

# SIGCSE TS 2024 Program

**ⓘ This program is tentative and subject to change.**

**Wed 20 Mar**

Displayed time zone: **Pacific Time (US & Canada)**

08:00 - 22:00 Quiet Room at **Meeting Room E147** Logistics

08:30 - 17:30 **Professional Development Session for New and Aspiring Educators** at **Affiliated Events**  
**Meeting Rooms B110-112**

Event URL: <https://www.cs.ubc.ca/~meghana/educator-workshop-2024/index.html>

08:30 9h ★ **Professional Development Session for New and Aspiring Educators**  
Other Meghan Allen University of British Columbia, Mohammad Azhar City University of New York

08:30 - 17:00 **Strategies for Operationalizing the CS2023 Society-Ethics-Profession Recommendations** at **Affiliated Events**  
**Meeting Rooms B117-119**

Event URL: <https://www.sigcas.org/events/sigcas-2024-sigcse-ts-affiliated-event/>

08:30 8h30m ★ **Strategies for Operationalizing the CS2023 Society-Ethics-Profession Recommendations**  
Other Johanna Blumenthal Regis University, Richard Blumenthal Regis University, Heidi J.C. Ellis Western New England University, Gregory W. Hislop Drexel University, Philadelphia, PA, USA, Mikey Goldweber Denison University, Lisa Kaczmarczyk

08:30 - 15:30 **Professional Development Pre-Symposium Event for Teaching-Track Faculty** at **Affiliated Events**  
**Portland Ballroom 251**

Event URL: <https://cra.org/crae/2024-sigcse-pre-symposium-professional-development-for-teaching-track-faculty/>

08:30 7h ★ **Professional Development Pre-Symposium Event for Teaching-Track Faculty**  
Other Geoffrey Herman University of Illinois at Urbana-Champaign, Logan Paul Indiana University Bloomington, Borja Sotomayor University of Chicago, Lisa Yan University of California, Berkeley, Jeffrey Turkstra Purdue University, Joshua Weese Kansas State University, Tali Moreshet Boston University

09:00 - 17:00 **Innovations and Opportunities in Liberal Arts Computing Education** at **Affiliated Events**  
**Meeting Rooms B115-116**

Event URL: <https://computing-in-the-liberal-arts.github.io/SIGCSE2024-Affiliated-Event/>

09:00 8h ★ **Innovations and Opportunities in Liberal Arts Computing Education**  
Other Jakob Barnard University of Jamestown, Grant Braught Dickinson College, Janet Davis Whitman College, Amanda Holland-Minkley Washington & Jefferson College, Karl Schmitt Trinity Christian College, Andrea Tartaro Furman University, Jim Teresco

<b>10:00 - 12:00</b>	<b>Integrating Topics from Computational Epidemiology into Computer Science Courses at Affiliated Events</b>
	<b>Online 1</b>
	Registration URL: <a href="https://virginia.zoom.us/meeting/register/tJErde6vpjMoHN1fERGorV07fBWc3DMFN6Wr">https://virginia.zoom.us/meeting/register/tJErde6vpjMoHN1fERGorV07fBWc3DMFN6Wr</a>
<b>10:00 2h</b>	<b>Integrating Topics from Computational Epidemiology into Computer Science Courses</b>
<b>Other</b>	<i>Baltazar Espinoza, University of Virginia, Charlottesville, Lenwood Heath Virginia Tech, Natarajan Meghanathan Jackson State University, B. Aditya Prakash Georgia Tech, S. S. Ravi University of Virginia, Aravind Srinivasan University of Maryland</i>
<b>12:00 - 21:00</b>	<b>Registration at Pre-Function E</b>
	<b>Logistics</b>
<b>13:00 - 17:45</b>	<b>Collaboratively Developing Dynamic and Interactive Materials for Dive into Systems at Affiliated Events</b>
	<b>Meeting Room D136</b>
	Event URL: <a href="https://diveintosystems.org/sigcse24">https://diveintosystems.org/sigcse24</a>
<b>13:00 4h45m</b>	<b>Collaboratively Developing Dynamic and Interactive Materials for Dive into Systems</b>
<b>Other</b>	<i>Suzanne Matthews United States Military Academy, Tia Newhall Swarthmore College, Kevin Webb Swarthmore College</i>
<b>13:00 - 17:00</b>	<b>Equitable Grading Community of Practice Meeting at Affiliated Events</b>
	<b>Meeting Room E145</b>
	Event URL: <a href="https://cs-equitable-grading-practices.github.io/">https://cs-equitable-grading-practices.github.io/</a>
<b>13:00 4h</b>	<b>Equitable Grading Community of Practice Meeting</b>
<b>Other</b>	<i>Stephen Edwards Virginia Tech, Adrienne Decker University at Buffalo, Manuel A. Pérez-Quiñones University of North Carolina Charlotte, Bob Edmison Virginia Tech, Audrey Rorrer UNC Charlotte</i>
<b>13:00 - 17:00</b>	<b>Conducting High-quality Computing Education Research Designed to Support CS for All at Affiliated Events</b>
	<b>Meeting Room E146</b>
	Event URL: <a href="https://csedresearch.org/conducting-cser-to-support-cs-for-all">https://csedresearch.org/conducting-cser-to-support-cs-for-all</a>
<b>13:00 4h</b>	<b>Conducting High-quality Computing Education Research Designed to Support CS for All</b>
<b>Other</b>	<i>Monica McGill Institute for Advancing Computing Education, Sarah Heckman North Carolina State University, Leigh Ann Delyser CSforALL, Jennifer Rosato College of St. Scholastica, Isabella Gransbury North Carolina State University</i>
<b>13:00 - 16:30</b>	<b>MSCS Pathways to Computing Consortium Convening at Affiliated Events</b>
	<b>Portland Ballroom 252</b>
	Event URL (register here): <a href="https://ms-cs.org/sigcse/">https://ms-cs.org/sigcse/</a>
<b>13:00 3h30m</b>	<b>MSCS Pathways to Computing Consortium Convening</b>
<b>Other</b>	<i>Catherine Gill Northeastern University, Jodi Tims Northeastern University, Caitlin Kidder</i>

