COMPSAC 2025 – A Personal Milestone in Toronto
Welcome and Farewell
By Sorel Reisman, Standing Committee Chair – IEEE Fellow

COMPSAC 2025 marked a significant milestone, bringing me full circle - almost 50 years of circling, from my hometown in Toronto, to California, and July 8 -11 back to Toronto. At the 2025 conference, I concluded one of my most impactful roles— 10 years as Chair of the COMPSAC Standing Committee. This year's conference was hosted at York University, Canada's third-largest university, founded in the same year I entered high school. Four years later, I met my wife at York U's Glendon Campus, at the time their only campus, and later, she and I both completed our PhDs - at U of T. (Sorry, York!)

This year's successful conference was made possible through the tireless efforts of General Chair Kostas Kontogiannis and Local Arrangements Chair Marios Fokaefs. Their dedication ensured that attendees felt welcomed and well-supported throughout the event.

The Evolution of the Theme

In the spirit of full disclosure, I confess that I developed the theme of this year's conference, *Harnessing the Power of Intelligent Systems: Shaping the Future,* with the assistance of the AI tools ChatGPT and Claude. While the AIs' drafts were imaginative—claiming COMPSAC had hosted Nobel laureates and invented quantum computing, the final version was refined to ensure factual accuracy with input from the organizing committee. Committee members and their roles are listed on the official website, https://ieeecompsac.computer.org/2025/ (along with archives of past programs).

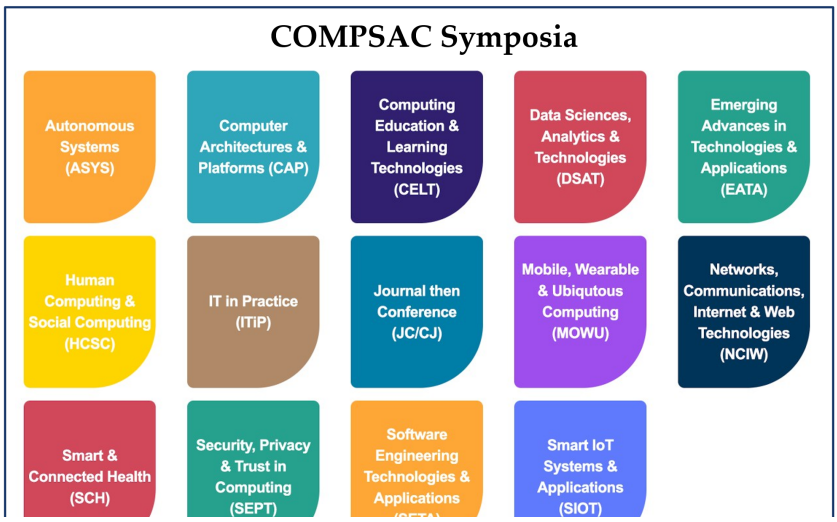

Figure 1: COMPSAC Symposia

A Year of Remarkable Engagement

The COMPSAC 2025 technical program was organized across 13 symposia (Figure 1). Almost 300 initial submissions were received from 50 countries (Figure 2), each receiving three reviews – more than the usual two that most conferences employ. The

review process was supported by 426 Program Committee members from 48 countries, reflecting strong international participation. While I do not personally participate in submission reviews, I did receive 1,450 personal emails and an additional 2,750 specifically related to those reviews.

