behalf of PEMAC and the MainTrain conference committee, I welcome you to MainTrain 2016 in the dynamic city of Toronto, Ontario. As an Ontarian myself, I am proud to share that for the last 7 consecutive years, Toronto has been the world's 4th best liveable city, as per the Economist Intelligence Unit!

The theme for this year's conference is 'Sustainable, Effective, Evolving'. We have designed the four days of this conference around this theme. We have a good mix of keynotes, sessions, workshops, tours and activities around this theme.

Sustainability is about meeting the needs of today without compromising the needs of future generations. It can be achieved through the integration of environmental, economic and social priorities into policies and programs and requires action at all levels - citizens, industry and governments. Having been in the Oil and Gas industry in my entire 27 year career, I have been a witness to the evolution of sustainability first hand. Decades ago, we used to focus on KPIs around productivity, equipment, process and cost. Today, in addition to those metrics, we also focus on 'Energy Intensity, Environmental Releases, Percent of water recycled, etc, and have annual goals and targets around them.

Therefore today, as Maintenance, Reliability and Asset Management professionals and leaders, we have a key role to play in the way we design or select our assets, all the way through how we manage them, and eventually renew or dispose them - the entire asset life cycle.

Our hope is that these four days would provide you with new ideas, inspirations, skills and avenues to bring in sustainability at the front and centre of your work. And daily lives.

I would like to thank everyone for taking time off your busy schedules to participate in this conference, and a safe and enjoyable stay in Toronto.

Sridhar Ramakrishnan, P.Eng., MMP



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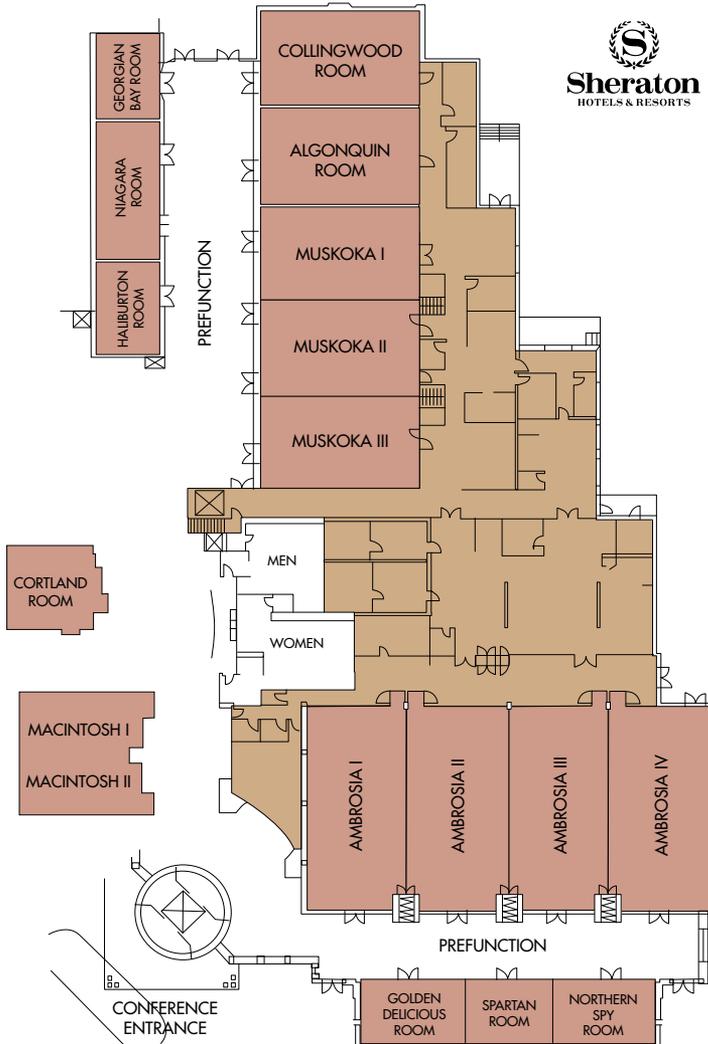
PEMAC is excited to offer a MainTrain 2016 Event App this year! Get all the latest details about the conference, the speakers, the sessions and an interactive map. You can even complete your surveys online - all from the ease of your phone or tablet.

- Create your own personal schedule by marking the sessions you want to attend as favorites
- Complete session surveys online, easily and quickly!
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If you haven't already installed the App be sure to do so now. Visit your App Store and search for **MainTrain 2016**. Once installed launch the app and create an account for yourself by simply typing in your first and last name. Now your ready to go and discover all there is to know about the conference!



Conference Floor Plan



Travel Partners



Our Sponsors

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Machinery & Equipment MRO magazine offers practical information for maintenance, reliability and asset management professionals in the manufacturing, utilities and resource industries. The award-winning publication has served machinery and equipment maintenance professionals across Canada since 1985. Learn more at www.mromagazine.com.

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CINDE is Canada's non-profit, member-based, technical society dedicated to the people and companies engaged in non-destructive evaluation (NDE), non-destructive testing (NDT), and inspection. CINDE offers world-class NDT training, is a full-service government approved certification examination centre, and offers comprehensive member benefits. For more information, please visit: www.cinde.ca and events.cinde.ca.



Humber College, in partnership with PEMAC, exclusively delivers the Asset Management Professional Certificate Program (AMPC). This online program is designed to build organizational capacity for excellence in Asset Management, and leads to the Certified Asset Management Professional (CAMP) designation. Humber also delivers an in-class offering of PEMAC's Maintenance Management Professional Certificate Program (MMP). MMP builds the knowledge and skills to drive improvements in uptime, production capacity, equipment reliability, safety, environmental compliance, economic life of assets, return on investment and effective communication between departments. www.humber.ca/education-training-solutions



The International Council for Machinery Lubrication (ICML) is a NFP organization founded to facilitate growth and development of machinery lubrication as a technical field of endeavor. ICML's Machine Lubrication Technician (MLT), Machine Lubricant Analyst (MLA) and Laboratory Lubricant Analyst (LLA), offered global since 2001, are internationally recognized and adopted by ISO as 18436-4 & 18436-5, respectively. www.lubecouncil.org



Northern Lakes College delivers PEMAC's Maintenance Management Professional (MMP) Certification Program LIVE Online. Students and instructors connect with each other at the same time without having to leave home or work, and they can take their classroom with them wherever they go as long as they have internet, device and sound. Imagine the possibilities of networking with maintenance professionals across the country and around the world while learning about maintenance best practices and earning your MMP designation. northernlakescollege.ca

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Our Exhibitors



We at **AssetAnalytix** offer consulting services for those wanting to improve asset reliability and maintenance management using analytics-driven data. Headquartered in Cary, NC, we have been building reports for more than 20 years helping companies maximize returns by: increasing productivity, improving quality, decreasing cost, and reducing compliance risk. www.assetanalytix.com



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Conference Tours

PEMAC is pleased to be offering two tours at this year's conference. These off-site tours are a great way to see behind the scenes and learn more about how these organizations are managing their maintenance, reliability and asset management strategies. To sign up for any of these tours please visit the registration desk.

Toronto Transit Commission's Wilson Carhouse Tour

PEMAC member, Avi Berger will be conducting a tour of the Toronto Transit Commission's Wilson Carhouse. Located at the edge of the former Downsview Canadian Forces Base, the 60 acre Wilson Bus and Subway Complex is an important hub in the TTC system. The importance of this property continues to grow, as it expands with more tracks and space for more buses are added. See the carhouse first hand and learn how the facility manages its maintenance processes for a vital city service. The PPE requirements for this tour include: safety glasses with side shields; as well as CSA Grade 1 (green patch) safety footwear. High ankle (6" or more) are recommended but not required. Pre-registration is required.

Date: Wednesday, September 21

Departure Time: 9:00 am

Return Time: 11:20 am

Lakeview Water Treatment Facility

Join this insightful tour, hosted by the Ontario Clean Water Agency, as we tour the Lakeview Water Treatment Facility. The 67-acre facility is one of the world's largest membrane treatment facilities, and tour participants will see start to finish how water is processed through the facility. The PPE requirements for this tour include: safety hard hat and vests. These items are available onsite and will be provided to participants upon. A waiver must also be complete prior to beginning the tour. Pre-registration is required.

Date: Thursday, September 22

Departure Time: 1:00 pm

Return Time: 3:30 pm

AUTHOR'S CORNER

PEMAC welcomes a number of authors to MainTrain conference and invites conference participants to join each of them one on one in our Author's Corner featured in the exhibitor showcase. Come visit each of these authors at the dedicated time.

Tuesday, September 20		Wednesday, September 21		Thursday, September 22	
14:30 to 15:00	James Reyes-Picknell	7:15 to 8:00	Susan Lubell	7:15 to 8:00	Roop Lutchman
16:30 to 17:00	Susan Lubell	10:00 to 10:20	James Reyes-Picknell	12:30 to 12:50	Roop Lutchman
17:00 to 17:30	Dharmen Dhaliah	12:30 to 12:50	Cliff Williams		
17:30 to 18:00	James Reyes-Picknell	16:00 to 16:20	Dharmen Dhaliah		
18:00 to 18:30	Susan Lubell				

MainTrain Exhibitor Showcase

PEMAC is very excited to welcome a wide range of organizations who will be participating in our exhibitor showcase this year. Be sure to drop by and visit each of them in the Ambrosia Foyer, and gain some valuable insight for your own organization.

WELCOME RECEPTION: Join us for this year's welcome reception, proudly sponsored by Lakeside Process Controls, in the exhibitor showcase on Tuesday, September 20 from 16:30 to 18:30 to meet and mingle with fellow delegates, sponsors and exhibitors. Refreshments will be served.



NEW THIS YEAR: Join us for a walking tour of the exhibits during the welcome reception. Small groups of participants will be guided through the exhibitor showcase, stopping at each exhibit for two minutes to learn more. Listen for the bell to signal your transition to the next exhibit.

Exhibitor Showcase Hours:

Tuesday, September 20
14:30 to 18:30

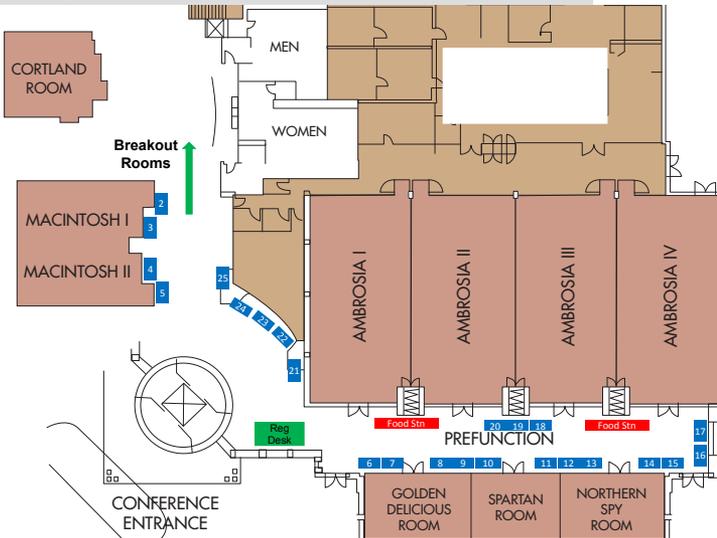
Wednesday, September 21
7:15 to 17:30

Thursday, September 22
7:15 to 13:30

DEMO Lounge:

Get hands on with many of the services and products being shared by our sponsors and exhibitors, and participate in our DEMO Lounge. Located in the Macintosh II room, you'll be able to stop in and learn more about some of the latest initiatives and ask questions about how they can support you. Find the latest details including the schedule onsite.

Key to Exhibitors



- | | | |
|----------------------------|-----------------------------------|----------------------------|
| 2 ICML | 10 ARMS Reliability | 18 Schneider Electric |
| 3 Brown & Root | 11 Lakeside Process Controls Ltd. | 19 UE Systems |
| 4 Kepner-Tregoe | 12 Lakeside Process Controls Ltd. | 20 Copperleaf Technologies |
| 5 VibeLube | 13 Humber College | 21 Shift Management |
| 6 PRUFTECHNIK | 14 Asset Analytic | 22 NRX AssetHub |
| 7 SDT Ultrasound Solutions | 15 RYKE Reliability | 23 MRO Magazine |
| 8 PEMAC | 16 Author's Corner | 24 IRISS |
| 9 Northern Lakes College | 17 Author's Corner | 25 OptiTest |

Conference Schedule at-a-Glance

Monday, September 19, 2016 (Workshops)

0715 - 0800	Registration & Breakfast Ambrosia Foyer			
0800 - 0845	Welcome and Opening Keynote: Sustainable, Effective & Evolving Asset Management: The Role of Professional Associations Rob Lash, President, PEMAC Board of Directors Ambrosia			
0900 - 1000	Asset Management Fundamentals James Reyes-Picknell Muskoka III	The FRACAS Method Susan Lubell & Abrar Ahmad Muskoka II	Optimizing Critical Spare Parts Stockholding Neil Montgomery Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day One Len Middleton Macintosh I
1000 - 1015	Break Ambrosia Foyer			
1015 - 1200	Asset Management Fundamentals (continued) James Reyes-Picknell Muskoka III	The FRACAS Method (continued) Susan Lubell & Abrar Ahmad Muskoka II	Optimizing Critical Spare Parts - Stockholding (continued) Neil Montgomery Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day One Len Middleton Macintosh I
1200 - 1300	Lunch Ambrosia Foyer			
1300 - 1430	Asset Management Fundamentals (continued) James Reyes-Picknell Muskoka III	Asset Management Supported by Reliability Modelling Jason Ballentine Muskoka II	Vibration Condition Monitoring Workshop for Managers Planners Engineers and Technicians Chad Wilcox Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day One Len Middleton Macintosh I
1430 - 1500	Break Ambrosia Foyer			
1500 - 1630	Asset Management Fundamentals (continued) James Reyes-Picknell Muskoka III	Asset Management Supported by Reliability Modelling (continued) Jason Ballentine Muskoka II	Vibration Condition Monitoring Workshop for Managers Planners Engineers and Technicians (continued) Chad Wilcox Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day One Len Middleton Macintosh I
1700 - 1900	Dine-Around		17:30 - 20:30 Supplemental sitting CAMA Exam Steve Burrows pd@pemac.org Muskoka III	

