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## SIGCSE News in Brief

Greetings and Happy New Year! Welcome to the January issue of the *Bulletin*.

This issue contains conference previews for the SIGCSE Technical Symposium and the International Computing Education Research (ICER) conference as well as conference reports from Koli Calling and the ITiCSE Working Groups. We introduce the 20 travel award winners for the SIGCSE Technical Symposium.

Articles about the CS-Ed Podcast and CSTEachingTips.org give news about their offerings.

In our Member Spotlight we interviewed Dr. Allison Clear from the Auckland campus of the Eastern Institute of Technology. Allison is currently co-leading the international research project CC2020 of 46 people from 20 countries to redefine the computing curricula for 2020 forward.

Take a look at the Upcoming Dates and Deadlines section to see if there is a conference coming up you want to attend or where you can submit a paper. We hope you enjoy the *Bulletin*!

### Newsletter Credits

- Editors: Karen Davis<sup>+</sup> and Jeffrey Miller<sup>+</sup>
- Contributors: Adrienne Decker<sup>+</sup>, Guido Rößling, Michail Giannakos, Jian Zhang<sup>+</sup>, Mark Sherriff<sup>+</sup>, Sarah Heckman, Pam Cutter, Alvaro Monge, Amber Settle<sup>◇</sup>, Karen Davis<sup>+</sup>, Adon Moskal, Anthony Robins, Renee McCauley<sup>◇</sup>, Amy J. Ko, Colleen Lewis, Nickolas Falkner, Petri Ihantola, Kristin Stephens-Martinez, Alison Clear<sup>+</sup>
- Photo credits: Ian Pollock, Mirele Gutica, Guido Rößling, D. Cenk Erdil<sup>+</sup>, Mohammad Azhar, John Eisele, Janice Pearce, Zack Spear, Karen Davis<sup>+</sup>, Tomas Sobek, Nickolas Falkner, Teemu Lehtinen, Alison Clear<sup>+</sup>

<sup>◇</sup>ACM Distinguished Member

## Upcoming Dates and Deadlines

Conference	Location	Dates	Full Paper Submission Deadline
<a href="#">SIGCSE 2020</a>	Portland, Oregon, USA	March 11-14, 2020	already passed
<a href="#">ITiCSE 2020</a>	Trondheim, Norway	June 17-19, 2020 (Working Groups: June 15-16)	Abstract: January 12, 2020; Full Papers: January 19, 2020; Working Group Abstracts: January 19, 2020
<a href="#">ICER 2020</a>	Dunedin, New Zealand	August 2020	Abstract: March 20, 2020 Full Papers: March 27, 2020

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

### SIGCSE Members Named Distinguished ACM Members

By Adrienne Decker, SIGCSE Board President

ACM announced the 2019 Distinguished Members class at <https://awards.acm.org/distinguished-members>, and I am happy to share that the following 10 SIGCSE members were honored:

- Valerie Barr
- Andrew B. Begel
- Kim B Bruce
- Thomas Cortina
- Andrea Danyluk
- Manuel Pérez-Quñones
- Mehran Sahami
- Amber Settle
- Jodi L Tims
- Charles Weems

The ACM Distinguished Member program recognizes up to 10 percent of ACM worldwide membership based on professional experience as well as significant achievements in the computing field.

### ITiCSE 2019 Working Groups Report

By Guido Rößling and Michail Giannakos, ITiCSE Working Group Chairs

The concept of Working Groups has been a unique feature since the start of the ITiCSE conference series, with CompEd adopting the Working Group practice in 2019. A Working Group comprises of typically 5 to 10 researchers who work together on a project related to computing education. Working Groups provide a wonderful opportunity to work intensively on a topic of interest with an international group of computing education researchers.

