SIGCSE *Bulletin*
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Contents

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SIGCSE Board

SIGCSE News in Brief

By Julie M. Smith and Charles Wallace, Bulletin co-editors

Welcome to the April issue of the SIGCSE Bulletin. We begin with an announcement of the slate of candidates for the SIGCSE Board election. We encourage all SIGCSE members to participate in this election and learn about the candidates; voting will close in May 2025.

There are several invitations to upcoming conferences: ITiCSE in June–July, RESPECT in July, ICER in August, and Koli Calling in November. Koli Calling is still accepting full paper submissions, and ICER is accepting poster and lightning talk submissions, as well as doctoral symposium applications.

The SIGCSE Virtual Conference committee reflects on their groundbreaking event in December 2024, with insights on successful aspects of the conference as well as lessons learned. We also have a report on this year's Technical Symposium.

We conclude with April's Member Spotlight: Mihaela Sabin of the University of New Hampshire discusses her collaborative efforts to think broadly about essential competencies for CS graduates.

We are always happy to receive brief news items that are of interest to the SIGCSE community; please contribute to future issues of the Bulletin by contacting either co-chair.

Upcoming Dates and Deadlines

Conference	Location	Dates	Submission Deadline
ITiCSE	Nijmegen, Netherlands	30 June - 2 July, 2025	----
RESPECT	Raleigh, NC, USA	14 – 16 July, 2025	----
ICER	Charlottesville VA, US	3 - 6 August, 2025	----
CompEd	Gaborone, Botswana	23 25 October, 2025	----
Koli Calling	Koli, Finland	11 – 16 November, 2025	Abstract: 20 July; Full paper: 27 July

Other conferences operate in cooperation with SIGCSE and are posted on the SIGCSE web site at sigcse.org/events/incoop.html

SIGCSE Board Election Slate Announced

By Adrienne Decker, SIGCSE Board Immediate Past Chair

Every three years, the SIGCSE Board holds elections for each elected position on the SIGCSE Board. Elections are being held this year for the board that will serve July 2025 – June 2028. Board members must be members of ACM and SIGCSE. Work to create the election slate started in September 2024 with the forming of the election committee. The committee was chaired by Adrienne Decker (U. at Buffalo, USA), Past Chair of the current SIGCSE Board. The other members of the election committee were: DaQuan Bashir (CSTA, USA), Alison Clear (EIT Auckland, New Zealand), Tamara Pearson (Georgia Tech, USA), Manuel Pérez Quiñones (U. of North Carolina-Charlotte, USA), and Jan Vahrenhold (U. of Münster, Germany).

After soliciting nominations from the SIGCSE community, the committee advanced the following nomination slate for this year's election.

Chair:

- Brian Dorn, U. of Nebraska-Omaha, USA
- Ryan Torbey, American Institutes for Research, USA

Vice Chair:

- Samuel Mann, Otago Polytechnic Te Pūkenga, New Zealand
- Claudia Szabo, U. of Adelaide, Australia

Secretary:

- Dennis Bouvier, United States Air Force Academy, USA
- Mark Sherriff, U. of Virginia, USA

Treasurer:

- Michelle Friend, U. of Nebraska-Omaha, USA
- Rachelle Hippler, Baldwin Wallace U., USA

Member at Large:

- Anu Bourgeois, Georgia State U., USA
- Francisco Castro, New York U., USA
- Chris Hundhausen, Oregon State U., USA
- Kemi Ola, U. of British Columbia, Canada
- Ethel Tshukudu, San Jose State U., USA; U. of Botswana, Botswana
- Mark Zarb, Robert Gordon U., UK

Slate information for all ACM SIGs having elections this year can be found at: www.acm.org/elections/sigs/2025-candidate-slate

How do I vote? Election information will be sent to active SIGCSE members via email in April 2025, and voting will close in May 2025.

How do I know if my SIGCSE membership is active? Log in to your account at myacm.acm.org to check your membership status and your registered email address, which will be used to send election ballots.

Koli Calling 2025: Call for Submissions

By Juho Leinonen and Rodrigo Duran

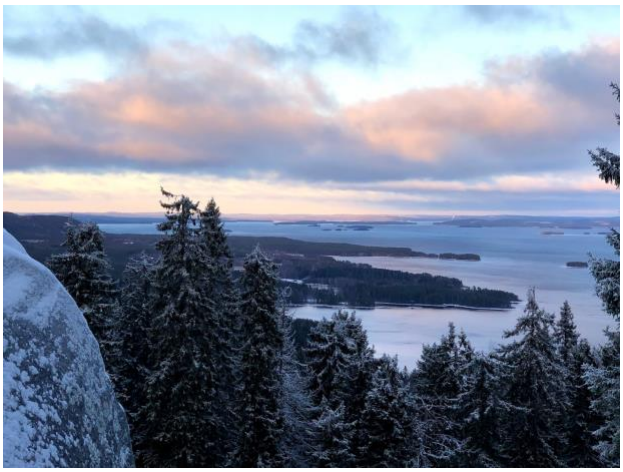

Photo credit: Juho Leinonen

We warmly invite you to attend the 25th Koli Calling International Conference on Computing Education Research (Koli Calling 2025), to be held 13–16 November 2025 in the beautiful Koli National Forest in Eastern Finland. The submission deadline for full papers and discussion papers is **27 July 2025**.