Tuesday, September 20, 2016 (Workshops)

0715 - 0800	Registration & Breakfast Ambrosia Foyer			
0800 - 0845	Opening Keynote Sustainable, Effective & Evolving Asset Management: The Role of Maintenance and Reliability Processes James Reyes-Picknell Ambrosia			
0900 - 1000	AM: A new buzzword or Value-adder? Ramesh Gulati Muskoka III	Reliability: Solving the Mystery and Breaking Paradigms Emilio Sarno Muskoka II	Maximize Asset Life Cycle Value Through Precision Lubrication Mark Barnes & Jason Kopschinsky Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day Two Len Middleton Macintosh I
1000 - 1015	Break Ambrosia Foyer			
1015 - 1200	AM: A new buzzword or Value-adder? (continued) Ramesh Gulati Muskoka III	Reliability: Solving the Mystery and Breaking Paradigms Emilio Sarno Muskoka II	Maximize Asset Life Cycle Value Through Precision Lubrication (continued) Mark Barnes Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day Two (continued) Len Middleton Macintosh I
1200 - 1300	Lunch Ambrosia Foyer			
1300 - 1430	AM: A new buzzword or Value-adder? (continued) Ramesh Gulati Muskoka III	Connecting The Dots: Putting your Reliability Based Maintenance Programs Into Action Jeff Bonnell Muskoka II	Maximize Asset Life Cycle Value Through Precision Lubrication (continued) Mark Barnes Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day Two (continued) Len Middleton Macintosh I
1430 - 1500	Break and Exhibitor Showcase Opens Ambrosia Foyer			
1500 - 1630	AM: A new buzzword or Value-adder? (continued) Ramesh Gulati Muskoka III	Connecting The Dots: Putting your Reliability Based Maintenance Programs Into Action (continued) Jeff Bonnell Muskoka II	Maximize Asset Life Cycle Value Through Precision Lubrication (continued) Mark Barnes Muskoka I	MMP Module 1 "An Integrated Strategy for Maintenance Management" Day Two Len Middleton Macintosh I
1630 - 1830	Welcome Reception in Exhibit Showcase & Author's Corner Ambrosia Foyer			

1830 - 2130	Certification Exams:	Certified Asset Management Assessor (CAMA) Exam World Partners in Asset Management Muskoka III	Certified Maintenance and Reliability Professional (CMRP) Exam Society of Reliability and Maintenance Professionals Muskoka II	ICML Exam International Council for Machinery Lubrication Muskoka I
1830 - 2030	PEMAC Members Meeting Ambrosia			

Wednesday, September 21, 2016 (Sessions)

0715 - 0800	Registration, Breakfast, Exhibitor Showcase Ambrosia Foyer			
0800 - 0845	Opening Keynote Sustainable, Effective & Evolving Asset Management: The Role of Implementing Standards Ramesh Gulati Ambrosia			
0900 - 1000	Where to Start and How to Sustain your Performance Turnaround Ronald Doucet Muskoka III	Journey to Operational Reliability: The Self Assessment J.-P. Pascoli Muskoka II	Enhancing Electrical Maintenance Surveillance Systems Rudy Wodrich Muskoka I	TTC Tour Group Meets Avi Berger Lobby
1000 - 1020	Break with Exhibitors & Author's Corner Ambrosia Foyer			
1020 - 1120	Best Practices in Scope Definition for Small Capital Projects Sandra MacGillivray Muskoka III	Root Cause Analyses Integration with Asset Management Program Erin MacNeil Muskoka II	Maintenance and Manufacturing Hiring Intelligence Philippe Mercure Muskoka I	TTC Tour Group Returns at 11:30 am Lobby
1130 - 1230	Teaching Old Dogs New Tricks: Supervisory Leadership Transformation Case Studies Marie Gervais Muskoka III	Use of Qualitative Survey to Focus Quantitative Reliability Assessment Matthew Price Muskoka II	CMMS Advancements and Innovations - City of Ottawa's Water and Wastewater Utility's Experience Devesh Shah Muskoka I	
1230 - 1315	Lunch and Exhibitor Showcase & Author's Corner Ambrosia Foyer			
1315 - 1445	MRO Expert Panel Ambrosia			
1500 - 1600	The Challenges of a Sustainable Physical Asset Management Approach Dharmen Dhaliya Muskoka III	Chilled Water Cleaning, Flushing and Passivation in a Radio Telescope Andres Ginsberg Muskoka II	How to Optimize Maintenance Through Better Planning and Scheduling Michel Fournier Muskoka I	
1600 - 1630	Break and Exhibitor Showcase & Author's Corner Ambrosia Foyer			

1630 - 1730	Nova Scotia Power Equipment Integrity Through PdM and RBI Warren Rodgers Muskoka III	Eli Lilly's Lubrication-Driven Global Reliability Suzy Hitchcock Muskoka II	Implementing a Best Practices Preventative Maintenance Program Blair Fraser Muskoka I
1800 - 2300	PEMAC Annual Awards Banquet - Toronto Harbour Cruise		

Thursday, September 22, 2016 (Sessions)

0715 - 0800	Breakfast, Exhibitor Showcase & Author's Corner Ambrosia Foyer		
0800 - 0845	Opening Keynote Sustainable, Effective & Evolving Asset Management: The Role of People Cliff Williams Ambrosia		
0900 - 1000	Cut Fat off your Production Lines but Keep the Flesh and Bone Ahmed Rezika Muskoka III	Simplifying RCM to Achieve Value with a Risk-Based Asset Management Methodology Bruce Wesner Muskoka II	Finding the Right Mix - Modernizing the Maintenance Strategy for Canada Post's Letter Sorting Equipment Dan Gilbert Muskoka I
1000 - 1020	Break with Exhibitors & Author's Corner Ambrosia Foyer		
1020 - 1120	Asset Risk and Governance Nigel D'Souza Muskoka III	Drowning in Data? Using your Reliability Program as a Life Raft Keith Berriman Muskoka II	Environmental Footprint of Maintenance Erika Mazza Muskoka I
1130 - 1230	Integrating Asset Management into Your Organization Culture Roop Lutchman Muskoka III	The DIKDAR Principle Paul Daoust Muskoka II	Winning Capstone Project 2016 Randy Bearisto Muskoka I
1230 - 1330	Lunch and Exhibitor Showcase Closes Ambrosia Foyer		
1330 - 1430	Bear Den Ambrosia		OCWA Tour Group Departs at 13:00 Returns 15:30 Meet in the Lobby
1445 - 1545	The Role of Professional Associations Cindy Snedden Muskoka III	Evaluating the Reliability of Your Electrical Distribution System Doug Marshall Muskoka II	Requirements-Gathering for Effective Change Management Faisal Shaheen Muskoka I
1545 - 1600	Closing Comments & Grand Prize Draw Ambrosia		

PEMAC reserves the right to make changes to the conference schedule right up until the day of the event.

Speakers & Presenters

KEYNOTE PRESENTERS

**Rob Lash, President,
The Plant Engineering & Maintenance Association**

Sustainable, Effective & Evolving Asset Management: The Role of Professional Associations

With his role as President of the PEMAC Board of Directors, and his extended role representing PEMAC at the Global Forum on Maintenance & Asset Management (GFMAM), Rob has gained a unique insight into how organizations across Canada and around the world are working to manage assets in a more strategic way. By day, Rob is the Manager, Centralized Maintenance Support, Operations, Maintenance and Monitoring, Environmental Services at The Regional Municipality of York.



OPENING KEYNOTE - MONDAY, SEPTEMBER 19 AT 8:00

SPONSORED BY: ARMS RELIABILITY

LOCATION: AMBROSIA

**James Reyes-Picknell, Founder and President,
Conscious Asset**

Sustainable, Effective & Evolving Asset Management:
The Role of Maintenance and Reliability Processes

James is an author of the best seller, "Uptime - Strategies for Excellence in Maintenance Management", co-author of Reliability Centered Maintenance: A Key to Maintenance Excellence, contributing author to several other books, a regular contributor to PEM / MRO and REM Magazines and a regular blogger on reliability, maintenance and asset management. His background includes naval service, petro-chemicals, defense projects, aerospace and management consulting. He has used RCM since the mid-1980s and leveraged its output to define full life cycle support of major defence and aerospace systems helping to save billions of dollars in capital and operational spending by investing only a small fraction of what was saved. James is a Professional Engineer, Certified Management Consultant, Certified Maintenance and Reliability Professional and a Certified Asset Management Assessor.



OPENING KEYNOTE - TUESDAY, SEPTEMBER 20 AT 8:00

LOCATION: AMBROSIA

WORKSHOP: ASSET MANAGEMENT FUNDAMENTALS - MONDAY, SEPTEMBER 19 AT 9:00

LOCATION: MUSKOKA III

MRO PANEL: WEDNESDAY, SEPTEMBER 21 AT 13:15

LOCATION: AMBROSIA

Ramesh Gulati, Asset management & Reliability

Planning Manager at AEDC /ATA-Jacobs

Sustainable, Effective & Evolving Asset Management:
The Role of Implementing Standards

Author, change agent, and reliability Sherpa, Ramesh has been involved with asset management and reliability improvement initiatives for 50 years. He is a highly sought after author/co-author of books such as: Certified Reliability Leader Pocket Dictionary, Maintenance & Reliability Best Practices and MRBP Workbook, as well as the Professional's Guide to Maintenance & Reliability Terminology.

Ramesh has supported the establishment of ISO certified Asset Management process (Tailored 9001) since 2004. Accredited Certified Maintenance & Reliability Professional (CMRP), Certified Reliability Engineer (CRE), Certified Reliability Leader (CRL) and Certified Asset Management Assessor (CAMA) professional, Ramesh has also been awarded the CMRP of the Year Award in 2014. We welcome Ramesh to share his insight into the important role of implementing standards when creating a sustainable, effective and evolving asset management program.



OPENING KEYNOTE - WEDNESDAY, SEPTEMBER 21 AT 8:00

LOCATION: AMBROSIA

WORKSHOP - AM: A NEW BUZZWORD OR VALUE-ADDER? - TUESDAY, SEPTEMBER 20 AT 9:00

LOCATION: MUSKOKA III

Cliff Williams, Corporate Maintenance Manager, ERCO Worldwide

Sustainable, Effective & Evolving Asset Management: The Role
of People

Cliff is author of the best selling maintenance novel 'People - A Reliability Success Story'. He is a maintenance educator and a sought after keynote speaker at conferences around the world. Cliff has received many awards including the Sergio Guy Memorial Award for contribution to the maintenance and reliability profession in 2012 and is a Director with the Plant Engineering and Maintenance Association of Canada. His experience in the steel, pulp and paper industries as well as for food giants Coca Cola, Kraft and Wrigleys provides Cliff with a great perspective. His focus has always been on developing the systems and people he has worked with - whatever the industry. Cliff is a facilitator for PEMAC's Asset Management Professional Certification and Maintenance Management program. All of Cliff's experience and current roles as Maintenance and Reliability Advisor at People and Processes, as well as Corporate Maintenance Manager with ERCO Worldwide, provides Cliff with a unique perspective around the role of people within an organization's asset management strategy.



OPENING KEYNOTE: THURSDAY, SEPTEMBER 22 AT 8:00

LOCATION: AMBROSIA

MRO PANEL: WEDNESDAY, SEPTEMBER 21 AT 13:15

LOCATION: AMBROSIA

Special Features:

TAKE THE TEST

PEMAC is offering three exams during MainTrain. It is a great opportunity to become accredited while you're in Toronto.

Certified Asset Management Assessor Exam

The CAMA Exam was developed by leading not-for-profit asset management organizations* and has been verified through rigorous technical and psychometric testing. The exam complies with the GFMAM's Competency Specification for an ISO 55001 Asset Management Auditor/Assessor, ensuring that successful applicants have the minimum required knowledge to be an ISO 55001 assessor. Click here to be directed to the WPIAM website to learn more about the exam.

* AMC, ABRAMAN, IFRAMI, PEMAC, SMRP

MONDAY, SEPTEMBER 19 AT 1730

LOCATION: MUSKOKA III

TUESDAY, SEPTEMBER 20 AT 1830

LOCATION: MUSKOKA III



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ICML Exam

The ICML Exam will be available to take during the conference. Pre-registration of the exam is required. To register for the exam, please submit your application form directly with ICML. Visit the ICML website for more information about the exam, as well as the Council and its Certification Program.

TUESDAY, SEPTEMBER 20 AT 1830

LOCATION: MUSKOKA I



CMRP Exam

The Certified Maintenance & Reliability Professional (CMRP) exam will be available to take at MainTrain. Managed by the Society for Maintenance and Reliability Professionals (SMRP) the CMRP is accredited by the American National Standards Institute (ANSI), which follows ISO standards for its accreditation and processes. Click here for more information about SMRP and the exam. More details available soon about when the exam will be hosted and how to register.

TUESDAY, SEPTEMBER 20 AT 1830

LOCATION: MUSKOKA II



Grand Prize Draw

PEMAC is excited to be offering a grand prize draw this year! Join us for the Conference Wrap Up presentation taking place at the end of the conference and you will be entered into a draw for one full conference registration to MainTrain 2017 in Saskatoon! You must be present to be entered into the draw and the winner will be announced during the wrap up.

THURSDAY, SEPTEMBER 22: 15:45 to 16:00 **LOCATION:** AMBROSIA

PEMAC General Meeting

A PEMAC General Members Meeting will be held onsite at the conference. All PEMAC members are invited to attend.

TUESDAY, SEPTEMBER 20 AT 18:30 TO 20:30

LOCATION: AMBROSIA



PEMAC AWARDS BANQUET: TORONTO HARBOUR CRUISE

Join PEMAC for our annual awards banquet, this year taking place off-site on the beautiful Toronto Harbour on the evening of Wednesday, September 21. Guests will arrive and board a cruise ship to tour the Toronto Harbour for an evening of networking, fun and honouring of some inspiring people in asset management, maintenance and reliability. Guests depart the conference hotel at 6:00 pm and return at 11:00 pm. Transportation from the conference hotel is included. Tickets are required to attend this event at a cost of \$100 for members and \$110 for non-members. Tickets can be purchased at the registration desk.