Working groups begin work electronically before the ITiCSE conference. They convene for face-to-face work three days before the conference (usually on the Friday evening), work together during the two days before the conference starts, and continue working throughout the three days of the conference. At the end of the conference, each group submits a draft report and a few weeks after the conference they submit a final report for review. If the report is accepted, the group revises it based on the reviewers' comments and suggestions for the camera-ready version to be published as a dedicated Working Group proceedings volume

in the ACM Digital Library. This unique experience is one that, in our opinion, each computer science educator should strive to participate in at least once.

In 2019, 16 proposals for Working Groups were received and ten Working Groups were selected by the Working Group chairs to convene at ITiCSE 2019. This year, ITiCSE was held in the northeast of Scotland, hosted by the University of Aberdeen. The Conference ran from 15th to 17th July. Working Groups started with a preliminary meeting on the evening of 12th July. Participants presented their results to conference attendees at two special working group presentation sessions. Their final reports were double blind reviewed by at least three selected expert reviewers, and we are glad that nine reports were selected for publication in the 2019 ITiCSE Working Group Reports (ITiCSE-WGR '19) in the ACM Digital Library.

The Working Group reports in 2019 cover diverse topics: from ways to address climate change within and by Computer Science, approaches for fostering program comprehension for novice programmers and an examination of pass rates in Computing and other STEM disciplines, an examination of curriculum design for data science and engineering education, a primer for learning theories within Computer Science Education research, an instrument to survey teachers in K-12 schools about their implementation of CS curriculum, an analysis on cloud computing courses with a look at moving towards a model curriculum, a review of literature on broadening diversity in cybersecurity education, and research on the landscape of text-based programming error messages. Given this diverse list, we are sure that researchers in computing education should find something of interest in the 2019 ITiCSE Working Group Reports (ITiCSE-WGR '19) that is scheduled to appear in the ACM Digital Library at the end of 2019.

We thank all Working Group members for their efforts before, during, and after ITiCSE 2019, as well as the conference chairs, Bruce Scharlau and Roger McDermott, the submission chair Simon, and all other committee members and volunteers for making ITiCSE 2019 and the Working Groups possible and so much fun.



Working Group 1 - photo credit: Ian Pollock



Working Group 2 - photo credit: Mirele Gutica



Working Group 3 - photo credit: Guido Rößling





Working Group 4 - photo credit: Guido Rößling



Working Group 5 - photo credit: Guido Rößling



Working Group 6 - photo credit: Guido Rößling



Working Group 7 - photo credit: D. Cenk Erdil



Working Group 8 - photo credit: Mohammad Azhar



Working Group 9 - photo credit: John Eisele



Working Group 10 - photo credit: Janice Pearce



## SIGCSE Technical Symposium 2020

### Preview

By Jian Zhang and Mark Sherriff, SIGCSE 2020 Symposium Co-Chairs, and Sarah Heckman, Pam Cutter, and Alvaro Monge, SIGCSE 2020 Program Co-Chairs

The 51st SIGCSE Technical Symposium is quickly approaching! From March 11-14, the SIGCSE community will gather at the Oregon Convention Center in beautiful Portland, Oregon, to once again share the latest in computer science education. The leadership team is incredibly excited about the program, the venues, and the city of Portland and we can't wait to share it all with you!

With the help of over 850 reviewers and 75 Associate Program Chairs, we accepted 171 papers out of 544 submissions for a 31.4% acceptance rate. The symposium had a record number of total submissions in all tracks combined (Papers, Panels, Special Sessions, Workshops, ACM Student Research Competition, Birds of a Feather, Demos, Lightning Talks, Nifty Assignments and Posters) at over 1100, with an overall acceptance rate of 40%. There were submissions and reviewers from around the globe, including (but not limited to) countries such as Australia, Brazil, Canada, China, Finland, Germany, Guyana, Italy, Mexico, Pakistan, Slovenia, and the United States. We invite you to visit the SIGCSE 2020 website (<http://sigcse2020.org>) for the conference schedule.

