



Canadian Society for Chemical Engineering | **For Our Future**
Société canadienne de génie chimique | **Pour notre avenir**

PSMd Meeting, 20 June 2018 Location: Wallberg Building, Rm. 215, University of Toronto St. George Campus, Toronto, Ontario

On-Webex: Morley Brownstein, Jean-Paul Lacoursière, Dave Watson, Danielle Binet

Present: Francois Roche, Jeffrey Castrucci, Parnian Jadidian, Melanie Wilson, Kenny Wei, Gerry Phillips, Ian Jobe, Laura Cicinelli, Guy Brouillard, Graeme Norval, Keith Landra, Brent Morgan, Shahanaz Khan, Bianca Salazar, François Roche, Jorhe Larez, Adrian Pierorazio

Presentation of Committee Members:

Francois Roche – Chair

Melanie Wilson – Vice Chair

Amanda Sistilli - Secretary,

Treasurer – Guy Brouillard,

Past Chair – Jyoti Patel

Acceptance of last meeting minutes: Guy supports, Melanie seconds

Approval of Agenda:

Adding topics: undergraduate training in PSM, the creation of a publication similar to loss prevention bulletin (publication of short stories related to PSM incidents) (these items can fit under subject headings already in the agenda and will be discussed at that time)

Safety Talk: François: cryogenic N2 offloading, truck leaving with hose still connected. Trained operators are running to the scene putting themselves at risk due to human nature to want to fix a situation. Gerry's comments are that operators need to be trained but the culture also needs to reinforce that there is no expectation for people to put themselves into any danger and respond to an incident. Operators also need to be made aware that the consequence of not responding right away often is not that bad. Go to the control room and figure out the best way to respond. Often running to the scene will not help the situation or could make it worse. 1/3 of vapour clouds are ignited from static from someone responding to the scene.

Reflections on the CSChE Conference:

Guy: Good sessions in the PSM topics, only one no show, good interest from the crowd and presenters were well prepared.



Adrian selected presentations. All papers were selected for this year. Some posters were rejected. In the past we have rejected a few presentations mostly because we were not confident they would attend. This year, the person who did not attend was travelling internationally and was unable to get a visa in time.

Melanie: A 'lessons learned' from this conference is that we can help in the process of presenters getting a visa so that they can attend the conference.

At the poster competition, there were 2 PSM related posters from Memorial University. Did this go through the PSMD?

Action: (Andy and Adrian) Some posters from the conference were related to PSM, Adrian was part of the team reviewing these posters. In the future it would be good to know that these students are interested in PSM and we can promote their posters within the PSMD and also work to encourage the students to join the PSMD. Guideline for the next conference planning committee: stay integrated with the plans with the rest of the conference so we can find connections and synergies and optimize them. i.e. Technical Committee for Poster Competitions. The planning committee needs some guidance in on who to connect with in the CSChE planning groups to ensure we are able to integrate as much as possible. Also, students who submit abstracts can only pick on subject area that their abstract refers to, which may limit PSM related topics if students consider their topic to fall under a different primary topic. It would be helpful. Ensure that posters are advertised to the PSM group and other important activities at the conference. Update the Symposia Planning Guideline with all this information and forward to Morley and Paul Amiot who are planning the CSChE items for next year. See appendix x.

Action: Consider creating a way to tag papers that are submitted as PSM so people can search them online.

Parnian: Interest from engineering education group has an interest in a combined session with the PSM group. There are some disagreements on how this could be done so this could be an idea for next year.

Panel Discussion:

-first time this was done at the PSM CSChE since 2013

Gerry: the panel needs a formal structure as well as cue questions if discussion is not happening.

Action: Adrian will add the need for cue questions for a panel to the planning committee guidelines.

Awards Presentation:

Gerry: Atkins was not at the presentation ceremony for the dinner. Atkins was not aware that they should be there to present the award.

Action: Ian will find an appropriate person (sponsor, previous award winner, PSMD Chair, etc.) to present the award. This should also be added to the Symposia Planning Guideline.



Action: (**Adrian**) Planning Committee should consider a PSM related plenary since the theme for next year's conference is integrating academia and industry.