Job Board

Did you know that PEMAC has a job posting service? Did you know that corporate and allied members receive complimentary job postings? To showcase some of the great career opportunities available, PEMAC is hosting a job board for conference participants to visit. Be sure to stop by and visit the job board near the registration desk to see the great opportunities that are available every day on www.pemac.org. For more information about posting your career opportunities email Melanie Mangion at admin@pemac.org or call (905) 823-7255 ext 2.

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Presenters:

Abrar Ahmad, Asset Management Professional Abrar has been the manager of business process integration at a leading oil company since 2007. His current role is to help establish sound systems, processes, training and methodologies to support integrated reliability programs and related projects. Abrar has worked in the industry for 28 years and has diverse experience in the oil and gas, petrochemical, fertilizers and other industries. He also has more than 17 years of experience with SAP Plant Maintenance. In addition, Abrar is currently the President of PEMAC's Alberta Chapter, and instructor for MMP courses. Connect with Abrar during his session.



WORKSHOP: THE FRACAS METHOD - MONDAY, SEPTEMBER 19 AT 9:00
LOCATION: MUSKOKA II

Jason Ballentine, CMRP and Engineering Manager North America, at ARMS Reliability has a degree in Mechanical Engineering and has been with ARMS Reliability since 2005. He is a reliability and maintenance strategy expert who oversees all of ARMS Reliability's improvement projects across North America, working with clients in a wide-range of industries on sizable and complex reliability projects. Some of his areas of expertise include: maintenance strategy development, reliability centered maintenance, system availability, reliability implementation programs, and root cause analysis facilitation and investigation.



WORKSHOP: ASSET MANAGEMENT SUPPORTED BY RELIABILITY MODELLING - MONDAY, SEPTEMBER 19 AT 13:00
LOCATION: MUSKOKA II

Mark Barnes, Vice-President Reliability Services at Des-Case Mark serves as Vice President of Reliability Services for Des-Case Corporation. In this role, Mark and his team of lubrication experts help educate end-users on the value of precision lubrication and provide support to help asset intensive companies change the way they perform lubrication. Based in Vancouver, Mark has been an active consultant and educator in the maintenance and reliability field over 20 years and has worked with clients around the world to design and implement lubrication improvement plans. Mark holds a PhD in Analytical Chemistry and is a certified maintenance and reliability professional (CMRP) from SMRP (Society for Maintenance and reliability professionals). His list of clients includes ExxonMobil, BC Hydro, Metro Vancouver, Chevron, Catalyst Paper, Cargill, Molson and International Paper. Don't miss Mark's all day workshop.



WORKSHOP: MAXIMIZE ASSET LIFE CYCLE VALUE THROUGH PRECISION LUBRICATION - TUESDAY, SEPTEMBER 20 AT 9:00
LOCATION: MUSKOKA I
MRO PANEL: WEDNESDAY, SEPTEMBER 21 AT 13:15
LOCATION: AMBROSIA



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Keith Berriman, Senior Consultant at Emerson, has 30 years of experience in reliability, maintenance and operations management. Formerly Director of Reliability for one of North America's largest fertilizer companies he led the implementation of improvement programs that increased plant production while reducing costs. He has worked in the petro-chemical, mining and forest products industries and with clients in offshore drilling, waste water and chemical processing. He is recognized as a thought leader in maintenance work management, presenting at conferences around the world. Keith graduated in Mechanical Engineering from the University of Sheffield, England and is a Professional Engineer in Alberta, Canada. He is also a Certified Maintenance and Reliability Professional with the SMRP.



SESSION: DROWING IN DATA? USING YOUR RELIABILITY PROGRAM AS A LIFE RAFT - THURSDAY, SEPTEMBER 22 AT 10:20

LOCATION: MUSKOKA II

Jeff Bonnell, Lloyds Register has played a key role optimizing asset performance, safety, and compliance for energy, infrastructure, transportation, utilities, and manufacturing companies in more than 20 countries. In addition to holding leadership roles in operations, service delivery, marketing and strategy with technology and service providers, Jeff has extensive experience as an engineer, manager, consultant, project manager, and solution architect. Jeff is the developer and instructor of the "Asset Knowledge Management" course for PEMAC's Asset Management Professional certification program. Jeff holds volunteer positions with PEMAC and the School for Social Entrepreneurship (<https://www.the-sse.ca/>) where he acts as a mentor for new entrepreneurs developing social enterprises. Jeff holds degrees in Industrial Engineering and Business and an MBA from the Richard Ivey School of Business at the University of Western Ontario.



WORKSHOP: CONNECTING THE DOTS: PUTTING YOUR RELIABILITY BASED MAINTENANCE PROGRAM INTO ACTION - TUESDAY, SEPTEMBER 20 AT 13:00

LOCATION: MUSKOKA II

Paul Daoust, Lead Engineer, Ops Integrity at Transalta, is a passionate and energetic asset management professional driving value in asset management, process safety management, risk management, maintenance management and reliability engineering for capital intensive industries. Paul has strong and varied technical and management leadership with over 24 years experience supporting a diverse portfolio of power generation assets. He is a professional engineer with APEGA; sits on the Board of Directors for Plant Engineering and Maintenance Association of Canada; is a Certified Reliability Leader; Certified Maintenance and Reliability Professional as well as a Certified Asset Management Assessor. Don't miss Paul during his session as well as part of the MRO Panel.



SESSION: THE DIKDAR PRINCIPLE - THURSDAY, SEPTEMBER 21 AT 11:30

LOCATION: MUSKOKA II

MRO PANEL: WEDNESDAY, SEPTEMBER 21 AT 13:15

LOCATION: AMBROSIA

Dharmen Dhaliyah, Manager Asset Management, City of Toronto

is currently leading the development and implementation of an Asset Management Framework for the Solid Waste Management Services Division to ensure optimum utilization and planning of capital assets. Prior to that Dharmen worked for five years in Toronto Water as Engineer/Senior Engineer, Asset Reliability where he led the development and standardization of maintenance and reliability practices in water & wastewater treatment sites/facilities. He also developed and led the implementation of a condition based maintenance program to improve asset reliability. With over 26 years of experience in maintenance & reliability engineering, asset management, and project management in a wide range of industry - quarry industry, construction materials manufacturing, meat & food processing industry, fresh & frozen bakeries, feed mill industry, consulting business, and municipal government, Dharmen has a lot of insight to share. He is professional mechanical engineer and holds PMP, CMRP, CAMA and MMP certifications, Dharmen also sits on the PEMAC Board of Directors, as well as a member of the Canadian Advisory Committee (CAC) for the development and review of the Asset Management ISO 55000 Suite Standards.



SESSION: THE CHALLENGES OF A SUSTAINABLE PHYSICAL ASSET MANAGEMENT APPROACH - WEDNESDAY, SEPTEMBER 21 AT 15:00

LOCATION: MUSKOKA III

Ron Doucet, P.Eng. MMP, Director, RYKE Reliability Inc, has successfully turned around the performance of many existing sites/plants and set others up with a culture of asset management excellence as part of operations readiness initiatives. Ron is the founder of RYKE Reliability and the creator of best practice RCM based improvement processes to improve maintenance tasks (PMO Pro), to determine and review required spares (RSC Pro) and to perform root causes failure analyses (RCFA Pro). Ron has been providing training in the RYKE improvement processes and in RCM2 as part of the Aladon network for over 17 years such that companies can become self-sufficient in their improvement efforts. Throughout 25 years of reliability improvement experience, Ron has had the added opportunity of living and leading these improvements often in parallel with running the day-to-day operations of the departments. This real experience enabled him to develop, proven and efficient implementation strategies for implementing a culture of asset management excellence encompassing both operating tasks, maintenance tasks, work processes and management systems. Ron is a Professional Engineer, MMP certified, an active instructor in the PEMAC Maintenance Management Professional program, an ALADON certified RCM II practitioner and creator of the RYKE suite of RCM based improvement processes.



SESSION: WHERE TO START AND HOW TO SUSTAIN YOUR PERFORMANCE TURNAROUND - WEDNESDAY, SEPTEMBER 21 AT 9:00

LOCATION: MUSKOKA III

Nigel D'Souza, Manager, Asset & Maintenance Management at City of Mississauga Nigel holds a bachelor's degree in Mechanical Engineering and is a licenced Professional Engineer in Ontario. After several years in quarrying production and maintenance engineering, and with Ontario Clean Water Agency, Nigel now holds a position with the City of Mississauga, and continues to contribute to and manage projects in maintenance program development, and asset management. Nigel also serves as PEMAC's GTA Chapter President, and participates in WEAO's Asset Management Committee.



SESSION: ASSET RISK AND GOVERNANCE - THURSDAY, SEPTEMBER 22 AT 10:20

LOCATION: MUSKOKA III

Michel Fournier, CEO, COGEP Inc.

a 25 year old Canadian technology company, where 50% of all employees are former maintenance management executives.

SESSION: HOW TO OPTIMIZE MAINTENANCE THROUGH BETTER PLANNING AND SCHEDULING - WEDNESDAY, SEPTEMBER 21 AT 15:00

LOCATION: MUSKOKA I



Blair Fraser, Manager of Reliability Solutions Business Unit at Lakeside Process Controls

is responsible for the day to day operations and the business development of the Reliability Solutions services and products. Prior to joining Lakeside Process Controls, Blair held various positions in maintenance in the Chemical Manufacturing and Pharmaceutical industries, focusing on implementing maintenance and reliability best practices.

Blair has been an active Maintenance and Reliability leader with over 15 years of asset management and reliability strategy development with hands on implementation experience in the power generation, pulp & paper, manufacturing, mining, pharmaceutical and oil refining industries. Blair is a certified maintenance and reliability professional (CMRP) from SMRP (Society for Maintenance and reliability and a Certified Reliability Leader (CRL) from the Association of Maintenance Professionals (AMP). We welcome Blair as he shares his insights during his session.

SESSION: IMPLEMENTING A BEST PRACTICES PREVENTATIVE MAINTENANCE PROGRAM: AVOIDING THE 10 MOST COMMON PITFALLS - WEDNESDAY, SEPTEMBER 21 AT 16:30

LOCATION: MUSKOKA I



Marie Gervais, PhD., Director at Shift Management Inc.

Marie Gervais, PhD., CEO Shift Management, provides managerial training and intercultural competency leadership for business and industry. Her work has a particular focus on systemic change and developing capacity. Some of her areas of expertise are in: workforce and management systems analysis, intercultural leadership training, conflict resolution, job performance improvement, and managerial training for a multi-ethnic workplace, particularly for a variety of literacy and English language proficiency levels. We welcome back Marie this year to conduct an informative and hands on session.

SESSION: TEACHING OLD DOGS NEW TRICKS: SUPERVISORY LEADERSHIP TRANSFORMATION CASE STUDIES - WEDNESDAY, SEPTEMBER 21 AT 11:30

LOCATION: MUSKOKA III



Dan Gilbert, National Director of Maintenance Planning & Performance at Canada Post in Ottawa. Prior to joining Canada Post Dan worked in a number of positions at Lafarge since 2009, including Maintenance & Inventory Business Process Manager, Manufacturing Manager and Project Management. Dan also has experience with Maximo, continuous improvement and root cause analysis. He has a Bachelor of Science in Engineering, Mechanical Engineering from the University of New Brunswick.



SESSION: FINDING THE RIGHT MIX - MODERNIZING THE MAINTENANCE STRATEGY FOR CANADA POST'S LETTER SORTING EQUIPMENT - THURSDAY, SEPTEMBER 22 AT 9:00

LOCATION: MUSKOKA I

Andres Ginsberg, Naval Mechanical Engineer AT ALMA Observatory is currently a permanent power generation supervisor/mechanical specialist. Supporting the Gas Turbine Power Generation Acceptance Phase, Andres coordinates and leads a team for all operational responsibilities, including overall operation and maintenance of the power generation facility. Andres has gained great insight from previous roles as well including: mining maintenance manager at Minera Huasco Lost Coloradosa, and Chief of the Main Maintenance Center for Navy Airplane. He holds responsibility and direction for complex topics and high target analysis. He holds degrees in Project Management, Human Resources and Aeronautics Maintenance. Join Andres for his session and learn more.



SESSION: CHILLED WATER CLEANING, FLUSHING AND PASSIVATION IN RADIOTELESCOPE - WEDNESDAY, SEPTEMBER 21 AT 15:00

LOCATION: MUSKOKA II



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Suzy Hitchcock, Executive Director, Global Strategy & Advocacy at International Council for Machinery Lubrication has a Bachelor in Social Communication with a major in Marketing and has been involved in industry for over twenty years, in both for-profit and not-for-profit organizations. Suzy is a delegate for Australia to ISO, where she is project leader at both national and international level, for ISO standards on the qualification and assessment of lubrication and oil analysis personnel. She is a long-time collaborator of SMRP's Certifying Organization, where she has served as volunteer proctor, globalization and translation consultant and as part of the Professional Development Team. Suzy is internationally published and a sought after presenter. Speaking regularly in conferences around the globe, she advocates for more respect and support to lubrication practitioners on a global scale.



SESSION: ELI LILLY'S LUBRICATION-DRIVEN GLOBAL RELIABILITY - WEDNESDAY, SEPTEMBER 21 AT 16:30

LOCATION: MUSKOKA II

Susan Lubell, independent Asset Management Strategy & Reliability Advisor and Vice-President, PEMAC Board of Directors, specializes in operational excellence with a strong focus on asset management and reliability strategy. With over 20 years of oil & gas experience, she has extensive experience developing and implementing many strategic cost effective maintenance programs; managing continuous improvement opportunities for equipment asset management, reliability, maintenance and engineering practices; and facilitating root cause analysis (RCA). She is a Professional Engineer and MBA, a certified Reliability Centered Maintenance (RCM) facilitator and holds the MMP and CAMA Certifications. In addition to her normal work responsibilities, Susan is the Vice President of the Plant Engineering Maintenance Association of Canada (PEMAC) and instructor for the Maintenance Management Professional (MMP) certification program.