We are thrilled to announce the keynote speakers for SIGCSE 2020! They will be sharing their

thoughts about the future of CS education as we look forward to the next 50 years of SIGCSE:

- Opening Keynote: Dr. Juan E. Gilbert (University of Florida, USA)
- First-Timer's Keynote: The 2020 SIGCSE Award for Lifetime Service to the Computer Science Education Community - Professor Alison Clear (School of Computing, Eastern Institute of Technology, New Zealand)
- Award Winner's Keynote: The 2020 SIGCSE Award for Outstanding Contribution to Computer Science Education - Professor Lauri Malmi (Aalto University School of Science, Finland)
- Closing Keynote: Dr. Valerie E. Taylor (Center for Minorities and People with Disabilities in Information Technology (CMD-IT), USA)

Over the past several years, both our submission and attendance numbers have been steadily growing. It's time for the schedule to do so as well! For SIGCSE 2020, we are adjusting the Saturday schedule. First, we are lengthening the early morning technical session to accommodate a few more papers and moving it to after lunch. This allows us to keep the Saturday keynote in the morning as was done in Minneapolis. After reviewing feedback from SIGCSE 2019, we are also moving the remaining symposium business from the Saturday lunch to the morning plenary session. With the lunch session now open, we plan to let attendees vote on and create "Topic Tables" where various affinity groups can claim a table to two to continue their discussions from the symposium.

Thursday night's highlights have always been the Birds-of-a-Feather sessions leading into the SIGCSE Reception. But what about Friday night? Well, this year, Friday Night is Movie Night! We will be screening *The Bit Player* (<https://thebitplayer.com/>), the story of Claude Shannon, for free in the main ballroom.



If you're interested in exploring Portland and the surrounding area, *Visit Portland* has put together some excursion opportunities with discounts that you can register for when you are here! Please see the For Attendees section of the SIGCSE 2020 website for more info.

We couldn't be more excited to welcome the SIGCSE community to the 51st Technical Symposium in Portland this March! We hope you will come and join us there!

Please go to <http://sigcse2020.org> for all the information about the Technical Symposium and follow us on Twitter @SIGCSE\_TS.



photo credit: Zack Spear on Unsplash



photo credit: Karen Davis

## SIGCSE Technical Symposium 2020 Travel Award Winners

By Amber Settle, SIGCSE Immediate Past Chair and Karen Davis, SIGCSE Bulletin Co-editor

The SIGCSE Board is pleased to introduce the selections for the 2020 Travel Grant Program awards. We asked each awardee to tell us about their roles in CS education and what they are most looking forward to about attending the Technical Symposium.

- **Loren Ayresman, King Kekaulike High School, USA:** I am a computer science teacher on the island of Maui. I strive to give CS opportunities to all students in my school. I look forward to seeing what is available for CS educators in high school, and connecting with other CS educators.
- **Neda Blackburn, Garrison Forest School, USA:** I am the Digital Learning Specialist at my school. There are no tech requirements at my all-girls school, but I have introduced 3 different Computer Science courses and am encouraging our students to give it a try. I would love to see how others work with CS, and I would really love to connect with some AP CSP teachers.
- **Jean Carlo Rossa Hauck, Universidade Federal de Santa Catarina, Brazil:** I am one of the coordinators of the Computação na Escola Initiative (<http://www.computacaonaescola.ufsc.br/>), dedicated to increasing computing education in elementary and high school. I am looking forward to participating in the SIGCSE Technical Symposium for the opportunity to learn from the most advanced research on computing teaching and especially to interact with the community, exchanging experiences and opening possibilities for mutual collaboration.
- **Audrey Coats, Lynnfield High School, USA:** This year I transitioned to full time computer science teaching and am loving it! I am so excited to meet other CS teachers, share best practices, learn how things are

changing, find out about other training. The hardest part of teaching CS is I am the lone CS teacher. I miss the camaraderie of working with other teachers.