Team for 2019:

-Paul Amiot (lead), Reid MacPhail, Laura and Morley. A third person is needed who will also lead for Ottawa in 2020. Co-leader to be chosen. Action: Laura will confirm the members for the CSChE 2019 team for planning PSM activities. Jan is the technical program chair of the conference who we should collaborate with.

Student Workshops:

Parnian: Significant improvement in planning from last year. Pre-registration this year helped a lot. 50 pre-registered, 45 attended. We changed the workshop this year to make it interactive, we found that the group was quieter this year for whatever reasons. Parnian and Amanda are going to hand the planning facilitation of the workshop to Kenny and Kathleen. Parnian and Amanda are thinking of planning a Level 2 version of the workshop that focuses more on the methods for quantitative/qualitative analysis techniques.

Kenny: risk management boardgame. Focuses on the risk = cons. X likelihood and the hierarchy of controls. Students seemed to enjoy themselves. Approx. 40 attendees. 32 people registered.

It would be a good idea to possibly have a ½ day session on PSM.

Graeme: Minerva has a presentation on QRA that we could use for PSM level 2. It can also be transformed into E-learning.

Action: (Parnian and Amanda): add to workshop student guideline to include PSMD members as possible mentors/networking opportunities or to work with PSM planners to highlight PSM sessions that may be good for students.

Action: Parnian, Amanda, Jeffrey: Plan content for level 2 session and e-learning module development.

Environmental Risk Assessment Guideline Update:

Morley:

14/22 Sections have been reviewed by the team for the draft guideline

Env. Risk Criteria Calibration Plan 4/10 activities completed or reviewed by team

Francois: Can we add 30-60 minutes at future meetings discussing 1 or 2 technical subjects.

Action: (Francois to add to agenda) Manny can present the technical findings of his team at the last 30 minutes of the next PSMD meeting. Explore whether we can include the CCPS, CIAC and possibly other organizations/representation from academia, environmental chemistry division, for the purpose of



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advertising what we are working on a prime the groups we want to collaborate with and get their buy-in in a teleconference in this discussion.

Action: Ian and Graeme to see if we can do a web session with, for example, the environmental chemistry division for presenting the Environmental Risk Assessment Guideline to the group. They will also link with the Director of Divisions for further collaboration opportunities.

CSA Z767 Awareness Updates:

Action #1: Pro-forma given to us from CSA with Marcello to sign for CIC and CSA agreement. Marcello will get this signed for Enbridge. Ian will get the CSChE board to sign this.

Action #2: Enbridge now has the the letter and is going to sign it.

Action #3: Gerrard is no longer in a role in Environment Canada to be able to assist us with the QRA Guideline review. There is no one in Environment Canada who can assist us at this time. This action is being cancelled.

Action #4: Parnian and Graeme did the presentation back in the Spring 2018. No other progress has been made here.

Action: (Amanda) Milestone map to be created for the rollout of awareness sessions, collaborate with the awareness team.

Action #5: Action #6: (Z663 is already published so this is not an opportunity for us to integrate with anymore)

Action #7:

Morley, a formal liaison between committees can be arranged, we need to pick which one we want inclusion on.

Action: Morley will forward an email on this to Graeme.

PSM Land use planning at Strathcona County:

Action: Francois to reach out to Tufail to see if there are any updates he would like to provide at the next meeting.

MIARC English Translation – Update:

-English translation is available on line \$100 per book, \$20 shipping. **Francois to insert link.** 3 people including Graeme and Jil assisted in reviewing the English version.

Risk Assessment Guideline:

Parnian will help Jean Paul for QA of the document
Reiss – reviewer from CRAIM for the guideline

Both guidelines are CSChE copyright, reverse copyright approval to reference these in CSA standards.
CIC policy development



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Operating Engineers (OE) Task Force:

Application of CSA Z767 to TSSA. The sunrise propane response didn't include a complete PSM component like CSA Z767. Including this approach going forward is something that TSSA is discussing. They are starting with propane retailers

Networking

There is a stakeholder list available, it is posted to Goggle docs. Contact Francois for a link, this is a living document that can/should be added to. This list is reserved for CSChE members

Action: Graeme to reach out to wood and mining associations, he will update the list.