WORKSHOP: THE FRACAS METHOD - MONDAY, SEPTEMBER 19 AT 9:00

LOCATION: MUSKOKA II

MRO PANEL: WEDNESDAY, SEPTEMBER 21 AT 13:15

LOCATION: AMBROSIA

Jason Kopschinsky Director of Reliability Services at Des-Case

Jason joined Des-Case in April of 2011 as Director of Reliability Services. Prior to joining Des-Case, Jason spent over a decade coaching clients in asset reliability and lubrication management. Jason has published a variety of technical articles on condition monitoring, contamination control, lubrication management and program management and has been invited to speak at numerous international symposia. Prior to joining Des-Case, Jason worked as Director, Technical Services at Noria Corporation, and as Director of Reliability Services at Trico Corp. Jason is a certified project management professional and a certified maintenance and reliability professional (CMRP) from SMRP (Society for Maintenance and reliability professionals).



WORKSHOP: MAXIMIZE ASSET LIFE CYCLE VALUE THROUGH PRECISION LUBRICATION - TUESDAY, SEPTEMBER 20 AT 9:00

LOCATION: MUSKOKA I

Roop Lutchman, Practice Group Lead for Business Consulting at GHD,

has over 33 years of combined management consulting and industry experience. Roop is a professional engineer, project management professional and a recognized industry expert in the management consulting area with specific focus in strategic Business Optimization, Knowledge & Information Management Solutions, Asset Management and Project Management. He is the author of three books on these subjects, published by DESTech Publishers: Computerized Work Management Systems for Utilities and Plant Operations (2003), Sustainable Asset Management (2006) and Creating and Managing Sustainable Organizations (2011). He is a member of WEF, AWWA, ASME, PMI and PEMAC.



SESSION: INTEGRATING ASSET MANAGEMENT INTO YOUR ORGANIZATION CULTURE - THURSDAY, SEPTEMBER 22 AT 11:30

LOCATION: MUSKOKA III

Leonard Middleton, President, Asset Management Solutions

Leonard has over 35 years of professional and international experience including: engineering; project management; and maintenance, reliability and asset management. He has worked in a number of asset intensive industries including utilities (electrical power transmission and distribution, electrical power generation, heating and cooling utility, potable water), mining, upstream oil and gas, upgrading, petrochemical, utility operations related to upstream oil and gas and petrochemical, manufacturing, automotive, and forestry. He is recognized as a subject matter specialist with knowledge in: assessments of maintenance, reliability, and asset management; assessments of project management practices; maintenance, reliability and asset management strategy; maintenance tactics development (RCM); maintenance work management; and maintenance performance measures and benchmarking. He has developed and delivered training to clients, and through his work with PEMAC has developed and delivered courses for the MMP (Maintenance Management Professional) program. Currently serving as a Director on the PEMAC Board, Leonard has also worked in a variety of technical and consulting roles in his career, including with a variety of multi-national global fortune 500 companies and for various clients in Canada, United States, United Kingdom, Argentina, Chile, Caribbean, Africa, and the Middle East. Leonard will be delivering the two-day MMP Module One course, "An Integrated Strategy for Maintenance Management", the first course in the MMP Certification series.



WORKSHOP: MMP MODULE ONE, "AN INTEGRATED STRATEGY FOR MAINTENANCE MANAGEMENT"
- MONDAY, SEPTEMBER 19 AND TUESDAY, SEPTEMBER 20 AT 9:00

LOCATION: MACINTOSH I

Sandra MacGillivray, Managing Director at Valency Inc.

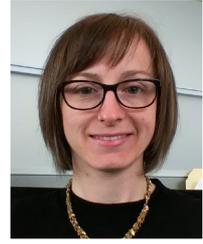
an implementer of best practices from the Construction Industry Institute (CII) that dramatically improve capital project performance. Sandra is a Registered Education Provider (REP) with the Construction Industry Institute (CII) and Project Management Institute (PMI), and a Project Management Professional (PMP) with over 15 years of project management experience. Sandra is a past research team member with the Construction Industry Institute on front end planning, risk management and portfolio management. She holds a Bachelor of Science from the University of Waterloo and a Master in Business Administration from Wilfrid Laurier University.



SESSION: BEST PRACTICES IN SCOPE DEFINITION FOR SMALL CAPITAL PROJECTS - WEDNESDAY,
SEPTEMBER 20 AT 10:20

LOCATION: MUSKOKA III

Erin MacNeil, Asset Management Office Operations Lead at Nova Scotia Power Inc. is a Mechanical Engineer with experience in both the Utility and Alberta Oilsands industries. As the Asset Management Office Operations Lead for Nova Scotia Power, Erin oversees Nova Scotia Power's Root Cause Analysis Program, as well as other Asset Management Processes including Generation Equipment Reporting, PdM and PdP, NERC Compliance and handheld technologies used in Operator Rounds. Erin has worked with NS Power's Asset Management Office for 3 years. Meet Erin at MainTrain.



SESSION: ROOT CAUSE ANALYSES INTEGRATION WITH ASSET MANAGEMENT PROGRAM - WEDNESDAY, SEPTEMBER 21 AT 10:20

LOCATION: MUSKOKA II

Doug Marshall, Senior Project Engineer, Industrial at Magna IV Engineering has over 35 years of experience in Electronics and Electrical Power Distribution. Doug's technical and project management experience, along with distribution and transmission of electrical engineering design gives him great insight into electrical and power systems. His current role allows him to conduct feasibility and power system studies for his clients, which provided various technical options, provided EPC budget costs, technical & construction risk assessment and execution strategy to implement each option. Doug has a B. Eng from Concordia and a Graduate Diploma from McGill, as well as a member in good standing with APEGA & APEGS. Meet Doug during his session.



SESSION: EVALUATING THE RELIABILITY OF YOUR ELECTRICAL DISTRIBUTION - THURSDAY, SEPTEMBER 22 AT 14:45

LOCATION: MUSKOKA II

Erika Mazza, CMMS - Asset Management Data Specialist at Regional Municipality of Durham has been capturing the asset data and interpreting the results for Duffin Creek WPCP for the last six years. Erika's background in one of the few Engineering Degrees offered in Venezuela, as an Industrial Maintenance Engineer, has helped her to understand the business needs of the CMMS beyond the requirements, identifying opportunities for improvement and optimization of the maintenance strategies on her site. Erika is also an active PEMAC volunteer, currently on the MainTrain 2016 planning committee. Learn more about Erika's unique insight during her session .



SESSION: ENVIRONMENTAL FOOTPRINT OF MAINTENANCE - THURSDAY, SEPTEMBER 22 AT 10:20

LOCATION: MUSKOKA I

Philippe Mercure, General Manager at OptiTest has over 20 years of experience in HR, technology and media sectors. Philippe and his certified administrator team assist manufacturers in making smart personnel decisions by assessing current and future technical employees on mechanical and electrical simulators prior. Prior to joining OptiTest, Philippe had key roles in managing operations and business development with large organizations including The Canadian Press, QMI News Agency. Philippe is a graduate from Laval University and holds diplomas in Industrial Relations and in Business. Join Philippe as he shares his experience and insight at MainTrain.



SESSION: MAINTENANCE AND MANUFACTURING HIRING INTELLIGENCE - WEDNESDAY, SEPTEMBER 21 AT 10:20

LOCATION: MUSKOKA I

Neil Montgomery, Associate Director at Centre for Maintenance Optimization and Reliability Engineering has been with the Centre for Maintenance Optimization and Reliability Engineering (C-MORE) at the University of Toronto since 2004. He has worked with dozens of companies across many industries on a variety of asset management problems. Neil has spoken at asset management conferences around the world and is actively involved in C-MORE's continuing professional education programmes. Meet Neil at MainTrain during his half-day workshop.



WORKSHOP: OPTIMIZING CRITICAL SPARE PARTS STOCKHOLDING - MONDAY, SEPTEMBER 19 AT 9:00

LOCATION: MUSKOKA I

Boudewijn Neijens, CMO at Copperleaf holds a Master degree in Mechanical Engineering from the University of Brussels, and an MBA from INSEAD in France. Based in Vancouver, BC, he works with large asset intensive corporations to refine their asset management practices in the areas of investment planning, decision analytics and risk-based models. He is President of PEMAC's Vancouver chapter, Chair of the Canadian chapter of the IAM and Convenor of ISO's workgroup for the dissemination of knowledge around ISO 55001.



MRO PANEL: WEDNESDAY, SEPTEMBER 21 AT 13:15

LOCATION: AMBROSIA

J.-P. Pascoli, Corporate Program Manager, Operational Reliability at

Cameco Corporation J.-P. is a member of Cameco Corporation's Operational Excellence team, appointed as Operational Reliability Program Manager. Leading to this role he was Manager of Engineering & Maintenance at Cameco Corporation's conversion facility in Port Hope, ON. Prior to this role, J.-P. held a number of management and engineering positions in maintenance and reliability within a number of industries including forest products, pulp & paper, and mining at various sites in northern Ontario and Quebec.



SESSION: JOURNEY TO OPERATIONAL RELIABILITY: THE SELF ASSESSMENT - WEDNESDAY, SEPTEMBER 21 AT 9:00

LOCATION: MUSKOKA II

Matt Price, Reliability Services Manager at Pioneer Engineering

Matt joined Pioneer Engineering in September 2014. With over 7 years of experience in reliability engineering and project management within oil refineries, Matt brings to Pioneer Engineering a unique skill set and ways to increase its reliability service offerings as well as providing vibration analysis and troubleshooting to its clients. As Pioneer Engineering's Reliability Services Manager, he is responsible for the day-to-day management of all of Pioneer Engineering's reliability specialists as well as ensuring clients receive the best possible service. Matt attended the University of Wyoming and earned his Bachelor of Science degree in Mechanical Engineering and is a Certified Maintenance Reliability Professional.



SESSION: USE OF QUALITATIVE SURVEY TO FOCUS ON QUANTITATIVE RELIABILITY ASSESSMENT - WEDNESDAY, SEPTEMBER 21 AT 11:30

LOCATION: MUSKOKA II

Ahmed Rezika, Electric Maintenance Manager at RajhiSteel,

has over 21 years of maintenance experience in Middle East with leading companies ranging from the steel to the cement industries. He is a certified CMRP, PMP, as well as an accredited consultant electrical engineer by SCE (Saudi Council of Engineers). Ahmed has been with RajhiSteel since 2004, an organization that produces about 20% of the Saudi Arabia reinforcement bars needs, starting from scrap melting process. Previously, he was a maintenance and automation supervisor engineer in ASEC, Sinai Grey Cement project, a company that specializes in EPC and O&M of cement plants. Working to obtain his MMP certification, Ahmed is an electrical engineer and management professional with an extensive experience in heading end-to-end planning, execution and management of electrical maintenance. Meet Ahmed during his session



SESSION: CUT FAT OFF YOUR PRODUCTION LINES BUT KEEP THE FLESH AND BONE - THURSDAY, SEPTEMBER 22 AT 9:00

LOCATION: MUSKOKA III

Warren Rodgers, Senior Engineer, Asset Management Office at

Nova Scotia Power is a professional Mechanical Engineer and Certified Maintenance Reliability Professional with over 15 years in engineering and asset management. Formally trained as a mechanic prior to becoming a professional engineer, Warren's background gives him a unique perspective on maintenance and reliability. His skills and experience have helped to build the current asset management program at Nova Scotia Power and lead the predictive maintenance program involving rotating and static equipment. Warren's passion for reliability and asset management is in the challenges faced to keep equipment running without the business even knowing you were there.



SESSION: NOVA SCOTIA POWER EQUIPMENT INTEGRITY THROUGH PdM AND PBI - WEDNESDAY, SEPTEMBER 21 AT 16:30

LOCATION: MUSKOKA III

Emilio Sarno, Vice President of Asset Management at SMEC's

International Division has more than 25 years of practical experience in the Asset Management discipline focused on the oil & gas, mining, chemical and utilities sectors, coordinating and developing the definition, integration and implementation of best practices related to maintenance, reliability and supply chain. Emilio is a certified Reliability Engineer by the American Society for Quality and holds two Master Degrees from the University of Washington in Mechanical and Industrial Engineering. Join his for his half day workshop.



WORKSHOP: RELIABILITY: SOLVING THE MYSTERY AND BREAKING PARADIGMS - TUESDAY, SEPTEMBER 20 AT 9:00

LOCATION: MUSKOKA II

Devesh Shah, Program Manager Asset Management at City of Ottawa

is a registered Professional Engineer (Ontario) and MBA with over 24 years of international experience in infrastructure management in public and private sector. He is currently the Program Manager, Asset Management Strategy with City of Ottawa. Devesh has handled key responsibilities in the areas of operations and maintenance, asset management, strategic planning, enterprise applications, change management, business transformation and best practices implementation. He has successfully lead full cycle SAP and Maximo implementations. He has Masters Certificate in Municipal Leadership from Schulich School of Business and Masters Certificate in Project Management from Carleton University. Devesh is the founding member of PEMAC's new Ottawa Chapter.



SESSION: CMMS ADVANCEMENTS AND INNOVATIONS - CITY OF OTTAWA'S WATTER AND WASTEWATER UTILITY'S EXPERIENCE - WEDNESDAY, SEPTEMBER 21 AT 11:30

LOCATION: MUSKOKA I

Faisal Shaheen, Manager of Information Systems, city of Toronto's Water Division has 20 years of experience that includes strategic policy, business development and marketing strategy within the environmental technology and public policy sectors. His project portfolio has employed market research, project/contract management, econometrics, value chain analysis, accountability mechanisms, best practices and transparency based instruments; to better serve the efficiency, effectiveness and sustainability objectives of agile technology firms and municipal organizations. Faisal has a B.Sc.



(Biology and Environmental Science) from the University of Toronto as well as an MBA (Strategy and Sustainability) from the Schulich School of Business and an MA (Public Policy and Administration) from Ryerson University. Faisal is currently completing a PhD in Policy Studies, also at Ryerson. We welcome Faisal for his session at MainTrain.