- **Nathalia da Cruz Alves, Universidade Federal de Santa Catarina, Brazil:** I want to help every child in Brazil to learn the basic concepts of computer science, and in order to do that, I need to help our community to convince local Brazilian authorities to include computing education in K-12. As a scholar-under-construction myself I want to know what it is like to attend a traditional and leading symposium on computing education and meet and talk to researchers whom I know only from reading their papers.
- **Simone C. dos Santos Lima, Universidade Federal de Pernambuco, Brazil:** I am head of the research group NEXT that fosters active learning approaches such as PBL and mentors undergraduate and graduate students for innovative experiences in computing education. I aim to meet other researchers in the area, share knowledge and experiences, and investigate project opportunities and international programs in computing education.
- **Roisin Faherty, TU Dublin - Tallaght Campus, Ireland:** I'm a full-time lecturer in computer science and I'm also part of CSinc that delivers computing outreach camps to schools around Ireland. I'm looking forward to learning about the exciting developments in the computer science education sector and having the opportunity to meet so many like-minded people.
- **Charity Freeman, Kenwood Academy High School, USA**
- **Jessica Johnsen, New Mexico Highlands University, USA:** I am the faculty member in charge of our Intro CS courses and like to call myself the CS recruiter! Nothing makes me happier than to have students from my Computer Literacy courses sign up to take my Intro Programming courses because they

realize CS can actually be fun and exciting. Being surrounded by peers who are just as interested in how we teach computer science as I am will be greatly inspiring and invigorating.

- **Anagha Kulkarni, San Francisco State University, USA:** I am actively involved in a CS Ed for non-CS students initiative at SFSU: PINC (<http://cose.sfsu.edu/pinc>). I'm interested in the top 5 pedagogical tools that others are testing/recommending for teaching CS to non-CS students.
  - **Viraj Kumar, Indian Institute of Science, India:** I am the Chair of ACM India's Special Interest Group on CS Education (iSIGCSE) which engages with CS faculty in higher education. As a consultant to the committee drafting India's National Education Policy, I contributed policies aimed at including computational thinking at the school level. I look forward to learning from others' experience to raise the profile of CS education research in India and seeking ideas for raising participation from India in SIGCSE events.
- **Jeffrey LaMarche, Regis University, USA:** I am a new assistant professor of computer science at Regis University in Denver, Colorado. I am also working toward completing a PhD degree, with a focus on classroom based techniques used to improve computer science education. During the technical symposium, I am most looking forward to learning about the current developments in computer science education research and new pedagogical techniques, especially ones specifically applicable to the courses I teach. I am also looking forward to the networking opportunities during the symposium and the potential for future collaborations.

- **William Marsland, San Francisco Unified School District, USA:** I support elementary computer science implementation, from developing curriculum to leading professional development for teachers to supporting educators with instruction in their classrooms. I am excited to meet and talk with so many of the faculty members, researchers, and practitioners, all doing work in CS education, whom I've previously only met virtually or on social media.
- **Eric J. Rapos, Miami University, USA:** I am an Assistant Professor of Software Engineering, with a strong interest in the Scholarship of Teaching and Learning (SoTL). I teach at the undergraduate and graduate level in small classes and individual educational experiences. I am very much looking forward to the opportunity to have open discussions with peers on the topic of education in CS and SE fields.
- **Kathryn Roznai, World Language High School, USA:** I teach Exploring Computer Science & Chemistry at World Language High School in Chicago. One of my primary teaching philosophies is that I am only a facilitator who gives students the tools to put in their toolbox. I'm most excited to see all the presentations of the neat things other educators are doing in their CS classrooms and brainstorm how I could work that in to my curriculum.
- **Dan Stone, Lane Tech High School, USA**
- **Nicholas Stoyas, Chicago Public Schools, USA:** My interest in Computer Science extends from the opportunity for student empowerment and voice through purposeful design and interaction. I leverage my role to question, challenge bias, and ensure access for all learners! I am most looking forward to furthering my understanding of the CS landscape through the exploration of current and emerging research. I am highly interested in the ACM Student Research Presentations and Paper Sessions running at various points throughout the conference.
- **Joel Sweatte, East Carolina University, USA:** I primarily teach introductory courses in computer science. I find today's students don't respond to yesterday's teaching methods. I am specifically interested in ways to better engage students. I look forward to meeting others who have embraced and explored active learning and problem based learning in teaching computer science.
- **Tobias Wrigstad, Uppsala University, Sweden:** I have been teaching programming and software development for 2 decades. For the last couple of years, I have been trying out mastery learning at scale and never looked back. I look forward to making connections with likeminded educators, being challenged, and learning from others.
- **Sabiha Yeni, University of Leiden, The Netherlands:** I am interested in effective learning trajectories for computational thinking and programming skill integration to curriculum. I would like to attend in order to follow current issues in the field and to network with researchers studying in this field and to find new research partnerships.