There will be a pre-conference workshop held in Joensuu, Finland on 12 November, and the Koli Calling Doctoral Consortium will be organized before the conference, 11–12 November as an in-person event at Joensuu. The conference itself will begin on 13 November in the afternoon. All accepted submissions need to be presented in person at Koli Calling. At least one author must attend the conference in person for the paper to be included in the proceedings. The main conference will be held at the Hotel Koli, located in a scenic national park about 60km north of Joensuu, Finland.

Koli Calling is one of the leading international conferences dedicated to the exchange of research and practice relevant to the scholarship of teaching and learning and to education research in the computing disciplines. Koli Calling publishes high-quality papers that combine teaching and learning experiences with solid, theoretically anchored research. Koli Calling is a single-track conference for original and novel work with research, practice and systems presentations as well as a keynote and invited talks. The conference is known for its moderate size, intimate atmosphere, and lively discussions.

We hope that many of you join us at Koli Calling 2025 and help us to make this conference as enjoyable and memorable as in the previous years!

ITiCSE 2025 Call for Participation

By Erik Barendsen, Jim Paterson, and Keith Quille

You are warmly welcomed to the 30th annual ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE), which will be held at Radboud University in Nijmegen, Netherlands from 30 June to 2 July 2025. ITiCSE is a computing education conference held annually, typically in Europe, sponsored by ACM SIGCSE and in collaboration with ACM Europe Council and Informatics Europe.

Nijmegen is the oldest city in the Netherlands, with a city center full of important historical locations. Nijmegen was founded by the Romans as an important base because of its strategic location. The city is exciting, interesting, and has a turbulent history. And it's not just a rich cultural history that Nijmegen has to offer. Nijmegen is a lively city with many cozy restaurants, bars and terraces that give the city a young vibe. Furthermore, you can find examples of modern architecture. For instance, a spectacular water management project 'Room for the River' was completed a few years ago, involving a change of the course of the river and the creation of an artificial island.

Nijmegen is well-connected: traveling to Amsterdam takes just a bit more than one hour. There are direct trains to and from Amsterdam and Amsterdam Schiphol Airport.

The green campus of Radboud university is located outside the city center of Nijmegen and is easily

accessible by bike or public transport. Radboud University is a broad university where research and education go hand in hand. Students and staff members feel connected to each other, to society, and to the world around them. For the conference, we are happy to welcome you at the Faculty of Science, in the modern Huygens Building.

The 2025 conference will follow a similar format to recent years, with working groups, an integral feature of ITiCSE, meeting for three full days before the conference from June 27–29, and the main conference taking place June 30 to July 2. ITiCSE 2025 will be an on-site event only.

Registration for ITiCSE 2025 is now open; please visit iticse.acm.org/2025/registration for details. Early bird registration is available through 1 May, but attendees may register at any time, including on-site. We look forward to meeting you in Nijmegen!

RESPECT 2025: Designing an Accessible Future for Equitable Computer Science

By Brianna Blaser, RESPECT 2025 Co-Chair

The ACM SIGCSE Conference on Research on Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT) 2025 will be held 14–16 July at the New Jersey Institute of Technology in Newark, NJ, USA. The theme for this year is Designing an Accessible Future for Equitable Computer Science. 2025 marks the fiftieth anniversary of the Individuals with Disabilities in Education Act, landmark legislation in the United States developed to ensure students with disabilities receive a free, appropriate public education. When we began planning the conference, we envisioned an opportunity to reflect on disability inclusion.

Of course, work on diversity, equity, and inclusion currently faces significant challenges in the United States. Seventeen states have initiated legal actions aiming to abolish Section 504 of the Rehabilitation Act of 1973. This section prohibits discrimination based on disability in entities receiving federal funding. Additionally, in 2024 the Department of Justice published a final rule about accessibility in public entities. At a time when tools, such as generative AI are on the rise, it is important the CS education community remain steadfast in a commitment to accessible and inclusive spaces and publishing rigorous research aligned to these laws.

Papers are currently under review, and we anticipate a robust program with opportunities to explore disability inclusion as a community. Meanwhile, authors whose work does not explicitly focus on disability or accessibility have been encouraged to attend to the theme in their positionality statement, limitations, or directions for future work. We hope this leads to rich conversations and an opportunity to learn from one another.