<b>19:00 - 22:00</b>	<b>Workshop at</b>	<b>Meeting Room D136</b>	<b>Workshops</b>
19:00	3h	★ <b>Workshop 101: Develop a Competency-Based Curriculum that Purposefully Integrates Computing Skills, Cross-Disciplinary Skills, and Dispositions</b>	
Talk		<i>Marisa Exter Purdue University, Deepti Tagare Purdue University, Mihaela Sabin University of New Hampshire</i>	
<b>19:00 - 22:00</b>	<b>Workshop at</b>	<b>Meeting Room E145</b>	<b>Workshops</b>
19:00	3h	★ <b>Workshop 108: Integrating Parallel and Distributed Computing in Early Computing Classes</b>	
Talk		<i>Alan Sussman University of Maryland, Sushil Prasad Georgia State University, Charles Weems University of Massachusetts, Sheikh Ghafoor Tennessee Tech University, Ramachandran Vaidyanathan Louisiana State University</i>	
<b>19:00 - 22:00</b>	<b>Workshop at</b>	<b>Meeting Room E146</b>	<b>Workshops</b>
19:00	3h	★ <b>Workshop 103: PLCC: A Tool Set for Teaching Programming Languages Courses</b>	
Talk		<i>Stoney Jackson Western New England University, James Heliotis Rochester Institute of Technology (Emeritus), Timothy Fossum SUNY College at Potsdam (Emeritus)</i>	
<b>19:00 - 22:00</b>	<b>Workshop at</b>	<b>Meeting Rooms B110-112</b>	<b>Workshops</b>
19:00	3h	★ <b>Workshop 104: Autograding Java assignments in Gradescope with Jacquard</b>	
Talk		<i>Ellen Spertus Northeastern University, Priscilla Jiménez Grinnell College</i>	
<b>19:00 - 22:00</b>	<b>Workshop at</b>	<b>Meeting Rooms B113-114</b>	<b>Workshops</b>
19:00	3h	★ <b>Workshop 106: Student Mission Control: Integrating Space Data Exploration into Data and Computer Science Education</b>	
Talk		<i>Dan Garcia UC Berkeley, Josh Hug University of California, Berkeley, Anirudhan Badrinath Stanford University, Michael Ball UC Berkeley, Lauren Mock University of California, Berkeley</i>	
<b>19:00 - 22:00</b>	<b>Workshop at</b>	<b>Meeting Rooms B115-116</b>	<b>Workshops</b>
19:00	3h	★ <b>(Cancelled) Workshop 107: The Euclidean Discus Toss</b>	<b>CANCELLED</b>
Talk		<i>Matthew Morena Christopher Newport University</i>	
<b>19:00 - 22:00</b>	<b>Workshop Online at</b>	<b>Online 1</b>	<b>Workshops</b>
19:00	3h	★ <b>Workshop 111: Generative AI in computer science education</b>	<b>ONLINE ONLY</b>
Talk		<i>Orit Hazzan Technion—Israel Institute of Technology, Yael Erez Technion</i>	
<b>19:00 - 22:00</b>	<b>Workshop Online at</b>	<b>Online 2</b>	<b>Workshops</b>
19:00	3h	★ <b>Workshop 112: Foundational Tools for Coaching Data Storytelling</b>	<b>ONLINE ONLY</b>
Talk		<i>Lujie Karen Chen University of Maryland, Baltimore County, Jiaqi Gong The University of Alabama, Louise Yarnall SRI International</i>	