Each person will receive complimentary registration at the 2020 SIGCSE Symposium and up to \$500 toward travel expenses.

The SIGCSE Board again thanks Henry Walker for his vision in establishing a program that addresses a clear need in the community. There were over 90 applications to the program in 2019, and the SIGCSE Board approved twice the number of awards originally planned in response to the strong demand.

We encourage anyone who wishes to support the program to donate by mail at the address given on the Travel Grant page (<https://sigcse.org/sigcse/programs/travel-grants.html>) or donate when you register to attend the 2020 SIGCSE Symposium.



## ICER 2020 Conference Preview

By Adon Moskal, Anthony Robins, Renee McCauley,  
Amy J. Ko, ICER 2020 and 2021 Organizers

You are warmly invited to the sixteenth annual ACM International Computing Education Research (ICER) conference, which will be held in Dunedin, New Zealand, 10-12 August 2020.

ICER is a well-regarded forum for presenting and publishing high-quality research in computing education. With its traditional single-track format, and round-table discussions, ICER affords a convivial and supportive environment for established and emerging researchers alike.

Research studies are the main focus of the conference, and this year, research papers will have a 10-page limit excluding references. ICER welcomes quantitative, qualitative and mixed methods studies into computing education, from both the tertiary and K-12 spaces. There is something for everyone in the eclectic range of topics on offer at an ICER conference, this makes for an interesting and thought-provoking event for all in attendance.

We also offer a range of submission categories that allow for different types of participation at other levels, ranging from initial ideas to exploratory work. To support work in earlier stages, ICER offers tracks for posters, which allow for individual feedback, and lightning talks, 3-minute presentations to all of the conference attendees at once. Either of these may be used to articulate an idea for a research study, provide an update on current research, or invite collaborators. A Work in Progress Workshop will also be held the day after the conference, providing participants with an opportunity to gain critical and in-depth feedback on their research ideas or projects.

A staple for doctoral students, ICER also plays host to the SIGCSE Doctoral Consortium, held the day before the main conference. Students accepted for the consortium will participate in an

all-day workshop conducted by prominent leaders in the computing education research community. Participants will also present their work at the conference in a dedicated poster session.

Finally, we invite proposals for other activities, such as workshops, to be held the day after ICER. If you have an idea for an activity that you would like to propose, please see the Call for Participation for more details.

In 2020, the excitement of ICER happens against the backdrop of Dunedin, in the South Island of New Zealand. With New Zealand's oldest university in residence, and the Polytechnic right next door, Dunedin is known as an education town. Dunedin is also a technology hub, sporting the fastest Internet in the Southern Hemisphere, and an array of technology companies and startups. For ICER attendees, Dunedin also provides a perfect 'jumping off point' for exploring New Zealand (quite literally, as the South Island is the birthplace of commercial bungee jumping!) Travelers going in any direction will quickly leave the city behind and find themselves amongst the splendours of nature: beaches, forests, and mountains are all within easy reach of Dunedin, and experiencing a rich collection of wildlife is almost guaranteed. Dunedin plays host to a wide variety of whales, dolphins, sea lions, penguins and albatrosses (albatry?), many of which are accessible to the public (you might even see a hobbit or an orc if you're lucky!)