B149.2 Update

There is no requirement in B149.2 to protect tank skirts. This requirement shows up in other guidelines (API, NFPA). Jean-Paul requested to add a clause to protect tank skirts in 2016, this request is on the agenda for the technical committee to discuss. There is a non-mandatory appendix to do a risk assessment in this code, Jean-Paul will request that this appendix become mandatory. Jean-Paul will also request that B149.2 to be brought into line with CSA Z767.

Action: Jean-Paul will send a formal request to the B149.2 technical committee for an update

Technical committees are independent from CSA Standards proper and need to be engaged independently. The members of the CSChE PSM chapter are encouraged to engage these committees as individuals.

Announcement

Jyoti is on the CSChE Board – Industrial Liaison West

Appendix A:

ORGANIZATION COMMITTEE

Adam Donaldson, Conference Chair, Dalhousie University

Adam.Donaldson@Dal.Ca

Jan Haelssig, Technical Program Chair, Dalhousie University

Jan.Haelssig@Dal.Ca

Stephen Kuzak, Sponsorship/Industrial Liaison, Dalhousie University,

Stephen.Kuzak@Dal.Ca

Julie O'Grady, Volunteer Coordinator

Jan.Haelssig@Dal.Ca

Lori Anthony, Undergraduate Student Program Co-Chair

Cassidy Wright, Undergraduate Student Program Co-Chair

Jonathan Totten, Graduate Student Program Co-Chair



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Michelle Combe, Graduate Student Program Co-Chair

CONFERENCE THEME

Synergy and Innovation through Community Engagement

SYMPOSIA

Honorary Sessions

Tbd

Special Sessions

Emerging Leaders in Chemical Engineering

Special Symposia (theme-oriented):

Emerging and Applied Industrial Research

This symposium is focused on advancing technology and developments which highlight the evolving role of chemical engineering in fundamental and applied research with direct impact and application in industry. The content of submitted abstracts can cover a variety of scopes, including: early or late stage commercialization initiatives, applied sustainability research with measured impact, industry-led research initiatives highlighting previous and emerging opportunities, or fundamental research carried out in response to clearly defined technology gaps in industry. Presenters within the symposia will be selected to exhibit leading-edge research across multiple industry sectors in Canada and abroad.

Chemical Engineering in the Community

This symposium will highlight leading-edge research driven by community need and collaborative consultation, safety and emergency preparedness, environmental sustainability, and economic development. Expected presentation topics will focus on fundamental and applied research developed in partnership or in consultation with stakeholders in the community, highlighting emerging best-practices and considerations for community-engaged development. Submitted abstracts may cover a variety of technical scopes, including but not limited to: Remote community resource management, environmental monitoring and remediation, industrial integration and sustainability initiatives, value-added manufacturing or waste material diversion and recycling. A common theme expected within this symposium is examples of community-engaged research highlighting the diversity and emerging opportunities for Chemical Engineers, and best practices/lessons learned through the engagement process.

Entrepreneurial Advancement and Globalization

This symposium will showcase research and development activities with strong links to Chemical Engineering which are contributing to entrepreneurship or technology globalization. Specific emphasis will be placed on research-driven academia-led projects and partnerships which highlight successful initiatives, providing examples for emerging and established researchers. Submitted papers may cover a broad range of topics, including but not limited to: product or process development, new materials development, material reprocessing, process scaling/intensification, and needs-based solutions developed from fundamental research. Presenters within the symposia will be selected to showcase entrepreneurial research and to provide context for researchers pursuing innovation and commercialization opportunities.



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Technical Tracks:

- Biotechnology and Biomedical Engineering
- Bioprocessing and Biomass Valorization
- Education in Chemical Engineering
- Chemical Engineering Fundamentals
- Process Safety and Loss Management
- Advanced Functional Materials
- Sorption and Separation
- Catalysis and Reaction Engineering
- Nanotechnology
- Microfluidics and Nanofluidics
- Energy and Natural Resources
- Environmental Engineering and Waste Management
- Mineral Processing
- Systems and Control
- Interfacial Phenomena and Multiphase Processes