SESSION: REQUIREMENTS-GATHERING FOR EFFECTIVE CHANGE MANAGEMENT- THURSDAY, SEPTEMBER 22 AT 14:45

LOCATION: MUSKOKA I

Jeff Smith, SME Reliability at Acuren, is a Certified Maintenance and Reliability Professional. He has developed an excellent reputation in the industry by successfully transforming various industries from a reactive environment to world class organizations. Experienced in both technical and tactical reliability, Jeff has extensive experience in implementation of precision maintenance practices resulting in improved equipment availability and cost effective maintenance. Join Jeff as he participates on the MRO Panel at MainTrain.



MRO PANEL: WEDNESDAY, SEPTEMBER 21 AT 13:15

LOCATION: AMBROSIA

Cindy Snedden, Executive Director for PEMAC Before joining PEMAC Cindy spent 9 years of her career as an oil and gas production engineer and then 11 years in Post-Secondary education and training with a focus on industrial programming. She is a Mechanical Engineer with a Graduate Diploma in Instructional Design. While working as a training coordinator at Northern Lakes College she helped PEMAC bring the MMP Program to the live online format. She joined PEMAC in 2010 as MMP Program Manager and took on the role of PEMAC's Executive Director in 2012. Cindy also represents PEMAC at the Global Forum on Maintenance and Asset Management.



SESSION: THE ROLE OF PROFESSIONAL ASSOCIATIONS - THURSDAY, SEPTEMBER 22 AT 14:45

LOCATION: MUSKOKA III

Bruce Wesner, Managing Principal for Life Cycle Engineering (LCE), has over 30 years of maintenance, engineering and management experience. Bruce holds Associate and Bachelor degrees in Engineering from Ball State University in Muncie, IN. He is a strong business leader with extensive senior management experience with world class companies in: HVAC (OEM products), heavy steel fabrication (Tier 1 supplier), tubular steel fabrication (high volume OEM production), high tolerance machining, mining, pharmaceuticals, food, chemical operations and building products. As a Certified Reliability Leader (CRL), Bruce's strength is driving improvements through lean and reliability-based initiatives. Certified by Prosci as a Change Management Leader, Bruce is very adept at applying change management principles to create successful client outcomes. Bruce currently is active as an Executive Board Member of The Canadian Institute of Mining, Metallurgy and Petroleum (CIM). He is also a member of The Society for Mining, Metallurgy and Exploration Inc. (SME) and active on The Global Mining Standards and Guidelines Group (GMSG). His expertise includes leading change and mentoring tactically and strategically to achieve results in multi-shift/multi-disciplinary operations.



SESSION: SIMPLIFYING RCM TO ACHIEVE VALUE WITH A RISK-BASED ASSET MANAGEMENT METHODOLOGY - THURSDAY, SEPTEMBER 22 AT 9:00

LOCATION: MUSKOKA II

Chad Wilcox, Executive Director of Business Development at

Pioneer Engineering has been a consultant with Pioneer for 12 years, providing vibration analysis solutions and training for clients across the United States and overseas. He received his B.S.M.E. from Colorado State University and later his M.S.M.E. Chad is certified Category III by the Vibration Institute. He has significant experience across many industries in advanced vibration analysis with a focus on Modal and ODS analysis, plant vibration condition monitoring setup, and vibration analysis training and mentoring. Chad has experience performing failure analysis for Seagate technologies and new product development modal parameter validation for Caterpillar. Mr. Wilcox is currently the Executive Director of Business Development for Pioneer Engineering, located in Fort Collins, Colorado. Learn from Chad's insights during his half day workshop.



WORKSHOP: VIBRATION CONDITION MONITORING WORKSHOP FOR MANAGERS PLANNERS ENGINEERS AND TECHNICIANS - MONDAY, SEPTEMBER 19 at 13:00

LOCATION: MUSKOKA I

Rudy Wodrich, Leader Product Development at IRISS,

is an Electrical Engineer whose career has revolved around designing electrical distribution systems for industrial, commercial and power generation applications for both high efficiency and reliability. Rudy spent 15 years working in designing and implementing energy efficiency and Power Quality mitigation strategies for Fortune 500 clients including Ford, General Motors, United Parcel Service, Merck and many others. This was followed 8 years in the Renewable Energy sector working to improve the reliability of commercial rooftop and utility scale solar power generation facilities. Most recently, he leads product development at IRISS Inc. in Bradenton, Florida working on Critical Asset Surveillance Technologies to provide early warning of potential electrical equipment failure and to automate maintenance record keeping with Internet of Things technologies. Rudy also holds an MBA from the University of Toronto.



SESSION: ENHANCING ELECTRICAL MAINTENANCE SURVEILLANCE SYSTEMS - WEDNESDAY, SEPTEMBER 21 AT 9:00

LOCATION: MUSKOKA I



Cameco is a strong supporter of energizing operational excellence through asset management.

DAY 1 - Monday, September 19

7:15 - 8:00 **REGISTRATION AND BREAKFAST**

LOCATION: AMBROSIA FOYER

8:00 - 8:45 **Welcome and Opening Keynote - Sustainable, Effective & Evolving Asset Management: The Role of Professional Associations**

Rob Lash, President - Board of Directors, PEMAC and The Regional Municipality of York

In this opening presentation, Rob will kick off the conference and welcome everyone to Toronto providing an overview for the conference ahead. Rob will also share some insights into the role of professional associations both locally and globally, in sustainable, effective and evolving asset management. He will highlight some of the great work going on in Canada and around the globe as it pertains to developing the capacity of individuals and organizations to deliver excellence in maintenance, reliability and asset management.

ARMS
RELIABILITY

EMPOWER | EDUCATE | EQUIP

Sponsored by ARMS Reliability

LOCATION: AMBROSIA

WORKSHOPS **Asset Management Fundamentals**

9:00 - 10:00

James Reyes-Picknell - Conscious Asset

Asset Management is emerging as both a new business discipline and professional career path. It covers a scope broader than each of engineering, design, maintenance, operations, human resources, risk and finance on their own. Everyone whose organizational role impacts the asset life cycle - from design to disposal - must have an appreciation of these disciplines and how they work together so that their organization can achieve business objectives while sustaining a balance of performance, risks, costs and opportunities as related to and created by those assets.

This workshop introduces the concept of Asset Management and its fundamental components. It will explain why past practices in the individual disciplines are no longer good enough, why we need a balanced perspective and integrated approach. A brief history of Asset Management will show how we've arrived at today's standards and some of the events that drove us here. The result of that is now embodied in international Asset Management standards, ISO 55000, 55001 and 55002. They will be presented and their content explained. A simple self-assessment exercise and discussion of its results will be used to illustrate how Asset Management may differ from the participants' organizations current ways of doing things.

Work by the Global Forum on Maintenance and Asset Management as well as the Institute of Asset Management will also be presented showing the full scope of Asset Management (yes, it is broader than ISO 5500X) and give participants a view of the effort being made within our profession world-wide. Certification of individuals and organizations will be explained.

In addition to copies of course slides, workshop participants will be given a copy of Conscious Asset's book, "ISO 55000 - What you Need to Know", an overview of the ISO 55000 series standards.

LOCATION: MUSKOKA III

The FRACAS Method - Failure Reporting, Analysis and Corrective Action System

Susan Lubell - Board of Directors, PEMAC and Independent with Abrar Ahmad - President Alberta Chapter PEMAC

This ½ day workshop is focused on FRACAS (Failure Reporting, Analysis, and Corrective Action System) with an emphasis on practical failure identification, failure management and the associated reporting system. It includes hands on exercises to learn the practical aspects of establishing and improving a FRACAS and the associated business value. Key takeaways:

- What is FRACAS?
- Understanding the role of FRACAS in improving performance
- How to develop and implement an effective FRACAS
- Establishing a data collection plan
- Creating an initial set of Roles, Goals, and Responsibilities for your FRACAS
- Creating a basic training plan for implementation
- Using FRACAS to drive business results

LOCATION: MUSKOKA II

Optimizing Critical Spare Parts Stockholding

Neil Montgomery - Centre for Maintenance Optimization and Reliability Engineering

Correct spare part stockholding is a fundamental asset management activity. Organizations can significantly improve their reliability and financial performance by making proper evidence-based data-driven spare parts decisions. In this case-study based workshop attendees will learn the fundamentals of critical spare part stockholding decisions. Attendees will discuss repairable versus non-repairable spares problems along with a variety of optimization and calculation criteria. See how to separate the planned replacements from the unplanned for better inventory management. Discover the data requirements and estimation techniques needed to determine part demand and repair rates. Participants will see how robust answers can be obtained with minimal inputs and also how some complex situations may require simulation - but not as often as some organizations think! Each phase of the workshop will be illustrated with real world examples from a variety of industries. Attendees will be given the opportunity to discuss their own organizations' spare parts needs and get solutions during the workshop itself.

LOCATION: MUSKOKA I

MMP Module 1 - An Integrated Strategy for Maintenance Management - Day One*

Len Middleton

PEMAC's Maintenance Management Professional (MMP) program provides training and accreditation to those aspiring to, or already in, maintenance management or supervisory positions. Certified MMPs are qualified to provide cost effective management of a business's physical assets. There are eight modules to the MMP program. Module 1 is being offered as a workshop at MainTrain over a two day period. The second day of this module is scheduled for Tuesday, September 20.

Based on the course text, "Uptime", Module 1 develops the framework for thinking about a strategic approach to maintenance management that is integrated with the business. Drawing on the elements presented in the "Maintenance Excellence Pyramid" of Uptime, participants in Module 1 will learn how strategy, people, basic care, materials management, performance management, work management, support systems, and tools such as RCM (Reliability Centered Maintenance) and RCFA (Root Cause Failure Analysis) can work together to build a culture of excellence.

* There is an additional fee for materials to participate in the MMP Module 1 course. Pre-registration is required.

LOCATION: MACINTOSH I

10:00 - 10:15 **BREAK**

LOCATION: AMBROSIA FOYER

10:15 - 12:00 **Asset Management Fundamentals (con't)**

James Reyes - Picknell - Conscious Asset

LOCATION: MUSKOKA III

The FRACAS Method

Susan Lubell - Board of Director, PEMAC and Independent & Abrar Ahmad - President Albert Chapter PEMAC

LOCATION: MUSKOKA II

Optimizing Critical Spare Parts Stockholding (con't)

Neil Montgomery - Centre for Maintenance Optimization and Reliability Engineering

LOCATION: MUSKOKA I

MMP Module 1 An Integrated Strategy for Maintenance Management - Day One (con't)

Len Middleton

LOCATION: MACINTOSH I

12:00 - 13:00 **LUNCH**

Sponsored by FT Services

LOCATION: AMBROSIA FOYER



13:00 - 14:30 **Asset Management Fundamentals (con't)**

James Reyes - Picknell - Conscious Asset

LOCATION: MUSKOKA III

Asset Management Supported by Reliability Modelling

Jason Bellentine - ARMS Reliability

With a small number of non-critical pieces of equipment, asset management can be a relatively straightforward exercise. But given a large number assets and/or a highly critical system the job of asset management can become more difficult. In these situations it can be helpful to use modelling tools to assist in decision making.

In this workshop participants will learn how analyzing failure history at your site (or another site with similar operating context) using Weibull Analysis is the first step in setting up most types of reliability models. Learn how this data is then used in forward predictions for RAM modelling, RCM and strategy optimization, and life cycle cost analysis through examples. Participants will be given the tools to discover that using previous asset performance combined with statistical modeling techniques will enable them to make quantitative decisions that lead to greater asset performance within their own organization.

LOCATION: MUSKOKA II

Vibration Condition Monitoring Workshop for Managers Planners Engineers and Technicians

Chad Wilcox - Pioneer Engineering

Vibration condition monitoring programs play an important role in an organization's rotating equipment reliability and maintenance strategy. While organizations may be in different stages of establishing their program, there are some common things to implement in order to get the greatest benefit from any program. This workshop focusses on starting your program off on the right foot. The workshop will use case histories to outline reasonable expectations, current vibration technology, and specific vibration standards for various industries.

In addition to starting off on the right foot the success of a vibration condition monitoring program will depend on maintaining momentum. This workshop will finish by addressing areas within the participants program where they can focus on improving the long term reliability of their assets instead of simply finding failures.

LOCATION: MUSKOKA I

MMP Module 1 An Integrated Strategy for Maintenance Management - Day One (con't)

Len Middleton

LOCATION: MACINTOSH I

14:30 - 14:45 **BREAK**

LOCATION: AMBROSIA FOYER

14:45 - 16:30 **Asset Management Fundamentals (con't)**

James Reyes - Picknell - Conscious Asset

LOCATION: MUSKOKA III

Asset Management Supported by Reliability Modelling (con't)

Jason Bellentine - ARMS Reliability

LOCATION: MUSKOKA II

Vibration Condition Monitoring Workshop for Managers Planners Engineers and Technicians (con't)

Chad Wilcox - Pioneer Engineering

LOCATION: MUSKOKA I

MMP Module 1 An Integrated Strategy for Maintenance Management - Day One (con't)

Len Middleton

LOCATION: MACINTOSH I

17:00 - 19:00 **DINE-AROUND**

DAY 2 - Tuesday, September 20

7:15 - 8:00 **REGISTRATION AND BREAKFAST**

LOCATION: AMBROSIA FOYER

8:00 - 8:45 **Welcome and Opening Keynote**

Sustainable, Effective & Evolving Asset Management: The Role of Maintenance and Reliability Processes

James Reyes - Picknell - Conscious Asset

James is an author of the best seller, "Uptime - Strategies for Excellence in Maintenance Management", co-author of Reliability Centered Maintenance: A Key to Maintenance Excellence, contributing author to several other books, a regular contributor to PEM / MRO and REM Magazines and a regular blogger on reliability, maintenance and asset management. His background includes naval service, petro-chemicals, defense projects, aerospace and management consulting. He has used RCM since the mid-1980s and leveraged its output to define full life cycle support of major defence and aerospace systems helping to save billions of dollars in capital and operational spending by investing only a small fraction of what was saved. Join James for his keynote where he focuses on the role of maintenance and reliability processes in developing a sustainable, effective and evolving asset management strategy.

