INCOSE Canada Chapter Quarter 2 Members Newsletter
July 2024

Introduction

After successfully launching the very first Chapter Newsletter, the INCOSE Canada Chapter Board is now publishing the Q2 Canada Chapter members newsletter. As this is a new addition to our chapter efforts, please let us know if you have any feedback so we can improve it over time.

If you are interested in joining us as a volunteer, please email us at canada@incose.net

Message from the Chapter's President

Our Vision, as set out in our Strategic Plan, is to become the key enabler for the Systems Engineering community within Canada to network, collaborate, share ideas and experiences, and for dissemination of Systems Engineering knowledge and best practices. This quarter we moved closer to that vision. Not only have we been recognised with the Silver Chapter Award for best chapter practices for the second year in a row, but we hosted in-person events in Vancouver and Toronto, the first time since the pandemic and many of our board members made the trip to Ireland to participate in the INCOSE IS in person. On the knowledge dissemination side of our vision, our Technical Program continues to deliver on the dissemination side of our vision and draws both heavy weights in the SE domain as well as rising stars bringing expertise and fresh perspectives to our members as well as the chapter wrapped up facilitating a very successful member-led INCOSE SE Handbook study group. To top up a very successful quarter our very own Tony Wu, currently the Vice-President and President-Elect, was accepted into the INCOSE's Technical Leadership Institute!

It is with excitement that I look towards the 3rd quarter, when we will roll out the first ever SE Student Competition within Canada and continue to host in-person events not only in Vancouver and Toronto for the second round but also for the first time in Montreal. In the fall, our annual elections are due, when our members vote for the next board so watch your email and our website for more information.

Membership Report

Welcome to Our Newest Members!

We are excited to welcome our newest INCOSE members to the Canada Chapter. Please look for them at future events. The following members joined in Q2 2024:

Quebec	Charles Gervais-Dumont, Martin Laporte, Kurt Sermeus, Brice Tranchant,
Ontario	Xavier Agustin Carballo, Fahim Mannan, Mohmed Anees Mohammed, Smruthi Mohan, Lukasz Pach, Hitesh Ramesh, Rupan Saravana, Patrick Woo
Alberta	Mike de Groot, Catharine Higgins
British Columbia	Nicolas Berniolles, Nizam Bourjeily, Natalia Bouzó Esteves, Ramapriya Dunna, Myles Ruether, Benjamin Steele

Congratulations to Our Q2 2024 Systems Engineering Professionals!

Associate Systems Engineering Professional (ASEP)	Shalini Dwivedi, Tristen Ruel, Anup Suresh

Note: Members who have opted out of the directory/email have been excluded from this list above. Please let us know if you think you have been omitted by accident, and we will be sure to include you in our following newsletter!

Many individuals participated in the INCOSE Canada chapter's study group in **2023**. Another study group was initiated in **Q1 2024**, in which systems engineers studied the INCOSE Systems Engineering Handbook in 12 weeks and prepared for the INCOSE Certification Exam. If there are enough interests, we will look to start additional study groups in **Q3 2024** for those interested in pursuing either ASEP or CSEP certification.

Passed Events

April 29th - Needs, Requirements, Verification, and Validation Management *(Event Recording Link)*

This was an INCOSE virtual event, brought to INCOSE members at no cost by the INCOSE Canada Chapter, featured speaker Lou Wheatcraft, senior consultant and managing member of Wheatland Consulting, LLC.

- **Abstract:**

  Needs, Requirements, Verification, and Validation Management (NRVVM) separates the "management" of NRVV processes and data from the "execution" of NRVV activities. NRVVM is a cross-cutting series of activities that span all life cycle process activities. The focus of NRVVM activities is to manage the artifacts that result from the NRVV activities to ensure alignment and consistency across the life cycle. During this presentation, the activities associated with preparing for NRVVM and performing NRVVM activities will be discussed as described in the INCOSE Requirement WG Needs and Requirements Manual (NRM).

