Department: Spotlight

IEEE Computers, Software, and Applications Conference (COMPSAC 2019)

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Milwaukee? What's in Milwaukee? Why Milwaukee? Where *IS* Milwaukee? Those were questions I heard when we learned that the US National Democratic Convention is going to be held in Milwaukee in July 2020. Those were the same questions I heard when I announced that COMPSAC 2019 was to be held in Milwaukee in July 2019. And now that the conference is over, I will bet that the 325+ attendees (from 50+ countries) can easily answer those questions—and all in a very positive way.

This year, the 43rd IEEE Computers, Software, and Applications Conference (COMPSAC), which alternates annually from Asia to North America to Europe, was held July 15–19 at Marquette University in Milwaukee. As the IEEE Computer Society's Signature Conference, COMPSAC is a major international forum for academia, industry, and government, organized to facilitate discussions of research, advancements, emerging problems, and future trends in computer and software technologies and applications. The conference is supported by several international societies, including the Information Processing Society of Japan (IPSJ), the Korean Institute of Information Scientist and Engineers, the China Computer Federation, as well as by special technical communities such as IEEE Future Directions.

This year's theme, *Data Driven Intelligence for a Smarter World*, continued the evolution of previous themes of "smartness" and "autonomousness," focusing on the underlying infrastructures of big data and AI. Papers and discussions were allocated to 13 symposia (tracks), 20 workshops, poster and fast abstracts sessions, a doctoral symposium, and to a series of panels, all of which facilitated discourse on and deepened attendees' understanding of the underlying topics. The annual Workshop structure was reinforced this year by the inclusion of three new workshops: 1) Big Data Computation, Analysis, and Applications; 2) Deep Analysis of Data-Driven Applications; and 3) the Workshop on Integrated Smart Healthcare. Two related extant workshops, 1) Advances in AI and Machine Learning: Research and Practice and 2) Smart Computing and Applications, were also key in supporting the conference theme.

This year's conference received about 275 submissions undergoing a double-blind review

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by at least three reviewers; 63 were accepted as regular and 50 as short papers. From about 120 others that were reviewed for workshops, 75 were accepted. A few years ago, COMPSAC introduced the J1C2 and C1J2 programs, both of which have attracted the interest of other IEEE conference organizers. J1C2 (Journal First/Conference Second) allows researchers to present extensions of their already-published work to their peers, soliciting input on their future research intensions. In the C1J2 (Conference First/Journal Second) program, COMPSAC organizers feed exemplary conference papers to select IEEE and IPSJ publications where they may be considered for journal publication as an alternative to the conference proceedings.

COMPSAC again this year continued the IEEE Open Preview program, making all the papers in the program available and free for public viewing on IEEE Xplore, one full month before the conference, thereby showcasing author/presenters' work to a much wider audience of researchers, which was earlier than usual. Analytics from last year indicate a much higher interest in authors' papers on IEEE Xplore than in previous years.

The conference again this year hosted four outstanding keynote speakers: 1) K. J. Ray Liu, IEEE Vice President of Technical Activities (TAB), who addressed some of the communications challenges of IoT; 2) Laura Specker Sullivan, whose expertise, ''techethics" is an important consideration in the design of data-driven autonomous devices; 3) Wendy Nilsen, Program Director for the Smart and Connected Health Program at NSF; and 4) Simon Y. Liu, an old friend from his days as EIC of *IT Professional*, who talked about emerging trends in digital agriculture. This was a particularly relevant topic in these climate-changing days when July global temperatures, including those in Milwaukee, were the highest in recorded history. Another supporting theme-oriented program was the plenary panel *Convergence and Transformation of Data Digitally via AI, Machine Learning, and Autonomous Systems*, organized by COMPSAC sponsor IEEE Future Directions, chaired by COMPSAC's longstanding supporter Kathy Grise.

This year COMPSAC introduced a new industry outreach program with a series of three industry panels that focused on the future of digital health, finance, and manufacturing. The program was organized by the COMPSAC Platinum Supporter the Northwestern Mutual Data Science Institute, a partnership with the University of Wisconsin-Milwaukee and Marquette University. Next year, this outreach program will be extended to address the needs of many more practitioners and "Young Professionals." As well, this year saw COMPSAC's first Women in Engineering panel discussing gender diversity. This program will also be expanded at future conferences.

Starting last year, COMPSAC's annual banquet took on a new focus, honoring the hard work and successes of many of our colleagues. This annual event became the "COMPSAC Annual Awards Banquet" after we were invited by the Computer Society to present some IEEE Computer Society awards at it. This year, the banquet was held at the Harley Davidson World Headquarters Museum, where the Edward J. McCluskey Technical Achievement Awards were presented to Radu Marculescu for seminal contributions to the science of network on chip design, analysis, and optimization; Zhi-Hua Zhou for contributions to machine learning and data mining; and C.-C. Jay Kuo for outstanding contributions to multimedia computing technologies and their applications.

Unlike most award ceremonies, where awardees have a brief time slot for their recognition, the COMPSAC awardees were front and center at a plenary session chaired by IEEE Computer Society (CS) President Cecilia Metra and President Emeritus Jean-Luc Gaudiot, where awardees spoke about how their personal career development led to the work for which they received their awards.

Following in the footsteps of other Richard E. Merwin Award recipients—including me in 2018, John Walz, President Emeritus of the CS received the 2019 award "for service to the Computer Society with dedication and strong leadership aligned with a visionary strategic plan." Other awardees included San Murugesan (Golden Core Recognition), Sheikh Iqbal Ahmed (Outstanding Contribution), Henry Chan and Claudio Demartini (Continuous Service), and Thomas Kaczmarek, Praveen Madiraju, AKM Jahangir Alam Majumder, Carmel Ruffolo, Hossain Shahriar, and Chandana Tamma, in appreciation for their work and dedication to the success of COMPSAC 2019.

Another trend that was continued this year, under the leadership of Paolo Montuschi and IEEE Eta Kappa Nu (HKN) Director Nancy Ostin, was the session in which the Outstanding HKN Chapter Award was made to the Politecnico di Torino Mu Nu Chapter represented by Politecnico students Sandro Santori and Davide Bisso. This chapter, the first in Italy and now one of the most active in Europe, was inducted into HKN at COMPSAC 2017, which was hosted at Politecnico di Torino. Also inducted at this year's ceremony were Eddie Custovic, Dejan Milojicic, and Edmundo Tovar.

COMPSAC has always been a venue for CS presidents, and this year that tradition continued with our plenary Presidents Panel chaired by Presidents Emeriti Kathy (Susan) Land (2004) and Dejan Milojicic (2014), featuring six other CS presidents emeriti (Chang, Kasahara, Metra, Yau, Gaudiot, and yours truly). Panelists were questioned by the chairs on their views of the future of the Computer Society and technology trends that might affect that future.

But as soon as COMPSAC 2019 ended, the organizing team for 2020, led by Edmundo Tovar, announced that COMPSAC 2020 will take place in Madrid, Spain, July 13–20. Visit the 2020 website at https://ieeecompsac.computer.org/2020/ and note these important dates:

Workshops proposals due: October 15, 2019
Workshops acceptance notification: November 30, 2019
Main conference papers due: January 20, 2020
Paper notification: April 3, 2020
Camera-ready and registration due: May 15, 2020

See you in Madrid!! Ole!!