LOCATION: AMBROSIA

WORKSHOPS
9:00 - 10:00

AM: A new buzzword or Value-adder?

Ramesh Gulati - AEDC/ATA-Jacobs

Are you realizing maximum value from your assets? Do you know how much it costs to operate and maintain your assets? Were these assets designed or procured with reliability, availability, maintainability, safety-sustainability in mind? Do you have the right processes established to ensure assets are specified, designed, procured, build, installed/ commissioned, operated, maintained, improved, disposed and managed rightly to reduce total cost of ownership.

This workshop will be facilitated to interactively discuss these questions and what participants need to do to make their processes robust, while applying the Ten Rights of Asset Management.

Learning objectives include:

- Understanding Asset Life Cycle Phases
- Ten Rights of Asset Management
- Why RAMS needs to be designed in
- Applicable standards and tools

LOCATION: MUSKOKA III

Reliability: Solving the Mystery and Breaking Paradigms

Emilio Sarno -SMEC

Reliability is a powerful concept that applied properly makes the difference between success and failure of installations, processes and systems; nevertheless, reliability does not need to be difficult, complex and overwhelming. Quite the opposite: reliability applications are more likely to succeed if they are easily understood by the different levels of the organization from trades to CEO. This is achieved by explaining reliability concepts easily understood by everyone within the organization.

The general objective of the workshop is to provide theory and practical guidelines to the audience for identifying and addressing reliability issues that are impacting the productivity and profitability the assets they are responsible for.

The workshop will provide basic knowledge and understanding regarding the tools and methodologies available within the reliability discipline, for the design, analysis and implementation of equipment strategies to systematically improve the performance of assets.

At the end of the training the assistants will be able to:

- Understand the current Reliability Engineering terminology
- Understand and apply reliability concepts at all levels of the organization
- Understand and overcome the typical reliability paradigms
- Collect the adequate data and calculate basic maintenance and reliability Metrics
- Understand the different reliability methodologies and the right application framework for each one
- Combine different reliability methodologies to create an effective reliability program
- Understand the role that Reliability Engineering plays within the Asset Management Framework

The workshop is specifically designed for current or future reliability engineers, maintenance supervisors and planners with maintenance, engineering and/or operations background that desire to be involved in improving reliability, availability and maintainability of assets through the application of modern reliability methodologies and tools.

LOCATION: MUSKOKA II

Maximize Asset Life Cycle Value Through Precision Lubrication

Mark Barnes and Jason Kopschinsky - Des-Case Corporation

Lubrication is a fundamental pillar of any reliability driven maintenance program. But while most maintenance professional recognize the importance of proper lubrication, fewer than one in three plants have developed lubrication practices that come close to best-in-class. In this workshop, we'll uncover why plants that have poor lubrication practices spend as much as 15-20% more on maintenance than upper quartile performers. Focusing on the six key areas of lubrication; including proper lubricant application, contamination control, storage and handling and oil analysis, participants will be lead through the basic concepts necessary for success. As part of the workshop, participants will be invited to conduct a self-evaluation of their lubrication practices. This will be used to provide a customize benchmark analysis and targeted action item list after the workshop that the plant can use to develop an improvement plan.

LOCATION: MUSKOKA I

MMP Module 1 An Integrated Strategy for Maintenance Management - Day Two (con't)

Len Middleton

LOCATION: MACINTOSH I

10:00 - 10:15 **BREAK**

10:15 - 12:00 **AM: A new buzzword or Value-adder? (con't)**

Ramesh Gulati - AEDC/ATA-Jacobs

LOCATION: MUSKOKA III

Reliability: Solving the Mystery and Breaking Paradigms (con't)

Emilio Sarno - SMEC

LOCATION: MUSKOKA II

Maximize Asset Life Cycle Value Through Precision Lubrication (con't)

Mark Barnes and Jason Kopschinsky - Des-Case Corporation

LOCATION: MUSKOKA I

MMP Module 1 An Integrated Strategy for Maintenance Management - Day Two (con't)

Len Middleton

LOCATION: MACINTOSH I

12:00 - 13:00 **LUNCH**

Sponsored by FT Services

LOCATION: AMBROSIA FOYER



13:00 - 14:30 **AM: A new buzzword or Value-adder? (con't)**

Ramesh Gulati - AEDC/ATA-Jacobs

LOCATION: MUSKOKA III

Connecting The Dots: Putting your Reliability Based Maintenance Programs Into Action

Jeff Bonnell - Lloyds Register

Practitioners of RCM, RBI, and other reliability based maintenance (RBM) methods frequently struggle to put recommendations into to practice and ensure compliance in a practical way. The RBM methodology often takes the blame for failed or underperforming programs. In reality, many other factors can impact the effectiveness of your RBM program. This interactive workshop will discuss the role management practices, knowledge and skills, and IT systems/data play in a program's success. Participants will use GFMAM and ISO 55000 documents as a model and will be provided with practical steps they can take in their own businesses to overcome these challenges.

LOCATION: MUSKOKA II

Maximize Asset Life Cycle Value Through Precision Lubrication (con't)

Mark Barnes and Jason Kopschinsky - Des-Case Corporation

LOCATION: MUSKOKA I

MMP Module 2 Day One (con't)

Len Middleton

LOCATION: MACINTOSH I

14:30 - 15:00 **BREAK & EXHIBITOR SHOWCASE OPENS**

15:00 - 16:30 **AM: A new buzzword or Value-adder? (con't)**

Ramesh Gulati - AEDC/ATA-Jacobs

LOCATION: MUSKOKA III

Connecting The Dots: Putting your Reliability Based Maintenance Programs Into Action (con't)

Jeff Bonnell - Lloyds Register

LOCATION: MUSKOKA II

Maximize Asset Life Cycle Value Through Precision Lubrication (con't)

Mark Barnes and Jason Kopschinsky - Des-Case Corporation

LOCATION: MUSKOKA I

MMP Module 1 An Integrated Strategy for Maintenance Management - Day Two (con't)

Len Middleton

LOCATION: MACINTOSH I

16:30 - 18:30 **WELCOME RECEPTION IN EXHIBITOR SHOWCASE & AUTHOR'S CORNER**

Join us during this grand welcome reception proudly sponsored by Lakeside Controls. Meet and network with fellow attendees, visit the exhibitor showcase during our walking tours, and enjoy a beverage and appetizers during this fun event.



LOCATION: AMBROSIA FOYER

CERTIFICATION **Certified Asset Management Assessor Exam**

EXAMS

18:30 - 21:30

MainTrain participants have the opportunity to participate in this exam. The CAMA Exam was developed by leading not-for-profit asset management organizations* and has been verified through rigorous technical and psychometric testing. This 2 hour exam complies with the GFMAM's Competency Specification for an ISO 55001 Asset Management Auditor/ Assessor, ensuring that successful applicants have the minimum required knowledge to be an ISO 55001 assessor. This means compliance with:

- ISO 55001 Asset management - Management systems - Requirements (core requirements and knowledge);
- ISO 17021-5 -- Conformity assessment -- Requirements for bodies providing audit and certification of management systems -- Part 5: Competence requirements for auditing and certification of asset management systems; and
- ISO 19011 -- Guidelines for auditing management systems.

Advance registration for the exam is required and available to up to 20 participants. Visit the WPIAM website to register for this exam.

* World Partners in Asset Management is a new joint venture with founding partners: Asset Management Council (Australia), PEMAC (Canada), SMRP (US), ABRAMAN (Brazil) and IFRAMI (France).

LOCATION: MUSKOKA III

CMRP Exam

PEMAC is pleased to be hosting the Certified Maintenance & Reliability Professional (CMRP) exam at this year's MainTrain Conference. Managed by the Society for Maintenance and Reliability Professionals (SMRP) the CMRP is accredited by the American National Standards Institute (ANSI), which follows ISO standards for its accreditation and processes. Examining more than just textbook information, the CMRP is a thorough examination of a broader scope of expertise measured against a universal standard. It was developed to assess professionals' aptitude within the five (5) pillars of the Maintenance and Reliability Body of Knowledge: Business Management, Equipment Reliability, Manufacturing Process Reliability, Organization and Leadership, and Work Management. Click here for more information about SMRP and the exam. Visit <http://www.smrp.org/i4a/pages/index.cfm?pageID=3707> to register for the exam being held on September 20.

LOCATION: MUSKOKA II

ICML Exam

The ICML Exam will be available to take during the conference. Pre-registration of the exam is required. To register for the exam, please submit your application form directly with ICML. Visit the ICML website for more information about the exam, as well as the Council and its Certification Program.

LOCATION: MUSKOKA I

18:30 - 20:30 **PEMAC MEMBERS' MEETING**

All are invited to the PEMAC Members' meeting for an association update and to offer input to future association development.

LOCATION: AMBROSIA

DAY 3 - Wednesday, September 21

7:15 - 8:00 **BREAKFAST, EXHIBITOR SHOWCASE AND AUTHOR'S CORNER**

LOCATION: AMBROSIA FOYER

8:00 - 8:45 **Opening Keynote**

Sustainable, Effective & Evolving Asset Management: The Role of Implementing Standards
Ramesh Gulati - AEDC/ATA-Jacobs

Join author, change agent, and reliability Sherpa, Ramesh Gulati during this morning keynote presentation. Ramesh has been involved with asset management and reliability improvement initiatives for 50 years and has supported establishment of ISO certified Asset Management process (Tailored 9001) since 2004. As the author/co-author of recently released books "Certified Reliability Leader Pocket Dictionary", "Maintenance & Reliability Best Practices 2nd edition" and "MRBP Workbook", along with the "Professional's Guide to Maintenance & Reliability Terminology", Ramesh is an expert on asset management and implementing standards. Ramesh will share what the role of implementing standards means to sustainable, effective & evolving asset management.

LOCATION: AMBROSIA

Save the date for *MainTrain 2017*

MainTrain 2017 is coming to Saskatoon!

Did you know that one of PEMAC's most active chapters is in a dynamic city in the heart of Saskatchewan? PEMAC and the Saskatoon Chapter are very excited to be hosting MainTrain 2017 at the historic Delta Bessborough in Saskatoon. Mark your calendars for September 18 to 21, 2017. We invite you to join us in a city that is rich in culture, industry and hospitality!

Visit www.maintrain.ca for more information soon, or contact Nicole Guillen, PEMAC's events planner at events@pemac.org or 1-877-525-7255 ext. 4. Follow us on Twitter @MainTrain2017 for all the latest information.



MainTrain 2017 | Saskatoon, Saskatchewan
www.MainTrain.com | September 18 to 21, 2017

9:00 - 10:00

Where to Start and How to Sustain your Performance Turnaround

Ronald Doucet - RYKE Reliability Inc.

In an underperforming asset intensive business, where production targets are not being met, there are chronic unscheduled breakdowns, overtime is high, repairs have blown the budget, unit are costs high and morale is low. Blame typically falls on the performance of the assets. The company is not sustainable as performance continues to deteriorate.

Many improvement initiatives, especially asset management improvement initiatives, have failed. For those initiatives that succeeded, many are not sustained and many focus on either tasks or processes in isolation. It is rare that the implemented management systems will ensure sustainability and even fewer include a strategic plan to manage the transition from breakdown to reliability.

This presentation will show how to address unscheduled failures by improving the maintenance and operational inspections tasks, how to develop proactive work management processes and how to transition to a planned and scheduled work environment. It will also introduce a very simple management system that can be adopted site wide at all levels ensuring that everyone in all departments are contributing to attaining core business expectations. This systems will also enable the identification of exceptions to base business performance in such a way as to prevent a reoccurrence of the causes and ensure that the improve asset management practices are sustained. The end result will be a transition to a planned and scheduled work environment complemented by continually improving company performance.

LOCATION: MUSKOKA III

Journey to Operational Reliability: The Self Assessment

J.-P. Pascoli - Cameco Corporation

Assessments are used to measure the current state of a program or system against a future or ideal state. A well performed assessment with detailed documented and practical recommendations can have a significant impact on an organisation. Many organisations offer services to perform such measurements; there are likely thousands of companies who solicit and pay for these services every year globally. However for many companies, particularly small to medium sized ones, funding such services can be challenging. With the growing amount of information that is readily available on the internet, best-practices and 'ideal state' definitions are no longer the privy of management consultants and industry gurus. This session presents the notion of a 'self-assessment' and the case study of one organisation's decision to develop its own assessment tool and program. The lessons learned and unexpected benefits as a result are also discussed.

LOCATION: MUSKOKA II

Enhancing Electrical Maintenance Surveillance Systems

Rudy Wodrich - IRISS

Electrical Maintenance Surveillance Technologies refers to condition based monitoring technology and equipment used every day to inspect electrical distribution assets. These surveillance and inspection systems determine the condition of the individual asset or system being inspected and include but are not limited to: infrared thermography, airborne ultrasound, motor current analysis, partial discharge testing, corona cameras and visual inspections.

The implementation challenge is that the inspection and surveillance equipment utilized yield their most valuable results when inspecting electrical distribution equipment that is operating under full load conditions. This is also when they are both most dangerous to maintenance personnel and of the greatest value to the process they are powering. The surveillance equipment implemented normally requires direct access or direct line of sight to the energized components inside the electrical system. This requires panels to be open which is an extremely dangerous condition. In many cases the posted Arc Fault Currents are too high and legal access is prohibited.

This presentation will show how ESDS technologies maintain the energized compartment's closed and guarded condition ensuring that personnel are not endangered. Participants will learn how the design allows the required test equipment to be used safely at any time, especially when equipment is under full load conditions which is when the inspection yields its greatest value.

LOCATION: MUSKOKA I

9:00 - 11:30 **TOUR of Toronto Transit Commission's Wilson Car House**

PEMAC member, Avi Berger will be conducting a tour of the Toronto Transit Commission's Wilson Car House. Tour delegates will depart at 9:00 am from the hotel and be transported to the tour location. Following the tour attendees will be returned to the hotel. Space is limited so be sure to pre-register for the tour. PPE requirements for the tour are: safety glasses with side shields, as well as CSA Grade 1 (green patch) safety footwear. High ankle (6" or more) are recommended but not required.