**Workshops****19:00 - 22:00 Workshop at Portland Ballroom 251****19:00 3h ☆ Workshop 102: Using Large Language Models for Teaching Computing**

*Talk Juho Leinonen Aalto University, Stephen MacNeil Temple University, Paul Denny The University of Auckland, Arto Hellas Aalto University*

**19:00 - 22:00 Workshop at Portland Ballroom 252****Workshops****19:00 3h ☆ Workshop 105: Teaching with AI (GPT)**

*Talk Rongxin Liu Harvard University, Carter Zenke Harvard University, Doug Lloyd Harvard University, David J. Malan Harvard University*

**Thu 21 Mar**Displayed time zone: **Pacific Time (US & Canada)**

<b>07:30 - 20:00</b>	<b>Registration at</b> <b>Pre-Function E</b>	<b>Logistics</b>
<b>08:00 - 22:00</b>	<b>Quiet Room at</b> <b>Meeting Room E147</b>	<b>Logistics</b>
<b>08:30 - 10:00</b>	<b>Opening Plenary and Keynote at</b> <b>Portland Ballroom</b>	<b>Keynotes / Logistics</b>
08:30 30m ★ <b>Welcome and Opening Remarks</b> <i>Day opening</i>	Logistics	<b>HYBRID</b>
09:00 60m ★ <b>Guiding Students Along Their Academic Path: Key Aspects of Learning That Impact All Learners</b> <i>Keynote</i>	<b>All Learners</b> Keynotes	<b>HYBRID</b>
	<i>Todd Zakrajsek University of North Carolina at Chapel Hill</i>	
<b>10:00 - 10:45</b>	<b>Coffee Break at</b> <b>Exhibit Hall E</b>	<b>Logistics</b>
10:00 45m ★ <b>Coffee and Refreshments</b> <i>Coffee break</i>		
10:00 45m ★ <b>SIGCSE Coffee Break Show</b> <i>Other</i>	<i>Mark Sherriff University of Virginia</i>	<b>HYBRID</b>
<b>10:00 - 10:45</b>	<b>Demos at</b> <b>Exhibit Hall E - Demos</b>	<b>Demos</b>
10:00 45m ★ <b>Demo 1A: AntiCopyPaster: An Open-Source Ecosystem for Just-in-time Code Duplicates Extraction</b> <i>Demonstration</i>	<i>Eman Abdullah AlOmar Stevens Institute of Technology, Mohamed Wiem Mkaouer University of Michigan - Flint</i>	<b>CC</b>
10:00 45m ★ <b>Demo 1B: Smart Greenhouse: Bridging Physical Computing, Plant Science, and Data Literacy</b> <i>Demonstration</i>	<i>Sheikh Ahmad Shah Boston College, Jaai Uday Phatak Boston College, Avneet Hira Boston College, Helen Zhang Boston College, Mike Barnet Boston College</i>	
10:00 45m ★ <b>Demo 1C: Social Media, Ethics, and Automation: Introducing a free interactive online textbook</b> <i>Demonstration</i>	<i>Kyle Thayer University of Washington, Susan Notess Durham University</i>	
<b>10:00 - 17:00</b>	<b>Exhibits Open at</b> <b>Exhibit Hall E - Exhibits</b>	<b>Logistics</b>

**10:00 - 12:00 Posters 1 at Exhibit Hall E - Posters**

Chair(s): Meghan Allen University of British Columbia, Ashish Aggarwal University of Florida