We are lucky to have Alexis Cobo from the University of Florida and Gabriella Waters from Morgan State serving as accessibility chairs this year. Given the theme, we have increased our efforts to ensure that both the conference itself, the review process, and the proceedings are accessible. Holding a hybrid conference allows a variety of individuals to participate who may be unable to travel to Newark due to financial or childcare constraints, health concerns, or other circumstances. Authors were asked to submit accessible PDFs of their papers to ensure that reviewers did not face accessibility barriers. In addition, we are working closely with Sheridan to ensure that the proceedings are accessible when they are published.

Given ongoing concerns about federal funding challenges, efforts are being made to keep ACM RESPECT 2025 attendance costs affordable to ensure broad participation. ACM RESPECT 2025 will be a hybrid event featuring accessible sessions both in-person and online. Certain experiences will remain exclusive to in-person attendees. Please check the conference website respectconference.org for up-to-date information on the event.

Whether this is your first ACM RESPECT or if it will be your tenth, we hope you will join us.

ICER 2025 Call for Participation

By Briana Morrison, Calkin Suero Montero, Leo Porter, and Neil Brown, ICER 2025 Chairs

We would like to invite you to Charlottesville, Virginia, USA to attend the 21st ICER Conference. The ACM Conference on International Computing Education Research (ICER) will be held 3–6 August 2025 in the Forum Hotel on the beautiful grounds of the University of Virginia. The conference will include an in-person Doctoral Consortium on Sunday, 3 August. Attendees are invited to an opening reception in The Rotunda, the original library designed by Thomas Jefferson (third

President of the United States) and centerpiece of the Academical Village on Sunday evening, 5–6:30pm.

The Forum Hotel
Photo Credit: Kimpton Hotels

The main program of the conference will be Monday–Wednesday, 4–6 August, and includes research paper presentations and round table discussions in the ICER tradition. There will also be lightning talks, poster sessions, and work-in-progress discussions. The conference dinner will be held at the Tasting Room & Taphouse at Mount Ida Reserve on Tuesday evening, with transportation provided.

While the paper deadline has passed, there is still time to submit your poster and/or lightning talk (deadline: 23 May). If you are a PhD student, you may apply to participate in the Doctoral Consortium (deadline: 1 May). Attendees can participate physically by traveling to Charlottesville or virtually in Discord where there will be an option for online discussions during the conference.

You are guaranteed an interesting and diverse program given the number of papers submitted (163). The lightning talks, posters, and presentations from the Doctoral Consortium attendees are sure to spark conversations and potential collaborations.

You can find information related to making your travel plans and hotel reservations at the conference website: icer2025.acm.org. Registration will open near the beginning of May, with the early registration discount ending **Friday, 6 June**, with the normal registration closing on **15 July**. All registrations after that time may not receive Conference Dinner tickets and are subject to space constraints.

When you are making your plans to attend, please be sure to stay a few extra days on either side of the conference. You will be in one of the most beautiful locations in the USA, and there are many local activities (Monticello, hiking, and Skyline Drive, to mention a few) or visiting one of the numerous breweries, wineries, or restaurants.

Shenandoah National Park
Photo Credit: Outside Online

Up-to-date information can be found on the conference website, icer2025.acm.org. If you have questions, you can email site-chairs@icer.acm.org. For more information on local activities, visit staycharlottesville.com or visitcharlottesville.org. We look forward to welcoming you with our southern hospitality!

SIGCSE Virtual 2024 Conference Report

By Mohsen Dorodchi, Judith Gal-Ezer, Stephen Cooper, Kate Lockwood, Zachary Dodds, Olúwakẹ́mi Ọla, and Rasika Bhalerao

SIGCSE Virtual 2024 was the first ACM Virtual Global Computing Education Conference and was designed to bring together educators, CSed researchers, and practitioners from around the world, particularly those who face difficulties traveling to SIGCSE-TS or other SIGCSE conferences. In its inaugural year, we had to come up with new ideas to make it suitable as an inclusive conference for participants from all around the world. Therefore, we decided early to have a three-day conference with three different themes based on regions: Europe, Africa, Middle East, and West Asia; East Asia, Australia, and New Zealand; and the Americas. We decided to hold the conference in early December of 2024 to have the most time available for planning and preparation. Unfortunately, some US educators shared that they could not participate as it conflicted with their final exams.

Our original target was to have 100 participants with 30 to 40 submitted papers and some posters. However, we ended up with 220 participants with 124 papers submitted in three categories of Computing Education Research (CER), Position and

Curricula Initiative (PCI), and Experience Reports and Tools (ERT). Of these 124, 41 were accepted for inclusion into the conference (33% acceptance rate). We also had 10 Panel submissions with 4 accepted. We had 33 submissions for Posters and Lightning Talks (which we decided to combine into a single category) with 19 accepted (58% acceptance rate). The following table summarizes this information.