We look forward to seeing you in Dunedin in August!

- Program Chair 2020: Anthony Robins, University of Otago, New Zealand
- Site Chair 2020: Adon Moskal, Otago Polytechnic, New Zealand
- Program Chair 2021: Amy Ko, University of Washington Seattle, USA
- Site Chair 2021: Renée McCauley, College of Charleston, USA

For other details see the Call for Participation on the ICER website: <https://icer.acm.org/>.



photo credit: Tomas Sobek on Unsplash

**New from CSTEachingTips.org -  
*Microaggressions: The Game!*  
By Colleen Lewis, Harvey Mudd College**

Have you ever frozen - not knowing what to say - when you heard a comment or question about diversity in CS? Inspired by the Critical Listening Guide from the National Center for Women and Information Technology (NCWIT; [www.ncwit.org/resources/critical-listening-guide](http://www.ncwit.org/resources/critical-listening-guide)), I created *Microaggressions: The Game!* The game invites players to respond to challenging scenarios related to subtle and not-so-subtle bias. Each scenario appears on a card, and players discuss how they would respond.

What might you say if your colleague said, “Women just don’t like CS” or “She only got the job because she’s a woman.” Each game card also has my answer, but when in doubt you usually say “What makes you say that?” or even just “I don’t know what to say.” We’re all responsible for learning to recognize and respond to bias - and the game can provide some \*fun\* practice!

With generous support from the NSF (Grants #1339404 & #1821136), I can print and send you copies of the game. In addition, Philip Conrad (UCSB) and I made a version of the game that is designed for training teaching assistants (TAs).

It has 52 game cards and half of them relate to teaching scenarios that we thought were important for TAs. For example, what would you do if students laughed when a student got a question wrong? Supporting our TAs in creating an inclusive community is challenging and really important. Our first print run of this was funded by a SIGCSE special projects grant and you can also request sets of the *Teaching Practices Game* for training your TAs!

The CSTEachingTips.org project seeks to document and disseminate teaching practices for creating equitable learning spaces where all students have the opportunity to learn. Teachers, curriculum developers, and professional development providers can use CSTEachingTips.org to find handouts, videos, workshop materials, and over 1000 tips for teaching CS. Follow-us on Twitter @CSTEachingTips where we post three tips a day.

Interested in copies of *Microaggressions: The Game!* Or the *Teaching Practices Game* - email me your request and mailing address! [lewis@cs.hmc.edu](mailto:lewis@cs.hmc.edu).



## Koli Calling 2019 Conference Report

By Nickolas Falkner and Petri Ihanola, Koli Calling Program Chairs

The Koli Calling International Conference on Computing Education Research is a single-track conference dedicated to publishing high-quality work in all areas of teaching and learning in the computing disciplines. The 19th Koli Calling was held in November 2019 in the Koli National Park in Finland, organized by the University of Eastern Finland, the University of Helsinki, and the University of Adelaide, Australia. There is often snow at the conference and it was there in small amounts this year, along with some beautifully crisp early winter air and stunning views of the national park and its lakes.



photo credit: Nickolas Falkner

The 19th conference received a total of 82 submissions, with an acceptance rate of 41% for papers. Participants joined the conference from Finland, the Netherlands, Macedonia, Norway, Germany, Ireland, Estonia, Sweden, the USA, Nigeria, Japan, Portugal, Australia, and New Zealand. While Koli started with a more regional focus, and is always held in Finland, it is now a truly international conference that just happens to be held in one of the most beautiful places in Finland.