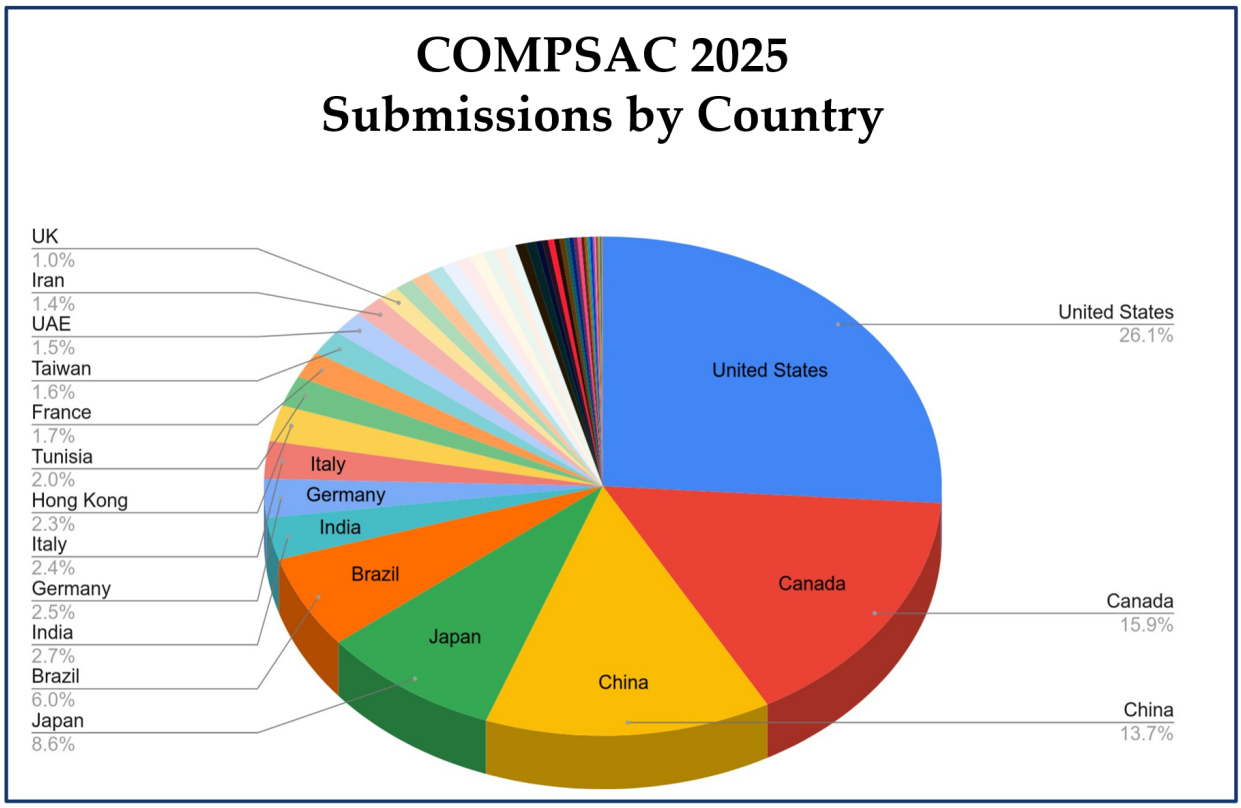

Figure 2: Submissions by Country

The original submission timeline, January 31, was extended to March 5, with the submission portal closing on March 7. Submissions included symposium and workshop papers, fast abstracts, special research sessions, and special tracks.

Keyword analyses of paper titles were conducted using the PyPI WordCloud_Mapper (https://pypi.org/project/wordcloud-mapper/), excluding common stopwords such as “using,” “based,” “approach,” “model,” “system,” and “software.” Figure 3 shows the top keyphrases extracted by EasyChair, our paper submission system. The most prominent terms included Large Language Models, Machine Learning, Deep Learning, Software Engineering, and Internet of Things, reflecting, for a change, the conference theme!

Top 30 Keyphrases

(Extracted by EasyChair)

Large Language Models	1000
Machine Learning	941
Deep Learning	794
name of organization of aff	772
Large Language Models LLMs	743
Software Engineering	607
Internet of Things	462
Natural Language Processing	438
Deep Learning Models	432
real-time	382

Neural Information Processing Systems	379
Smart Contracts	371
Computer Vision and Pattern Recognition	353
city country email address	318
Machine Learning Models	301
Acceptance ratio	297
Artificial Intelligence	295
Test Cases	284
Graph Neural Networks	235
consumer devices systems and services	229

Neural Network	226
source code	225
Transformer-based models	219
IoT devices	219
Time Series Forecasting	217
Blockchain and Distributed Ledger	210
Infrastructure as Code	207
Deep Reinforcement Learning	201
Artificial Intelligence AI	201
Federated Learning	192

Figure 3: Extracted Key Phrases

A Comment on Symposia

Figure 1 shows the 13 symposia in which the conference is organized. One of the more successful of these is *IT in Practice* (ITiP). Former and current ITPro Editors-in-Chief (EIC) created and organized that symposium. Aside from managing all the submissions related to that symposium, the ITiP program organizers also take advantage of COMPSAC's unique JC/CJ program to "harvest" papers for future *ITPro* editions. That program allows researchers to 1) submit previously published papers together with a description of intended follow-on research for discussion/comment with other conference attendees (JC - Journal Conference); and 2) it also allows other IEEE Computer Society Editors-in-Chief to solicit COMPSAC-presented papers for inclusion in their magazines/journals (CJ - Conference Journal).