In addition to papers, panels, posters and lightning talks, 4 working groups were selected to present their work. Finally, several PhD students participated in the doctoral consortium on the final day. Based on all the feedback we received, the conference was perceived as a success by its participants, as well as the steering, program, and organizing committee members who felt the presentations, technology, and social interactions exceeded expectations.

Flipped Model of Presentations

To take advantage of the online platform, the program chairs chose to use a flipped presentation model. Authors recorded and captioned video presentations which were provided to participants ahead of the conference. Sessions were structured to focus on engagement and interaction; presenters spent two to three minutes summarizing their work and the rest of each session was devoted to rigorous discussion/question and answer. In a post-event survey, 75% of respondents either agreed or strongly agreed that these sessions were done well. Comments indicated that participants enjoyed the focus on interaction, felt the session leaders did a good job keeping the discussion on track, and enjoyed the active question and answer sessions. Respondents who did not enjoy the format mostly pointed to the lack of preparation of some participants and unclear expectations relating to preparation.

While a minority of participants indicated that they would prefer live presentations, 76% of survey respondents found the videos helpful. Participants enjoyed being able to watch presentations from other time zones, to leave sessions they found uninteresting, and to refer back to videos later. 16% of survey respondents reported that they did not watch any of the videos prior to the conference, which may have led to the uneven preparation reported. It seems clear that this flipped model has a lot of promise for future online conferences. There are still details to iron out. For future conferences, the steering committee is considering providing more pre-conference support and communication for both presenters and attendees.

In addition to traditional conference sessions, SIGCSE Virtual created multiple options for social engagement with other participants. While these sessions were positively rated by those who attended, 70% of participants did not attend any social events. In future years, the steering committee will continue to explore best practices for social engagement in virtual spaces to build the SIGCSE Virtual community.

One of the primary goals of SIGCSE Virtual was to provide a high-quality conference that would be accessible to community members who might not be able to travel for various reasons. Survey responses indicated that 91% of respondents agreed or strongly agreed that the conference was accessible and 92% of respondents agreed or strongly agreed that they felt welcomed and included. Comments indicated that participants appreciated the low cost of attendance (especially with the challenge of obtaining institutional support for travel), and the accessibility across time zones. Still, most of the attendees were North American. We hoped to see more participants from other countries and especially from Asia. Those who found accessibility to be an issue would prefer a time that does not overlap with the end of the academic semester, and to have a single integrated platform for the conference.

Overall, the program and steering committees are happy that the feedback seems to support the need for a virtual conference such as SIGCSE Virtual, and a majority of the participants felt that SIGCSE Virtual 2024 was well executed. There are also clear areas of improvement ahead of the next conference in 2026.

Best Papers

The steering committee decided to have two categories: a *best paper* and a *best student paper*. These were selected by two judges: a steering committee member and a program co-chair.

1) The best paper was “Breaking Barriers: Overcoming Resistance to Curriculum Indigenization” by Nicole Herbert.
2) The best student paper was “Developing an Integrated Computing Curriculum (Coding + Social Skills) for Elementary Students with Autism Spectrum Disorder” by Erin Anderson and Claire Donehower.

Community Engagement Activities

Our goal was to boost social interaction at the conference by creating virtual spaces where people could interact outside the formal program schedule. We held four types of events: convergence, curiosity, confluence, and serendipitous coffee. All the events were advertised on the conference platform Slack.

Confluence was a time to play, laugh, relax and share. This was scheduled game time, and we had two on the schedule. During the sessions, attendees played online games; we had 10 attendees spanning three continents who attended the sessions. Convergence was intended to be a time to engage in unconference activities to discuss various computing education topics. Four sessions were held strategically to allow people from different continents to attend, though we had about 5 attendees (in addition to the seasoned volunteers whom we invited to facilitate the conversations).

Serendipitous Coffee: We had planned to pair people together for random coffee sessions, but no one signed up for this event. The last event planned was Curiosity. We recruited 11 sages from four continents to share their expertise in CS Education and Teaching with the community. Two sessions were scheduled: one on Thursday and another on Friday. Participation was low; only five people attended the sessions (in addition to the scheduled speakers).

Overall, the social engagement was less than we hoped. We used the Slack platform, and while we had over 200 registrants for the conferences, only about half of the registrants joined our workspace. One nice personal touch was the recorded introductory videos from conference organizers. This was a lightweight way to make the organizers relatable, and based on the anecdotal feedback received, people appreciated it. For future years, organizers should explore integrating social activities into each session. Starting a paper session with a 10-minute meet and greet or having the break between sessions be a wellness moment could be more beneficial, as we observed that most participants attended scheduled sessions only. So, we should consider moving towards a more integrated approach.