- **Presenter's Bio:**

  Lou Wheatcraft is a senior consultant and managing member of Wheatland Consulting, LLC. Lou is an internationally recognized expert in systems engineering with a focus on needs, requirements, verification, and validation across the system lifecycle. Lou has over 50 years' experience in systems engineering and supports clients from government and industries involved in developing and managing systems and products. Lou has been an active member of INCOSE for over 23 years and is the chair of the Requirement Working Group (RWG). Lou is a principal author of several RWG manuals and guides, including the Needs and Requirements Manual (NRM), Guide to Needs and Requirements (GtNR), Guide to Verification and Validation (GtVV), and newly released version 4 of the Guide to Writing Requirements (GtWR).

May 9th – In-person meet-up in the Vancouver Area

INCOSE Canada Chapter hosted an in-person meet-up in Downtown Vancouver, BC:

- At **Tap & Barel - Convention Centre**
- on **Thursday, May 9, 2024, 5 pm PST**.

This event's purpose was to provide the INCOSE Canada Chapter members in the Greater Vancouver Area with an opportunity to meet, mingle, and discuss various Systems Engineering topics.

May 17th – In-person meet-up in the Toronto Area

INCOSE Canada Chapter hosted an in-person meet-up in Downtown Toronto, ON:

- At **Arts & Letters Club**
- on **Friday, May 17, 2024, 5 pm EST**.

This event's purpose was to provide the INCOSE Canada Chapter members in the Greater Toronto Area with an opportunity to meet, mingle, and discuss various Systems Engineering topics.

June 10th - Increasing the Success Rate of AI and ML Systems Deployment at the Enterprise Level *(Event Recording Link)*

This is an INCOSE virtual event brought to you at no cost by the INCOSE Canada Chapter, featuring speaker Mehran Irdmousa. Join us as Mr. Irdmousa shares his insights, unique perspective, and research on increasing the Success Rate of AI and ML Systems Deployment at the Enterprise Level.

- **Abstract:**

  As organizations increasingly adopt artificial intelligence (AI) and machine learning (ML) technologies to drive innovation and business growth, efficiently deploying and managing AI/ML systems in production becomes more critical. This presentation will explore the augmentation of MLOps, a discipline focused on efficiently deploying and managing ML models, with Enterprise Architecture (EA), a strategic planning approach for aligning IT infrastructure and business objectives. We will discuss how this augmentation can enhance the success rate of AI/ML systems deployment at the enterprise level. In this presentation, we will cover the following key topics:

  - The current problems in the industry and the way to motivate these research efforts
  - Strategic alignment between AI/ML initiatives and overall business goals
  - The role of MLOps in streamlining the deployment, management, and continuous improvement of AI/ML models in production environments
  - The benefits of augmenting MLOps with EA, including improved resource management, standardized processes, and better collaboration among stakeholders to increase the success rate of AI/ML systems deployment at the enterprise level
  - Challenges arise when augmenting MLOps and EA, such as organizational resistance, complexity, scalability, and strategies for overcoming these challenges.

- **Presenter's Bio:**

  Mr. Irdmousa is a distinguished AI strategist and Enterprise Architect with a decade of experience in the research and development of cutting-edge AI solutions. His expertise lies in operationalizing complex systems from concept to deployment, boasting a 100% success rate. As a passionate advocate for AI research and its seamless integration into modern systems engineering and enterprise architecture, Mr. Irdmousa has become a sought-after thought leader.

*If you are interested in presenting at one of the Canada Chapter's events, please contact canada@incose.net. Different Systems Engineering topics are welcomed, including Requirements Management, Model-Based Systems Engineering (MBSE), Verification and Validation, Machine Learning/AI, Cyber Security, and Systems Safety/FMEA. **Presenters receive a certification from the INCOSE Canada Chapter for their contribution to the chapter.***

The 18th Annual IEEE International Systems Conference

Our very own Past President, Ray Barton, attended the IEEE's SYSCON 2024 Conference held on April 15th to 18th, 2024, in Montreal, Canada, in coordination with INCOSE Central, and attended the multiple tracks as part of IEEE SYSCON's Technical Program such as System-of-Systems and System Architecture, to name a few. As for the presence of INCOSE and having a booth, INCOSE got full value for its sponsorship of the conference. INCOSE members could register at the same registration fee as IEEE members. INCOSE was featured in the hardcopy Program Schedule handout with two full pages on INCOSE. At the conference and during the sessions, INCOSE members conversed with one another, and many said they would see each other again at 2024 IS in Dublin.