DEPART FROM FRONT LOBBY

10:00 - 10:20 **BREAK WITH EXHIBITORS AND AUTHOR'S CORNER**

LOCATION: AMBROSIA FOYER

10:20 - 11:20 **Best Practices in Scope Definition for Small Capital Projects**

Sandra MacGillivray - Valency Inc

Poor scope definition is the leading cause of capital project cost and schedule overruns, and small projects are no exception. Small capital projects with limited complexity represent up to 70% of the projects in an organization's capital program, yet minimal emphasis has historically been placed on adopting front end planning and scope definition best practices. For over 20 years, organizations around the world have utilized the Project Definition Rating Index (PDRI) methodology to improve scope definition in capital projects. It is the most successful open industry standard available and proven to deliver increased cost and schedule certainty, with over \$96 billion in projects benchmarked by the Construction Industry Institute (CII). Over the past two years, CII has published two new PDRI templates to help organizations improve scope definition in small industrial and infrastructure projects.

This presentation will introduce the PDRI methodology and explain how it is being used in small projects to successfully:

- Improve cost and schedule certainty
- Increase team alignment
- Identify gaps and provide teams with action items
- Provide better transparency on risks

LOCATION: MUSKOKA III

Root Cause Analyses Integration with Asset Management Program

Erin MacNeil - Nova Scotia Power Inc.

Nova Scotia Power is a vertically-integrated utility which owns, operates and maintains the majority of its power production facilities. Facilities include thermal steam units (coal, oil and gas-fired), combustion turbines (oil and gas fired), hydro, tidal, wind and biomass. The age and complexity of the power production facilities and equipment ranges from 90+ years for some Hydro stations, 40+ years in some steam turbines, 40+ for many combustion turbines and as new as 1 year old with respect to our wind turbines. Join Erin as she focuses on how Nova Scotia Power's RCA programs and approach integrates into its other asset management processes. Participants will gain insight into why this integration is a critical piece of the program versus execution of RCAs themselves.

LOCATION: MUSKOKA II



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Maintenance and Manufacturing Hiring Intelligence

Philippe Mercure - OptiTest

Identifying and hiring talented technical employees in the manufacturing industry is not an easy task for Maintenance, Operations and HR leaders. In today's manufacturing economy, automation and computerization have taken over vast sections of the industry leaving technical employees to hold greater control over assembly assets and making more decisions about how to deploy, manage, and maintain equipment. Manufacturers need to hire talented technical employees that have multi skills abilities to do many jobs and that have the capability to adjust, repair and troubleshoot various type of equipment. Relying on a good CV, past experience and a good academic background is no longer adequate. In order to solve this issue, innovative maintenance, operation and HR executives are now turning into "hands on" and troubleshooting simulation mechanical and electrical assessments prior to hire to get talented technical employees.

In this presentation, you will see and learn:

- How leaders includes mechanical and electrical simulator assessments in their hiring process to get the data they needs for making smart hiring decisions.
- The accuracy and validation testing factors of the simulator technology based on scientific researches.
- How to save costs by delegating more maintenance responsibilities to your employees
- Case studies, results, returns and gains made at specific manufacturing companies

LOCATION: MUSKOKA I

11:30 - 12:30 Teaching Old Dogs New Tricks: Supervisory Leadership Transformation Case Studies

Marie Gervais - Shift Management Inc.

Most front line lead hands or supervisors are appointed to their positions because they are good at their jobs. But how often do they get management training to work effectively with people and build their teams? This presentation highlights five companies who invested in front line supervisor in-person leadership training to work effectively with diverse workforces. It describes their struggles, successes and explains what works to transform "good workers" into "inspired, confident team leaders".

LOCATION: MUSKOKA III

Use of Qualitative Survey to Focus Quantitative Reliability Assessment

Matthew Price - Pioneer Engineering

Fully understanding the maintenance and reliability strengths and weaknesses within a facility can be a huge undertaking. Traditionally, a study to understand reliability is performed by either calculating, tracking, and comparing key performance indicators, or through a qualitative approach, observing compliance with best practices of maintenance and reliability activities to determine perceived strengths and weaknesses. Both approaches have downsides.

In this session, participants will learn about a more effective and repeatable reliability assessment that includes a quantitative assessment using plant CMMS work history to develop trends, key performance indicators, and comparisons that will either validate or invalidate strengths and weaknesses as determined in a qualitative assessment with plant personnel. See how the ability to reliably gather and assess historical CMMS data will depend on determining a set of requirements or data signatures which can be used to validate strengths and weaknesses. Additionally, the quantitative cost information can be effectively used to justify projects, programs, and personnel required to improve maintenance and reliability activities. Learn how a reliability assessment can most efficiently and effectively be administered in this way; the use of a qualitative assessment to better focus a quantitative analysis provides the best combination of overall understanding from personnel with the accuracy and reliability of historical data.

LOCATION: MUSKOKA II

CMMS Advancements and Innovations - City of Ottawa's Water and Wastewater Utility's Experience

Devesh Shah - City of Ottawa

The City of Ottawa's Environmental Services Department provide critical water, wastewater and solid waste services to customers through a complex network of infrastructure assets valued more than \$15 billion. The Department has been practicing elements of maintenance and asset management for years and the City continues working toward integrating and improving its maintenance work practices leveraging technology. Its CMMS system has evolved over the years from paper-based system to stand-alone application to fully integrated mobile solution resulting into higher degree of process automation, more visibility and better control. Accurate and timely information is a critical success factor for effective maintenance program execution for sustainable operations.

The presentation will discuss the evolution of maintenance practices and CMMS with its innovative use in implementing effective maintenance program for assets delivering water and wastewater services. The session will highlight innovations related to integrating CMMS with geographical system for spatial asset management, municipal call center 311 system for better services to citizens and Ontario 1 Call system for provincial regulation compliance. Participants will hear about Ottawa's experience with developing KPIs and generating reports through CMMS for performance management, productivity improvement, regulatory compliance (Ontario's Drinking Water Quality Management System) and identifying potential cost savings opportunities for financial sustainability.

LOCATION: MUSKOKA I

12:30 - 13:15 **LUNCH, EXHIBITOR SHOWCASE AND AUTHOR'S CORNER**

LOCATION: AMBROSIA FOYER

13:15 - 14:45 **MRO Panel Session**

A comprehensive preventive maintenance program will result in lower maintenance costs every time

What is more important - focus on reliability or focus on maintenance practices?

Where will asset management deliver the biggest bang for the buck for companies that implement it?

Join us for an expert panel where experienced professionals debate these topics and provide valuable insight.

Debaters:

Jeff Smith, Acuren & Mark Barnes, Des-Case

Sue Lubell, Independent & Cliff Williams, ERCO Worldwide

Boudewijn Neijens, Copperleaf Technologies & Paul Daoust, Transalta

Moderators: Rehana Begg, MRO Magazine & James Reyes-Picknell, Conscious Asset

Sponsored by MRO Magazine

LOCATION: AMBROSIA

15:00 - 16:00 **The Challenges of a Sustainable Physical Asset Management Approach**

Dharmen Dhaliwal - City of Toronto

A holistic approach to managing physical assets has become a top priority these days, both in the public and the private sectors. Physical assets are in urgent need for more attention and better care in order to meet required service levels, to minimize risks, to comply with regulatory requirements, to sustain growth demands and to meet the ever-changing needs of the community at large. Without doubt businesses and governments fully understand the importance of physical asset management and are dedicating capital to close the gap. The major stumbling block is finding a sustainable organizational approach. Lots of organizations are stuttering and getting confused when it comes to implementing and sustaining a physical asset management philosophy. One of the main reasons is the existence of bureaucratic silos. In many organizations - government, corporate and non-profit sectors there is a lack of collaboration and alignment to achieve organizational strategic goals. This session will explore the challenges faced by organizations while they start implementing a sustainable physical asset management approach.

LOCATION: MUSKOKA III

Chilled Water Cleaning, Flushing and Passivation in a Radio Telescope

Andres Ginsberg - ALMA Observatory

The ALMA Observatory near San Pedro de Atacama in Chile is a "Window on the Universe" recording information about our collective cosmic heritage. Imagine the impact of downtime at such a facility! The Data Centres at the ALMA technical Operation Support Facility (OSF) have operated continuously since the observatory start up in 2008, with lots of improvements and new equipment received after starting science operations in 2010. At the very beginning, all IT and Laboratory systems were cooled with only one chiller unit, but during 2011 two more chiller units were installed to improve the cooling capabilities due to sustained temperature rise over the time. After routine maintenance actions and Root Cause Analysis evaluation, cooling water was found to be out of specifications and certainly not in operational condition. Although the Scientific Department supported all actions to sort out the issue, a challenging restriction was imposed to fix the problem: Data Centres had to maintain continuous operations during this repair work. Thus, the challenge was to perform a flushing process without stopping the data centre and to avoid any temperature rise while heating the chemical blended flushing solution. During the injection of the cooling air flow it was absolutely essential to avoid any overheat alarm warning in the Data Room Racks and IT labs. Participants will hear about all lessons learned and experiences gained while performing an HVAC flushing procedure at the ALMA observatory and how to improve the state of preparedness to reduce any risk related to the process.

LOCATION: MUSKOKA II

How to Optimize Maintenance Through Better Planning and Scheduling

Michel Fournier - COGEP Inc.

To provide planners and schedulers with the right tools to increase productivity, sustainability and effectiveness, organizations using SAP, JDE, Oracle, Maximo need to address many challenges that impact execution for maintenance and repair. The key for success relies on simplifying the planning and scheduling process while keeping all data in the ERP. In this presentation, participants will discover how Fortune 100-listed Conagra, Suncor, Sanimax, General Dynamics, and Philip Morris reduced work order planning time by almost 50%, increased equipment reliability, improved budget monitoring and reduced downtime. Attendees will be introduced to a revolutionary, intuitive and powerful scheduler for managing job assignments and controlling work orders and projects to be carried out in a company's plant, facility and fleet. Learn how to aggregate best practices of planning and scheduling in one system, to analyze the work of your planner with schedule adherence metrics and how productivity for a planner starts by planning and scheduling without external files.

LOCATION: MUSKOKA I

16:00 - 16:30 **BREAK WITH EXHIBITOR SHOWCASE AND AUTHORS CORNER**

LOCATION: AMBROSIA FOYER

16:30 - 17:30 **Nova Scotia Power Equipment Integrity Through PdM and RBI**

Warren Rodgers - Nova Scotia Power Inc.

A practical and efficient condition based maintenance (CBM) program is built of two fundamental elements-one for rotating and dynamic assets in the adopted term of a (PdM) or Predictive Maintenance program and one for static assets known as Risk Based Inspection (RBI) program. This presentation will highlight these NSPI asset management programs for monitoring the state and reporting condition based (CBM) deficiencies on our physical assets. The discussion will review the development, management, integration and day-to-day application of our PdM/RBI programs including tools and techniques for VA, IR, MCA, HEP/FAC inspections and more. Participants will also discuss the general journey to condition monitoring for equipment over the thermal fleet. NSPI consciously chose innovative vendors, technologies and techniques. The audience will learn what challenges it faced internally and externally. The differences between how the CBM programs are integrated into our business today as opposed to piecemeal prior to AM program implementation starting in 2012.

LOCATION: MUSKOKA III

Eli Lilly's Lubrication-Driven Global Reliability

Suzy Hitchcock - ICML

When reliability and predictive maintenance in general were not improving as quickly as desired, Eli Lilly's management realized that some areas were better than others in the reliability space and as a result started to integrate these improvements into their business plans. Since winning the 2008 John R. Battle award for excellence in machinery lubrication, Eli Lilly and Co. has continued to develop its lubrication program not only in the United States but around the world. The company operates more than 20 manufacturing sites internationally, with each having its own goals, objectives, culture, challenges and reliability journey. In 2009, Rendela Wenzel took the reins of Eli Lilly's corporate lubrication technical team. She has continued to grow the lubrication program and has recently taken on a new role to further drive reliability globally.

This presentation will share Eli Lilly's journey into a lubrication-driven global reliability organization. It will highlight strategies applied by Wenzel for Lilly's policies and direction for reliability and predictive maintenance (PdM) and discuss the results achieved from the program.

LOCATION: MUSKOKA II

Implementing a Best Practices Preventative Maintenance Program

Blair Fraser - Lakeside Process Control

In an effort to increase equipment reliability and reduce unscheduled downtime, many organizations have taken the proactive step of implementing a Predictive Maintenance (PdM) Program. Unfortunately, only an estimated 20% of these initiatives actually achieve the anticipated results. This presentation will explore how to avoid the ten most common pitfalls substantially improves PdM results and provide participants with tools they need to implement a best practice preventative maintenance program.

LOCATION: MUSKOKA I

18:30 - 23:00 **PEMAC Annual Awards Banquet - Toronto Harbour Cruise**

Join PEMAC for our annual awards banquet, happening offsite this year on the beautiful Toronto Harbour. Guests will arrive and board a luxurious ship and tour around the Toronto Harbour for an evening of networking, fun and honouring of some inspiring people in asset management, maintenance and reliability. Guests depart the conference hotel at 6:00 pm and return at 11:00 pm. Transportation from the conference hotel is included. Tickets are required to attend this event. For more information and to purchase tickets visit the registration desk.

DAY 4 - Thursday, September 22

7:15 - 8:00 **BREAKFAST, EXHIBITOR SHOWCASE, AUTHORS CORNER**

LOCATION: AMBROSIA FOYER

8:00 - 8:45 **Opening Keynote**

Sustainable, Effective & Evolving Asset Management: The Role of People

Cliff Williams - ERCO Worldwide

Author of the best selling maintenance novel 'People - A Reliability Success Story', Cliff is a maintenance educator and a sought after keynote speaker at conferences around the world. Cliff has worked in the steel, pulp and paper industries as well as for food giants Coca Cola, Kraft and Wrigleys. His focus has always been on developing the systems and people he has worked with - whatever the industry. His belief is that success is achieved through the synergies of the teams he has worked with. Join Cliff for this opening keynote where he shares his insights into the role of people in sustainable, effective and evolving asset management solutions.