Supporter and Sponsor Involvement

By its nature, SIGCSE Virtual provided its Supporter and Sponsors sessions a variety and depth of integration difficult to achieve at an in-person venue. In particular, the Saturday Sponsors and Supporters Track kicked off with an energizing back-and-forth hosted by the US National Science Foundation. The shared virtual session enabled smooth joining-and-leaving alongside multiway Q&A, experience sharing, and presentations. The UNC Charlotte College of Computing and Informatics used Gather.Town avatars and a virtual meeting place to coordinate and present a slate of professional and pedagogical opportunities. Attendees thoroughly enjoyed - and benefited from - learning about UNC Charlotte's Bridges project and College of Computing and Informatics (CCI)’s vision. The afternoon Pensieve sessions demoed and discussed Pensieve's AI Tutor in an adaptive plenary flow. From there, one-on-one conversations naturally branched into break-out rooms where individual attendees and Pensieve engineers discussed specific features and deployment possibilities. SIGCSE Virtual thanks all of our sponsors and supporters: Google (Gold), UNC Charlotte (Silver), Harvey Mudd (Silver), Pensieve (Solar), Microsoft (technical partner), and the US NSF (a supporting partner). The conference is already looking forward to the creativity and connections that SIGCSE Virtual's Sponsor and Supporter track will convene in 2026.

Ideas for the next SIGCSE Virtual

The next SIGCSE Virtual Conference will be held in 2026, and the steering committee will soon start their initial tasks to help the conference leaders.

The committee structures for SIGCSE Virtual 2024 were as follows: The steering committee included 6 members including the conference chair. The organizing committee included 12 members (not including the general chair) and the program committee had 8 members (with the program co-chairs) who dedicated many hours of hard work to make this conference a success.

To encourage more participants outside North America, the steering committee will approach researchers from other countries (especially Asia and Africa) to be added to the organizing committee as liaisons to different regions to help out with spreading the words and more participants from other regions and countries.

SIGCSE Virtual 2024 thanks its attendees as well as all the committee members for making it a success. See you in 2026!

2025 SIGCSE Technical Symposium Report

By Jeffrey A. Stone and Timothy Yuen, SIGCSE TS 2025 Symposium Co-Chairs; Samuel A. Rebelsky, Libby Shoop, and James Prather, SIGCSE TS 2025 Program Co-Chairs; and Oluwakemi Ola and Narges Norouzi, SIGCSE TS 2025 Hybrid Experience Co-Chairs

The 2025 SIGCSE Technical Symposium was held in Pittsburgh, Pennsylvania from 26 February–1 March 2025. This was one of the largest Technical Symposiums ever, with a total of 1,707 registered attendees. Most of these attendees were in-person (96%) while the remainder joined us online. Regardless of modality, the program provided a diverse set of papers, panels, special sessions, and other works centered on improving computer science education.

Our program included two incredible keynote presentations. Our opening keynote was provided by Dr. Cecilia Aragon of the University of Washington. The presentation, entitled "What is Human-Centered AI and Why Does It Matter?", focused on the importance of human issues in the advent of AI technologies. The closing keynote presentation was provided by Dr. Jamika Burge, the CEO and Co-Founder of blackcomputeHER.org, Inc. Her presentation was titled "Intersectionality *is* Computer Science Education" and provided a look at intersectionality and its importance to CS education.

Cecilia Aragon, Opening Keynote
Photo credit: Robert Walker

Jamika Burge, Closing Keynote
Photo Credit: Robert Walker

On Thursday, former chairs Ben Stephenson, University of Calgary, and Lina Battestilli, North Carolina State University, gave a lunchtime presentation entitled, "Things I Wish I Knew Before I Attended My First SIGCSE TS." This session was designed to provide useful tips and strategies for our first time attendees as they navigated the Technical Symposium. It was a great presentation, and very informative!

Ben Stephenson and Lina Battestilli, First-Timers Lunch Presentation
Photo Credit: Robert Walker

Three award winners were presented their awards at this year's Technical Symposium. On Friday, Jonathan Mwaura received the ACM SIGCSE Award for Broadening Participation in Computing Education for his work supporting communities of students at the K-12 through graduate levels from often overlooked populations. Manuel A Pérez-Quiñones received the ACM SIGCSE Award for Distinguished Service to the Computer Science Education Community for his 30 years of dedicated service to computing education through mentorship and advocacy. Mitchel Resnick received the ACM

SIGCSE Award for Outstanding Contribution to Computer Science Education in recognition of long-lasting efforts to develop new technologies and activities to engage people, particularly children, in creative learning experiences based on computational literacy for discovery and expression. After receiving their awards, the three award winners participated in a panel on "The Future of CS Education" during our Friday plenary session. This panel, moderated by SIGCSE Board Secretary Dan Garcia, allowed the award winners to discuss their thoughts and visions in a "fireside chat" discussion.