May 17th – In-person event in Toronto, ON

The 18th Annual IEEE International Systems Conference (SYSCON 2024), Montreal, QC
(From left to right: Ray Barton, Mehdi Djili, and JP Forget)

May 9th – In-person meet-up in Vancouver, BC

Upcoming Events

July 29th - Happy Hour Event: Sharing Experiences from INCOSE IS2024 (*Registration Link*)

Please join us for this FREE virtual (Zoom) happy hour event offered by the INCOSE Canada Chapter on Monday July 29, 2024, at 8:00 pm ET (Value = 1 PDU/CEU) hosting Ivan Rodrigues, Ivan Taylor, Ray Barton, and Stéphane Lacrampe.

Whether you attended in person, virtually, or couldn't make the **34th Annual INCOSE International Symposium in Dublin, Ireland (July 2 – 6, 2024)**, we invite you to join this happy hour event where you can grab your favourite refreshment and snack, connect with our panel members, and share knowledge and experiences!

Canada Chapter's Accomplishments in Q2 2024

- Participated in the 18th Annual IEEE International Systems Conference
- Hosted technical events with great member participation rate

- Initiated the first Canada Chapter Newsletter
- Hosted in-person workshops in Toronto and Vancouver
- Awarded Silver Chapter status for the INCOSE Chapter Circle Award 2024
- Held INCOSE Handbook Study Groups in collaboration with other INCOSE Chapters
- Tony Wu, Canada Chapter's vice-president and president-elect, was accepted into Cohort 10 of the INCOSE's Technical Leadership Institute
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Upcoming Canada Chapter's initiatives for 2024

- Host Systems Engineering Student Competition
- Share experiences from the 18th Annual IEEE International Systems Conference (*Link*)
- Share experiences from the 34th Annual INCOSE International Symposium *(Link)*
- Hold the second round of in-person networking sessions in Toronto and Vancouver
- Roll out Chapter Board elections
- Improve Canada Chapter's membership engagement
- Improve Canada Chapter's technical program

INCOSE Handbook Study Group

The Canada Chapter wrapped up a 13-week term that drew a total of 57 professionals from around the globe, 24 of them from Canada. We teamed up with the Michigan and Huntsville Chapters and split the cohort into two where each cohort were given the challenge to review and present a prescribed section of the INCOSE SE Handbook v5 each week. Each session was wrapped up with a quiz on the section with the cohort scoring in the high 70% over the whole term.

The INCOSE Handbook Study Group was initiated to address a growing demand from our members for support towards professionalization within the SE domain. That's why the format was tailored to encourage self-learning, regular feedback on progress and an incentive to register for the SEP exam.

Based on the all-round success of the initial cohort of Canada, Huntsville and Michigan's INCOSE Handbook Study Group, we're investigating to stand up another cohort in the fall this year. Anybody interested to join the student-led study group initiative are welcome to reach out to the Canada Chapter at *canada@incose.net*.

Systems Engineering Student Competition

We have long held the belief that the future of the INCOSE Canada Chapter lies in the growth of members who recently graduated in the engineering domain within Canada. This year we have decided to initiate a SE Study Competition targeting final year undergraduates in Engineering majors registered at a university or college within Canada and challenging them to adopt Systems Engineering good practices in the development of their final year projects.

Students will present the adoption of Systems Engineering practices on their projects to compete for $2,000 CAD for the first prize or $1,000 CAD for the second prize. The project teams who win first, second and following three runners-up will also be granted complementary INCOSE membership worth a total of roughly $2,100 CAD. We are actively looking for sponsors and student registrants (registration closes mid-September) so if you would like to find out more, please either check out our website or reach out to the Canada Chapter at *canada@incose.net*.

Meet the 2024 INCOSE Canada Chapter Board Members.

In case you missed it, your elected 2024 INCOSE Canada Chapter board consists of:

President	**Vice-President and President-Elect**	**Membership Director and Treasurer**	**Technical Program Director**
Terry Fitzgerald	Tony Wu	Ivan Taylor	Ivan Rodrigues

Communication Director	**Secretary**	**Webmaster**	**Past President**
Arman Nikkhah	Pengzhou Lu	Stéphane Lacrampe	Ray Barton

To learn more about board members' background, please visit INCOSE Canada Chapter Website (Link).