LOCATION: AMBROSIA

SESSIONS

9:00 - 10:00

Cut Fat off your Production Lines but Keep the Flesh and Bone

Ahmed Rezika - Rajhisteel

Sustaining asset performance while managing quality of production with reduced production costs is like keeping your balance while walking on a high-wire. When the market sets the sales price and the shareholders sets the net profit expectations, the only choice left is decreasing production costs. Labor-cost appears to many managers as an easy target when cutting costs. On the contrary, investing in improving the labor qualifications can result in higher efficiency and by default lower costs. The market is pushing organizations who are looking for sustaining or improving profits in this direction, including the steel industry that also faces this challenge. How do organizations select optimum production levels, minimum manpower numbers in order to sustain their productivity and profitability while maintaining a flexibility in following the market demands? The short answer is "do more for less". However, it is not an easy task. The Target is to demonstrate this situation and the analysis that has been done at Rajhisteel, where the results are promising so far. Planning to upgrade the QMS to ISO 9001:2015 will help the organization improve and shift the focus to sustainability and effectiveness.

LOCATION: MUSKOKA III

Simplifying RCM to Achieve Value with a Risk-Based Asset Management Methodology

Bruce Wesner - Lifecycle Engineering

Risk-Based Asset Management is a strategic management approach to physical assets that leverages an enabling technology such as SAP Plant Maintenance coupled with risk and failure based controls. This approach ensures optimum asset care to drive increased availability that creates value, resulting in higher profits. Today, increasing asset utilization and decreasing total cost of ownership are standard corporate objectives. Organizations must optimize asset performance to survive tough business conditions. The focus on continuous improvement and lean events to increase OEE, improve availability and reduce life cycle costs is now common place - but this approach doesn't go far enough. Faced with the lack of technically qualified people, an aging work force, and shrinking margins, organizations must consider risk when applying resources to asset management. This presentation will describe the process of cataloging physical assets by hierarchy, criticality and risk. Participants will receive an overview of risk and failure analysis and their linkage to controls, and discover how some common reliability analysis techniques can be used to ensure continuous improvement.

LOCATION: MUSKOKA II

Finding the Right Mix - Modernizing the Maintenance Strategy for Canada Post's Letter Sorting Equipment

Dan Gilbert - Canada Post

In 2010, as part of Canada Post's \$2 billion Postal Transformation initiative, a new fleet of state of the art letter sorting machines were deployed at mail processing plants across Canada. This presentation will discuss the journey taken to apply RCM methodology and change management techniques to optimize the blend of maintenance triggers on Canada's workhorses of letter sortation.

LOCATION: MUSKOKA I

10:00 - 10:20 **BREAK with EXHIBITOR SHOWCASE & Author's Corner**

10:20 - 11:20 **Asset Risk and Governance**

Nigel D'Souza - City of Mississauga

Organizations are under increased pressure to demonstrate due diligence in upholding H&S and protecting the environment. With this, challenges exist in managing risk for new equipment/technology; where operating context specific maintenance requirements have not had the opportunity to be demonstrated or identified, in prioritizing future capital, and re-evaluation of the organization's risk exposure.

This presentation will provide an overview of the development of the risk model, prefaced with a brief review of foundational elements which were required to implement the risk model at the Ontario Clean Water Agency. The strategy employed uses a common matrix approach to probability and consequence of failure ranking, however, application of this approach has been defined to support rapid deployment for new infrastructure while providing an effective base for analysis.

Topics covered will include establishing the end goals used for framework development and how these facilitate deployment within the agency. This model allows the organization to support effective project identification and prioritization, while including mechanisms for continuous evolution of the method as well as the organization's asset and maintenance management program.

LOCATION: MUSKOKA III

Drowning in Data? Using your Reliability Program as a Life Raft

Keith Berriman - Emerson Reliability Consulting

The advent of the Internet of Industrial Things and pervasive sensing is creating a tsunami of data that threatens to overwhelm us. Without a strong program in place to use the information we are wasting money and resources. Building a strong reliability & maintenance program ensures you are looking for the right data to tell you what you need to know. In this presentation Keith will look at the building blocks of a program and how to leverage all the data we are collecting.

LOCATION: MUSKOKA II

Environmental Footprint of Maintenance

Erika Mazza - Region Municipality of Durham

Maintenance activities have a direct effect on the environment that surround the facility where they are executed. There are three aspects in which maintenance strategies contribute to a facility foot print in the environment: 1) Resources needed 2) Efficiency of the equipment 3) Waste introduced into the ambient as part of maintenance activities. In order to be a sustainable maintenance department, the first and third aspects must be reduced or closely controlled and aspect two should be maximized.

There are a number of techniques and actions ready to help us achieve asset efficiency and reliability but the real question is, if we are willing to commit to be environmentally responsible in our maintenance activities; do we understand the environmental impact of keeping our assets reliable?

Join this session for a lively conversation about how making cultural changes, all the way to adapting new technologies, organizations can start making changes that will endure economical trending, while positively impacting all our surroundings.

LOCATION: MUSKOKA I

11:30 - 12:30 Integrating Asset Management into Your Organization Culture

Roop Lutchman - GHD Limited

Many organizations have embarked on asset management programs and struggle to implement best in class practices, find it difficult to sustain the new ways of working and find it difficult to demonstrate the return on the investment in AM. Success in Asset Management (AM) Development and Sustenance of the AM Program depends of effective Change Leadership throughout the program. It requires a focus on the following areas:

1. Program and Steering Team Charters
2. Comprehensive Business Case
3. Comprehensive Project Management Plan
4. An AM Framework and Policy that provides a clear vision for AM
5. A Leading Change Plan (and an effective issue management process)
6. Communications Plan
7. Tracking and Reporting of Benefits

This presentation will provide practical guidance to people who are embarking on an AM Program, in the throes of implementing one or trying to sustain the new way of working. Participants will hear about real case studies where challenges in the areas listed above were successfully managed.

LOCATION: MUSKOKA III

The DIKDAR Principle - Data, Information, Knowledge, Decision, Action, Result

Paul Daoust - Transalta

In this presentation, participants will learn about the DIKDAR principle. DIKDAR is an acronym for Data - Information - Knowledge - Decision - Action - Result. The DIKDAR principle can be used effectively for improved decision making in maintenance, reliability and asset management. Together these items present a value chain that can provide focus and attention to what is truly important in effectively managing your assets. This presentation will share how to apply the DIKDAR principle for improved decision making asset performance and health monitoring to drive business value in your organization.

LOCATION: MUSKOKA II

Winning Capstone Project 2016

Randy Bearisto

The Capstone is the final project of the Maintenance Management Professional program. Capstone course participants, often working in teams, analyze real-life maintenance management realities at one of their places of employment and work together to apply the relevant concepts from the MMP program to make a recommendation to advance proactive practices. The Capstone course instructors nominate the best project proposals in their classes each year and two are chosen to receive the Capstone Awards. This presentation, "Capital Asset Upgrade of a Compressed Air System", is the winner of the "Business Process" focused Capstone award. Randy and team completed their Capstone course at BCIT in Burnaby, BC.

LOCATION: MUSKOKA I

12:30 - 13:30 LUNCH, EXHIBITOR SHOWCASE, AUTHORS CORNER LAST CHANCE

LOCATION: AMBROSIA FOYER



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¹ Multi-vehicle Discount is up to 15% in ON, NB, AB, NS, NT, NU and YT and up to 10% in NS, PE, and NL.

² Loyalty Savings are only available in ON, AB, NS, NL, NB and PE. Up to 15% available in ON and NL; Up to 10% available in AB; Up to 7% available in NS, NB and PE.




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13:00 - 15:30 TOUR of Ontario Clean Water Agency at the Lakeview Water Treatment Facility

The 67-acre facility is one of the world's largest membrane treatment facilities, and tour participants will see start to finish how water is processed through the facility. This tour will depart from the conference hotel and guests will participate on a 90 minute tour. The PPE required for this tour is a safety hard hat and vests. PPE is available at the tour site for those that did not bring theirs. A signed tour waiver is required to participate on the tour. Guests will be returned to the hotel at 3:30 pm.

DEPART FROM FRONT LOBBY

13:30 - 14:30 Bear Den

In this general open forum we invite participants to share topics and questions of asset management, maintenance and reliability that are relevant to you and your organization. Share and learn with other conference participants how they are managing the same issue, as well as gain valuable insight from our various experts in the audience.

LOCATION: AMBROSIA

14:45 - 15:45 **The Role of Professional Associations - Contributing to a Sustainable, Effective and Evolving Profession**

Cindy Snedden - PEMAC

Why should I join a professional association? How can I contribute?

Over 25 years ago when the founders of PEMAC began the venture of creating a non-profit professional association for maintenance managers there was very little recognition of the role of maintenance, reliability and asset management professionals to “sustainable, effective and evolving” organizations.

Looking back, PEMAC is extremely proud to have been part of the progress that has been made but there is clearly much more to accomplish. It remains a concern that recognition of maintenance management, reliability management and asset management as vital fields of practice remains relatively low, even within industries that can directly benefit from a professional approach to this aspect of their business.

In this session we'll look at what has been accomplished by the professional associations that participate in the Global Forum on Maintenance and Asset Management, what remains to be done, and how you can contribute through your professional association.

LOCATION: MUSKOKA III

Evaluating the Reliability of Your Electrical Distribution System

Doug Marshall - Magna IV Engineering

Electrical reliability requirements for facilities vary based on their criticality to the organization. Unplanned outages can cost millions of dollars in damages, directly and indirectly. Furthermore, it impacts the performance and compensation of a facility's engineers, operators and plant managers. Although poorly understood among stakeholders, electrical system reliability is directly tied to productivity and operating cost. This presentation will demonstrate that by quantifying the statistical probability of an electrical system failure, maintenance resources can be prioritized to address the critical components of your system and therefore minimize maintenance costs. Participants will see that by understanding the type of inherent failure modes of your equipment, recommendations can be made to improve preventative maintenance programs, to implement on-line and off-line predictive maintenance programs and to eliminate 'single points of failure' all of which will contribute to minimizing downtime in the event of an unplanned outage.

LOCATION: MUSKOKA II

Requirements-Gathering for Effective Change Management

Faisal Shaheen - City of Toronto

Operations management practitioners face several challenges in optimizing the usage of CMMS and AMS solutions. One of the critical tasks in an increasingly complex environment is ensuring that software solutions keep pace with legislative, productivity and efficiency based requirements. Participants in this session will see how operations management thinkers, among them management theorists and organizational behaviorists in particular, have introduced terms like 'big data', 'refresh' and 'disruptive management' in attempts to stimulate thinking around solution development. See how recent experiences from City of Toronto operating divisions with introducing software solutions illustrate the importance of documenting and validating specific and inter-divisional needs as 'beacons' for project management. Effective and efficient management of internal and external stakeholders requires documented artifacts that are constant throughout the project life cycle. Discover how the absence of such artifacts simply permits changes in scope, requirements and expectations.

LOCATION: MUSKOKA I

15:45 - 16:00 CLOSING COMMENTS - GRAND PRIZE DRAW

Don't miss this closing session when we wrap up the conference, announce details of the 2017 conference and award our conference grand prize draw.

LOCATION: AMBROSIA

*PEMAC reserves the right to make changes to the conference schedule right up until the day of the event.

Asset Management Professional (AMP) Certification



The AMP Certificate program is designed to build organizational capacity for excellence in Asset Management by developing relevant knowledge and skills across disciplines for those responsible for Asset Management decision-making and design of the Asset Management system.

The program is offered exclusively at Humber College, in association with PEMAC.

www.humber.ca/continuingeducation/program/asset-management-professional-certificate



Maintenance Management Professional (MMP) Certification



The MMP program provides training and certification to those aspiring to, or already in, maintenance management or supervisory positions enabling them to align their work with the Asset Management strategies and plans of the organization.

For more information about the program that is offered at 14 colleges, universities and technical institutes across Canada, visit: www.pemac.org/certification



PEMAC Acknowledgements

On behalf of the Board of Directors and the conference attendees, we would like to extend a big thank you to the MainTrain 2016 planning committee, PEMAC staff and all of the on-site member volunteers that have made this year's conference a success. Your time, effort and careful attention to making this a truly successful conference shines though.

Committee Chair:

Sridhar Ramakrishnan, Suncor Energy Inc.

Committee Members:

Gregg Bentley, Armtec Infrastructure

Ryan Cockwill MMP, Cameco Corporation

Nigel D'Souza, City of Mississauga

Erika Mazza, Region Municipality of Durham

James Reyes-Picknell, Conscious Asset

Cindy Snedden, PEMAC

The following people provided additional support to the paper review process:

Cliff Williams, ERCO Worldwide

Joanne Siennicka, Independent

Onsite Support Staff:

Steve Burrows, PEMAC Education and Professional Development Program Manager

Nicolle Guillen, PEMAC Events Coordinator

Melanie Mangion, PEMAC Head Office

Claire Russell, PEMAC Head Office

Tell Us How We Did

We hope that you enjoyed the conference. Take a moment to let us know how we did by completing our online feedback survey. Visit this website www.surveymonkey.com/r/MainTrain2016Feedback. Or scan the QR code show here.





Looking Ahead *MainTrain 2017*

MainTrain 2017 is coming to Saskatoon!

PEMAC is excited to be hosting MainTrain 2017 at the historic Delta Bessborough hotel in the heart of the dynamic city of Saskatoon, Saskatchewan! With an economy that is driven by a diverse combination of agriculture, mining, advanced technology and innovation, the City of Saskatoon is one of the fastest growing centres in Canada offering both a youthful vitality and cultural richness.

When: September 18 to 21, 2017

Where: Delta Bessborough Hotel

Don't miss your chance to join us again to meet with participants from across the country and around the world and share maintenance, reliability and asset management insights.

More details about the 2017 conference will be available shortly at www.maintrain.ca. For more information contact Nicolle Guillen at events@pemac.org or 1-877-525-7555 ext. 4.



MainTrain 2017 | Saskatoon, Saskatchewan
www.MainTrain.com | September 18 to 21, 2017

70%

of the time spent on reliability improvement fails to generate sustainable business success

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5

Offices across **ONTARIO & MANITOBA** to support the evolution of your program

1

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