Left to Right: Judith Sheard (SIGCSE Board), Jonathan Mwaura, Manuel A Pérez-Quiñones, Mitchel Resnick (Award Winners), Dan Garcia (SIGCSE Board)
Photo Credit: Robert Walker

This year, we once again provided a hybrid experience, which included a selection of papers, panels, special sessions, and keynotes accessible to our online attendees. The Whova app was used to facilitate communication between all participants, and this year, it included a SIGCSE-TS-themed trivia game and photo contest in which over 300 participants participated.

Best Papers

The selection of a small number of best papers by the Program Chairs was challenging, to say the least. Congratulations to all the authors of these papers!

Best Papers: Computing Education Research

CS Concepts and Contextual Factors in Integrated Computing Activities in U.S. Schools by Masoumeh Rahimi, Georgia State University, Lauren Margulieux, Georgia State University, and Erin Anderson, Georgia State University.

Improving Agile Retrospectives through Metacognitive Scaffolding by Ahsun Tariq, Oregon State University, Phillip Conrad, University of California Santa Barbara, Christopher Hundhausen, Oregon State University, Andrew Yu, University of California Santa Barbara, and Olusola Adesope, Washington State University.

Sister Circles: An Intersectional Method in Computing Education by Yolanda Rankin, Emory University, and Nyshia Baker.

Best Papers: Experience Report and Tools

Grading for Equity in a Hyflex Compiler Design Course by Fatima Abu Deeb, KSAU-hS, Ella Tuson, Brandeis University, and Timothy Hickey, Brandeis University.

How a Small College Can Make a Big Impact on High School CS by James Matthews, Siena College, Robin Flatland, Siena College, Kathryn Schiller, University at Albany, Jesse Moya, Siena College, and Pauline White, Siena College.

An MS in CS for non-CS Majors: A Ten Year Retrospective by Logan W. Schmidt, Khoury College of Computer Sciences at Northeastern University, Caitlin J. Kidder, Center for Inclusive Computing at Northeastern University, Ildar Akhmetov, Northeastern University, Megan Bebis, Khoury College of Computer Sciences at Northeastern University, Alan C. Jamieson, Khoury College of Computer Sciences at Northeastern University, Albert Lionelle, Khoury College of Computer Sciences at Northeastern University, Sarah Maravetz, Khoury College of Computer Sciences at Northeastern University, Sami Rollins, Khoury College of Computer Sciences at Northeastern University, and Ethan Selinger, Khoury College of Computer Sciences at Northeastern University.

Best Papers: Position and Curricula Initiatives

Models of Mastery Learning for Computing Education by Claudia Szabo, The University of Adelaide, Miranda Parker, San Diego State University, Michelle Friend, University of Nebraska Omaha, Johan Jeuring, Utrecht University, Tobias Kohn, Karlsruhe Institute of Technology, Lauri Malmi, Aalto University, and Judithe Sheard, Monash University.

What Can Computer Science Educators Learn From the Failures of Top-Down Pedagogy? by Sverrir

Thorgeirsson, ETH Zurich, Tracy Ewen, ETH Zurich, and Zhendong Su, ETH Zurich.

Thank You

Our annual Technical Symposium is the result of a collective effort, and we would like to extend our sincere thanks to all our volunteers who gave us their time, their energy, their efforts, and their creative works. We would also like to thank our supporters and exhibitors for their financial contributions as well as their contributions to both the conference program and the exhibit hall. Finally, we would like to thank our friends at dlPlan, the David L. Lawrence Convention Center, Visit Pittsburgh, and all of our service providers. Thank you, everyone, for a tremendous 2025 Technical Symposium.

Outstanding Reviewers and APCs

Outstanding APCs: Meghan Allen, *University of British Columbia*; Ruth Anderson, *University of Washington*; Lina Battestilli, *North Carolina State University*; Bradley Beth, *Vermont State University*; Zack Butler, *Rochester Institute of Technology*; Jennifer Campbell, *University of Toronto*; Steve Cooper, *University of Nebraska, Lincoln*; Kathryn Cunningham, *University of Illinois, Urbana-Champaign*; Leigh Ann Delyser, *SRI*; Paul Denny, *University of Auckland*; Matthew Hertz, *University at Buffalo*; Shuyin Jiao, *North Carolina State University*; Marion Lang, *GitHub*; David Levine, *University of Southern Maine*; Kevin Lin, *University of Washington*; Jérémie Lumbroso, *University of Pennsylvania*; Stephen MacNeil, *Temple University*; Sagnik Nath, *University of California, Santa Cruz*; Miranda Parker, *San Diego State University*; Ben Stephenson, *University of Calgary*; Luther Tychonievich, *University of Illinois, Urbana-Champaign*; Henry Walker, *Grinnell College*; Josh Weese, *Kansas State University*; Steven Wolfman, *University of British Columbia*.