The keynote address was “Grand Challenges for Computing Education in the 21st Century” by Dr. Amy J. Ko, where attendees were challenged to think beyond traditional aims and mechanisms of computing education. Dr. Ko argued that the problems humanity faces in the 21st century, such as the climate crisis, disinformation, and economic disruption from automation, would benefit far more from research on teaching aspects of computing other than programming. A detailed discussion followed on four specific aspects about teaching computing that the community should investigate: the limitations of computing, data literacy, responsible computing, and preparing teachers to teach these ideas. The talk and slides are available at Dr. Ko’s blog site at <https://medium.com/bits-and-behavior/21st-grand-challenges-for-computing-education-f5e937d57155>.

The conference had a very full program, with two full days of talks, a record number of posters, and well-spaced time for discussion and networking.

A 2-day doctoral consortium chaired by Judy Sheard and Ari Korhonen was held in Helsinki just prior to the main conference with 6 attending students who received focused mentoring to develop and improve upon their existing work.

The following presented work deserve special mention:

- The Best Paper award was received by Steven Bradley for his work “Addressing Bias to Improve Reliability in Peer Review of Programming Coursework.” This paper explores the use of a hierarchical Bayesian model to account for varying bias and precision amongst student assessors.
- The Best Presentation award went to Radu Marinescu-Istodor and Ilkka Jormanainen for the presentation of their paper “Machine Learning for High School Students.” Their



work describes a machine learning method for object recognition that can be implemented using knowledge that high school students attain during their normal math and IT classes.

- The Best Poster award went to Nacir Bouali, Eeva Nygren, Solomon Sunday Oyelere, Jarkko Suhonen and Violetta Cavalli-Sforza for “Imikode: A VR Game to Introduce OOP Concepts,” where the audience was introduced to firsthand experience on virtual reality in education.
- A special “Best Pool Poster” award went to Juho Sorva, for his poster “Splashing the Surface of Research: A Study of Koli Abstracts,” which was presented once in the social spa activity and again during the traditional poster session, to ensure that everyone could see it. The chairs commend Juho’s dedication to fulfilling Koli-goers and Keeko Valaskala’s long dream of an evening track of “pool posters” to be presented at the hotel spa.

For those who love the outdoors, the conference allowed time for exploring the Koli National Park with a guided excursion to the Ukko-Koli hill through the hill trails, as well as an extensive social program, including games sessions, discussion spaces, relaxing spa and sauna visits for networking and socializing each evening of the conference.



photo credit: Teemu Lehtinen

## The CS-Ed Podcast

By Kristin Stephens-Martinez, Duke University

The CS-Ed podcast is a new podcast featuring 6 episodes hosted by Kristin Stephens-Martinez from Duke University. Each episode is a conversation with a computer science educator talking about teaching and managing their classrooms. This project is funded in part by a SIGCSE special project grant!

Our goal is to release one episode a month. The first episode came out in November and featured David Malan on CS50’s tools. December’s episode featured Dan Garcia on designing exams. Episodes in 2020 will include Amy Ko on teaching students how to debug, Mark Guzdial on live coding in class, Armando Fox on MOOCs in the classroom, and Colleen Lewis on how she teaches her class and uses peer instruction.

Besides our main conversation, we also asked each guest about something they find awesome in computer science. Their thoughts ran the gamut from technology, history, and people they admire. We then closed with too long didn’t listen (TL; DL), where our guest summarizes the most important things they want our listeners to learn from our conversation. So, if all else fails, our listeners can skip to the end to get the gist.

You can subscribe to “The CS-Ed Podcast” in most podcast apps. You can find us online at <https://sites.duke.edu/csedpodcast/>, Twitter @csedpodcast, and <https://www.facebook.com/csedpodcast/>.



## Member Spotlight

In this feature of the Bulletin, we highlight members of the SIGCSE community. In this issue, *Bulletin* co-editor Karen Davis interviewed Alison Clear.

Alison Clear is an Associate Professor and Programme Leader at the Auckland campus of the Eastern Institute of Technology. She has an extensive academic and professional career that has involved academic leadership in research, scholarship, teaching and curriculum development nationally and internationally and an extensive publication record in national and international conferences and journals in computing and information technology. Her research interests include Computing Curriculum development, Women and Computing, ICT in developing countries, elearning implementation and the development of computing education.