ITPro's current EIC, Charalampos Z. Patrikakis (Babis), has initiated discussions with several COMPSAC 2025 authors to publish renditions of their papers in future issues of *ITPro*. Notably, one of the conference's best papers, *Development of a Respiratory Motion Video-Based Monitor for Noninvasive Mechanical Ventilation Synchronization in Premature Infants* (Authors: Carine Rech, Vinicius Teixeira, Humberto Fiori, and Márcio Pinho), will be the basis for a future *ITPro* series. (The paper, *Enhancing Public Safety with Digital Twins for Indoor Air Quality Monitoring by Non-Experts, (*Authors: Louis Nisiotis, Aimilios Hadjiliasi, and Nicholas Napp) also received a Best Paper award.

ITPro "Mini" Editorial Board Meeting

This year, we continued an informal practice started in Turin, Italy, in 2023, of conducting, at COMPSAC, a mini editorial board meeting of *ITPro* magazine, the driving force behind the symposium, ITiP. Figure 4 shows some of the ITiP/COMPSAC editorial board/organizers at this year's mini meeting in Toronto. Shown, from left to right, are San Murugesan (former ITPro EIC), yours truly, Amir Dabirian (IT Trends Department Editor), Hiroyuki Sato (Editorial Board Member), Charalampos Z. Patrikakis (current ITPro EIC), and Tiziana Margaria (Associate EIC).

Figure 4: Mini ITPro Mini Editorial Board Meeting

Distinguished Keynote Speakers

This conference continued its nearly 50-year tradition of excellence with a lineup of distinguished plenary keynote speakers. While we usually have three keynoters, this year we were fortunate to be able to host four:

- Hironori Washizaki, 2025 IEEE Computer Society President and Co-Chair of the Smart IoT Symposium, previously served as Local Arrangements Chair for COMPSAC 2018 in Tokyo. His topic was "Impact of IEEE Computer Society in Advancing Technologies, including LLM/AI and Software Engineering."
- Dejan Milojicic, VP at Hewlett-Packard Labs and past IEEE CS President, known for his leadership in future technology forecasting, asked, "Can You Predict the Future"?
- Yale Patt, Distinguished Teaching Professor at UT Austin, returned after a decade to give us his "Random Thoughts after 60 years in the Trenches."
- Neel Sundaresan, General Manager of Automation and AI at IBM, where I began my professional career, presented, "From Turing Test to Turing Tack: AI's Transformative Tensions in Software Engineering,

Plenary Panels and Special Recognitions

A plenary panel by Kathy Grise explored "Harnessing the Power of Intelligent Systems with Public Safety Technologies." Grise, recipient of the 2024 Eric Herz, Outstanding IEEE Staff Member Award (and an ex-IBMer), has long supported COMPSAC, this year again as a cochair of DSAT, the Symposium on Data Sciences, Analytics and Technologies.

Another special event this year was COMPSAC's recognition of the 15th anniversary of the merger of Eta Kappa Nu (HKN) with IEEE. Led by IEEE Director Nancy Ostin, HKN, originally founded in 1904, is today IEEE's 200,000-member, international honor society. What better way to celebrate that event than with a celebratory cake at our 350-person conference banquet?

Student Research and Mentorium

This year, COMPSAC introduced a new Student Research Symposium, organized by students worldwide. It was coordinated with the IEEE Mentorium 2025, mentored by Professor Dave Towey, Co-Vice Chair of the COMPSAC Standing Committee. The Mentorium focused on mentorship, networking, and professional development for early-career researchers. This will become an annual event to involve more students and early career researchers in future COMPSACs.

A Legacy of Collaboration and Transition

COMPSAC's continued annual success was once again bolstered by its long-standing partnership with the Information Processing Society of Japan (IPSJ), which has supported the conference since 2012. Japanese colleagues played a vital role, including hosting

multiple conferences, including our most recent 2024 conference in Osaka. Our work with IPSJ was particularly meaningful to me this year, my last leadership role of the conference. I was proud to learn in May that the IPSJ Board had honored me as an Honorary IPSJ Member, a distinction shared with fewer than 45 individuals, including my predecessor Standing Committee Chair, Carl Chang.

A Farewell and a New Chapter

After a decade as Standing Committee Chair, I am beginning a transition from leadership to an advisory role. Although my colleagues honored me at a "tribute" dinner in Toronto, I must credit the past decade's conference's success to the outstanding volunteers who do the real work throughout the year. Professor Sheikh Iqbal Ahamed (Marquette University), who managed the day-to-day operations leading those volunteers, has now officially assumed the position of Standing Committee Chair with the future chairmanship of the conference.

COMPSAC 2025 concluded as a resounding success, reaffirming its status as the signature conference of the IEEE Computer Society. Under Iqbal's new leadership, the conference is poised to continue its legacy of excellence, starting next July 7-10, when COMPSAC 2026 will celebrate its 50th birthday in Madrid, Spain. Visit www.compsac.org for submission details.