Outstanding Reviewers: Christine Alvarado, *University of California San Diego*; Sogol Balali, *Oregon State University*; Nathan Bean, *Kansas State University*; Ivona Bezakova, *Rochester Institute of Technology*; Grant Brought, *Dickinson College*; Oladele Campbell, *Niger State Polytechnic*; Kyle Chin, *UBC*; Adrienne Decker, *University at Buffalo*; Morgan Fong, *University of Illinois, Urbana-Champaign*; Brian Fraser, *Simon Fraser University*; Michelle Friend, *University of Nebraska, Omaha*; Brian Hare, *University of Missouri, Kansas City*; Geoffrey Herman, *University of Illinois, Urbana-Champaign*; Amanda Holland-Minkley, *Washington & Jefferson College*; Jennifer Holst, *City University of New York*; Friday James, *Kansas State University*; David Kempe, *University of Southern California*; Wanda Kunkle, *Penn State, Harrisburg*; Amy Larson, *Augsburg University*; Jonathan Liu, *University of Chicago*; Thomas Marlowe, *Seton Hall University*; Miya Natsuhara, *University of Washington*; Margherita Renieri, *IMT School for Advanced Studies Lucca*; Kristin Stephens-Martinez, *Duke University*; René Walendy, *Ruhr University Bochum*; Eliane Wiese, *University of Utah*; Robert Yacobellis, *Loyola University Chicago*; Lisa Zhang, *University of Toronto*.

Next year's SIGCSE Technical Symposium will be held in St. Louis from 18-21 February 2026. We hope to see you there!

Member Spotlight: Mihaela Sabin

By Julie M. Smith and Charles Wallace, *SIGCSE Bulletin* Co-Editors; Mihaela Sabin

Dr. Mihaela Sabin is a Professor in the Applied Engineering and Sciences Department at the University of New Hampshire, Manchester.

How did you first get involved with the CS education community?

First, I got involved with the education community. As a computer science PhD student, I joined the University of New Hampshire's Future Faculty program and enrolled in the Master of Science for Teachers (MST) in College Teaching, which I completed concurrently with my PhD. That's when I learned how students learn, how to design a syllabus, what active learning means, and how critical it is to get to know your students. The book that made a deep impression on me at that time was *Talking About Leaving: Why Undergraduates Leave the Sciences*, by Elaine Seymour and Nancy M. Hewitt. Shortly after graduation, as a junior faculty at a small teaching college in New Hampshire, having a heavy teaching load, my full attention turned to teaching. A pre-college summer camp in CS that I organized in 2004 gave me the opportunity to collect data on the participants' perceptions and experiences and share the findings in my first computing education paper that was published in 2005 in the Journal of Computing Sciences in Colleges. Two years later I had my first presentation, at SIGITE's 8th conference

in Destin, Florida. My session chair happened to be Barry Lunt, the chair of the ACM/IEEE-CS task force, which had released the IT2008 curricular report a year later. I will never forget how Barry's warmth and support eased my visible nervousness.

Dr. Mihaela Sabin
Photo credit: David Vogt

Can you describe some of the ways you have been involved in developing and enhancing computer science education?

From the very beginning in my career, I have held the belief that what matters the most in our profession as educators and researchers is not necessarily what we teach, but how we teach, for whom we teach, and from whom we learn how to teach. Those from whom I've learned have made my CS education contributions possible.

My very first mentor and role model, who became a dear friend and whom I deeply miss, was Ralph Morelli. My work at the time was on integrating real-world projects in my courses, sponsored by local non-profits. Ralph's call for participation for the SIGCSE 2010 Humanitarian Free and Open-Source Software (HFOSS) pre-symposium resonated with what I was doing. That's how I've started participating in the SIGCSE community and forging valuable relationships with HFOSS promoters and scholars, such as Heidi Ellis and Greg Hislop.

2010 was a year of two other remarkable "first" experiences: an NSF Scholarships in STEM (S-STEM) award for which I was the PI, and the founding of the CSTA NH Chapter with a group of brave and caring teachers with whom I had connected while preparing the NSF S-STEM proposal. Many of the S-STEM scholars and their teachers were from the Career and Technical Education (CTE) centers across the state.

My increased involvement with NH CTE coincided with another project that Ralph Morelli launched, the App Inventor platform and curricula. That led to another NSF-funded project I led. The project supported professional development for non-computing CTE teachers who integrated mobile app development with App Inventor in their classes and engaged their students in computing learning experiences students wouldn't have had otherwise. I'd like to mention that the NSF program solicitation that made the project possible was *the NSF EPSCoR Research Infrastructure Improvement (RII) Track 3: Building Diverse Communities*. The external evaluators of the project were two wonderful researchers, co-authors, and friends, Wendy DuBow and Adrienne Smith.