Alison Clear is an Associate Professor and Programme Leader at the Auckland campus of the Eastern Institute of Technology. She has an extensive academic and professional career that has involved academic leadership in research, scholarship, teaching and curriculum development nationally and internationally and an extensive publication record in national and international conferences and journals in computing and information technology.

Her research interests include computing curriculum development, women and computing, ICT in developing countries, elearning implementation and the development of computing education. Alison is an invited international keynote speaker, has been a member of the international ACM Educational Council, member and vice chair of the ACM Special Interest Group in Computer Science Education and Fellow of the Institute of Information Technology Professionals (IITP) and Fellow of the Computing and Information Technology Research and Education in New Zealand (CITRENZ). She is currently co-

leading the international research project CC2020 of 46 people from 20 countries to redefine the computing curricula for 2020 forward.



photo credit: Alison Clear

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

I graduated in computing from the very first course ever held in New Zealand, then I went to industry for over four years. When I first started teaching I got involved with the national association who were looking to update the curriculum and it just grew from there. I was mainly involved locally and nationally, then with Australasia and I first went to a SIGCSE conference in 1998. In 2003 I stood for the SIGCSE Board.

### **Could you describe some of the ways you've been involved in developing and enhancing computer science education?**

I have been involved in curriculum development for many years, enhancing and updating the curriculum as the technology changed and as we understood more about teaching computer science. Sharing of ideas and things that worked in our computer science classrooms. I chaired our National Advisory Committee on

Computing Qualifications for many years and started a national conference 30 years ago and also a national journal. When you don't have things you need, you have to go out and make it happen. I developed the first computing degree program in the Institute of Technology sector in New Zealand and then the first master's degree and the first professional doctorate in that sector.

**What have you learned during that time?**

The most important thing is the dedication of the computer science educators, the willingness to share great ideas and help and support each other. I also have learned the importance of computer science education research and the importance of dissemination of the results to help others enhance their own classrooms for their students.

**Based on your experiences, where do you feel computer science education is? What is working? What is not?**

This is difficult as depends so much on the country, the university/institution and the academic. Where one thing may work for one academic it doesn't for another. We are all the same and we are all different and we need to value and celebrate the differences

**What are the biggest challenges for diversity, equity, and inclusion in CS education today?**

We need to continue with the programs that show young people what a computer scientist and anyone working in the discipline of computing does. Computing is a wide field computer science is one part of it, what do our CS graduates do in the workplace? What industry do they say they belong to? Showing potential students and their parents and advisors that the profession of computing is vast with opportunities for all types of people. We all use different terms to mean the same thing and the same term to mean different things, we really as a profession need to be more consistent. We are

a really new profession so it will take time but, in the meantime, we are confusing the very people we hope will join us. Make things clearer to potential students and parents so they know of all the wonderful careers to be had and the opportunities available.

**You've been a leader in CS education in a variety of ways. What do you think are the biggest research challenges for us going forward?**

Making sure we have dynamic classrooms so that we can educate the technology influencers of the future. Advancing computing education research to ensure the educators are well qualified inspirational and well informed. Keeping industry involved in the curriculum development so our graduates can step straight into industry as well as be prepared for higher degrees.

**What do you enjoy doing when you are not working?**

In the past I have been active in basketball as a national league referee, sailing as an enjoyable past time, but now watching sport, especially rugby when the All Blacks play. We live on a small farm so I am busy with the animals, I have four breeding alpacas and cria, cows, sheep, chickens and ducks. I am a Christmas nut and love doing craft work for Christmas. I decorate my house inside and out and entertain all December. I also love having people to stay. But most of all my family, children and grandchildren who are now living all over the world, London, Vietnam, Perth and Oklahoma! I love to cook and try to garden, as organic as we can.