The end of that project overlapped with the release of the IT2017 curricular report, which concluded three years of intense, complex, and creative effort of the ACM/IEEE-CS task force I had the honor to chair. The IT2017 project meant the forging of new friendships and rewarding collaboration with John Impagliazzo and Rajendra Raj, and scholars and educators who diligently and expertly advance community college computing education, Beth Hawthorne, Cara Tang, Markus Geissler, and Christian Servin.

Many developments have happened since then, along with new transformative and lasting collaborations: work on computing competencies and their reconceptualization to include dispositions, of which I've learned from Valerie Barr, Chris Stephenson, and Tony Clear—the first to bring the disposition concept in the computing education discourse. And a deeply meaningful relationship with the Uppsala Computing Education Research Group, led by Mats Daniels and represented by researchers from all over the world. Through UpCERG I had the opportunity to explore new lines of inquiry with Virginia Grande, Païvi Kinnunen, Anne-Kathrin Peters, and Asa Cajander. It's about care, emotions, teachers' role modeling in our classrooms, and the humanization of computing and engineering education.

Where do you think computer science education is headed in the next 5-10 years?

Among computing disciplines, Computer science is The Foundation. Its foundational roots and supports extend also to non-computing disciplines. I believe that more than ever CS needs to affirm itself as a discipline of liberal arts and sciences. Its "sister" discipline in this endeavor is mathematics. Like mathematics, CS is fundamental to learning while pursuing academic degrees, and CS is fundamental to lifelong learning while pursuing careers, fulfilling community, societal, environmental, and citizen's responsibilities, and protecting citizen's rights. As the co-founder and chief science officer of Hugging Face, Thomas Wolf, recently said in a post, and I paraphrase, we educate CS students (and all students) not to know the answers or perform known tasks, but to ask the right questions, questions that others are missing or don't dare to ask.

The change I hope to see is that CS, more than any other discipline, gives a richer, profoundly humanistic meaning to computing competencies and expected professional competencies of CS graduates, to elevate the meaning of a *computing professional of character*. In other words, to give moral, civic, and intellectual values to the computing technical expertise. The concept of character is at the core of my most recent learning quest. On this quest, I'm in the company of old and new friends: Steve Frezza, Marsia Exter, Cassandra Thomas, and the team of scholars and educators in the Educating Character Initiative at Wake Forest University.

What do you think are the biggest challenges facing the community?

I have three in mind. First, we need to think deeply and critically about the CS discipline foundations, values, impacts, and risks. Secondly, reflecting on all these aspects, as well as on our own individual stance, values, emotions, and actions as CS educators, should become a practice we model for our students. Third, it may sound radical, but grades are the wrong measuring stick. In our careers, whether I prepare an NSF proposal, I submit a paper, or I apply for promotion or for another position, if those review processes are well designed and structured, then I'll receive good feedback along with the answer "approved for funding", "paper accepted", "promoted", "hired", or ... "not yet." And I will know what to do next. I'm glad that the CS education community has visionaries who are working on this.

What are the biggest challenges for diversity, equity, and inclusion in CS education today? And what can CS educators do to help encourage diversity?

We live trying times, when the diversity, equity, and inclusion language is being politicized. This is probably the biggest current challenge, which, unfortunately, diverts attention from why diversity, equity, and inclusion really matter and how the CS education community ensures that that's the case.

I invite all computing educators, including CS educators, to read, learn, and stand by the ACM's mission and commitment to diversity, equity, and inclusion, as clearly stated and broadly shared under the ACM's message of *welcoming all to computing*.

Each of us individually, within our academic programs, departments, and institutions, and among peers we collaborate and network with at the computing education conferences or through other common endeavors need to respond to the NCWIT's "cut through the chaos" call, through the voice of Dr. Catherine Ashcraft, and decisively continue the CS education community's work on research-based culture change. I mean change that promotes and protects open inquiry in face of political and financial risks.

Last thing: NCWIT's call emphasizes "relentless clarity." The ACM Diversity and Inclusion Council stresses that "words matter," something I've personally learned from another great colleague and friend, Tiffani Williams. When meanings are misunderstood or distorted, we don't give up on carrying on the debate and carrying out the actions that do justice to the words' meaning and legitimize them.

What do you enjoy doing when you are not working?

When I don't work, I try to find time to get lost in the natural world, which, for me, is ideal to welcoming wondering thoughts and aspiring hopes. New Hampshire, where I live, and its neighbor state Maine offer plenty of opportunities, to the point of the most mundane opportunities for that.