10:00	<b>2h</b>	<b>Star</b>	<b>Dynamic, Animated Feedback for Randomized Problems with Computer-Based Testing</b>	Posters
	<i>Talk</i>		Arihant Choudhary University of California Berkeley, Dan Garcia UC Berkeley	
10:00	<b>2h</b>	<b>Star</b>	<b>Data Science Mastery Learning using Parsons Problems-Inspired Table Transformations</b>	
	<i>Talk</i>		Jacob Seungwon Choe UC Berkeley, Matthew Lee UC Berkeley, Siddharth Marathe UC Berkeley, Armando Fox UC Berkeley, Dan Garcia UC Berkeley, Narges Norouzi University of California, Berkeley	
10:00	<b>2h</b>	<b>Star</b>	<b>Mastery with Method: Calibrating Policies to Boost Completion and Sentiment in a Computing Course using Mastery Learning</b>	
	<i>Talk</i>		Vedansh Malhotra University of California, Berkeley, Jenny Mendez University of California, Berkeley, Dan Garcia UC Berkeley	
10:00	<b>2h</b>	<b>Star</b>	<b>Elevating Learning Experiences: Leveraging Large Language Models as Student-Facing Assistants in Discussion Forums</b>	
	<i>Talk</i>		Chanchal Mitra University of California, Berkeley, Mihran Miroyan UC Berkeley, Rishi Jain UC Berkeley, Vedant Kumud UC Berkeley, Gireeja Ranade UC Berkeley, Narges Norouzi University of California, Berkeley	
10:00	<b>2h</b>	<b>Star</b>	<b>A game to share the story of LGBTQ+ pioneers and influential computer scientists</b>	
	<i>Talk</i>		Karina Mochetti UBC	
10:00	<b>2h</b>	<b>Star</b>	<b>Perception, Trust, Attitudes, and Models: Introducing Children to AI and Machine Learning with Five Software Exhibits</b>	
	<i>Talk</i>		Fred Martin University of Texas at San Antonio, Saniya Vahedian Movahed University of Texas at San Antonio, James Dimino University of Massachusetts Lowell, Andrew Farrell University of Massachusetts Lowell, Elyas Irankhah University of Massachusetts Lowell, Srija Ghosh University of Massachusetts Lowell, Garima Jain University of Massachusetts Lowell, Vaishali Mahipal University of Massachusetts Lowell, Pranathi Rayavaram University of Massachusetts Lowell, Ismaila Temitayo Sanusi University of Eastern Finland, Erika Salas University of Massachusetts Lowell, Kelilah Wolkowicz University of Massachusetts Lowell, Sashank Narain University of Massachusetts Lowell	
10:00	<b>2h</b>	<b>Star</b>	<b>Hiring, Training, and Managing Undergraduate Teaching Assistants for Large CS1 Classes</b>	
	<i>Talk</i>		Megan Englert University of Colorado Boulder, Lecia Barker University of Colorado Boulder, Austin Cory Bart University of Delaware, USA	
10:00	<b>2h</b>	<b>Star</b>	<b>Analyzing Student Performance with Free Late Submission Days</b>	
	<i>Talk</i>		John R. Hott University of Virginia	
10:00	<b>2h</b>	<b>Star</b>	<b>DCC Sidekick: Helping Novices Solve Programming Errors Through a Conversational Explanation Interface</b>	
	<i>Talk</i>		Lorenzo Lee Solano University of New South Wales, Sydney, Jake Renzella University of New South Wales, Sydney, Alexandra Vassar University of New South Wales, Sydney	
10:00	<b>2h</b>	<b>Star</b>	<b>Pair Programming with ChatGPT</b>	
	<i>Talk</i>		Xi Chen Utah Valley University, Jingsai Liang Westminster University	
10:00	<b>2h</b>	<b>Star</b>	<b>Developing Computational Thinking in Middle School Music Technology Classrooms</b>	
	<i>Talk</i>		Lauren McCall Georgia Institute of Technology, Brittney Allen Georgia Institute of Technology, Jason Freeman Georgia Institute of Technology, Stephen Garrett Georgia Institute of Technology	K12
10:00	<b>2h</b>	<b>Star</b>	<b>Guided Undergraduate Training for Shark Segmentation (GUTSS)</b>	
	<i>Talk</i>		Amy Wu University of Florida, Morgan Cobb University of Florida, Victor Perez St. Mary's College of Maryland, Christian Grant University of Florida, Jeremy A. Magruder Waisome University of Florida	
10:00	<b>2h</b>	<b>Star</b>	<b>Creation of a CS1 Course with Modern C++ Principles</b>	
	<i>Talk</i>		Ryan Dougherty United States Military Academy	

10:00	<b>2h ★ Facilitating Teens as Ethical Sensemakers of Technology</b>	<i>Talk</i>	<i>Rotem Landesman University of Washington, Jean Salac University of Washington, Seattle, Amy Ko University of Washington</i>
10:00	<b>2h ★ Interactive Learning Modules for Fostering Secure Coding Proficiency in Introductory Programming Courses</b>	<i>Talk</i>	<i>Guangming Xing Western Kentucky University, Gongbo Liang Texas A &amp; M University - San Antonio, Tawfiq Salem Purdue University</i>
10:00	<b>2h ★ Considerations for Improving Comprehensive Undergraduate Computing Ethics Education</b>	<i>Talk</i>	<i>Grace Barkhuff Georgia Institute of Technology, Jason Borenstein Georgia Institute of Technology, Daniel Schiff Purdue University, Judith Uchidiuno Georgia Institute of Technology, Ellen Zegura Georgia Institute of Technology</i>
10:00	<b>2h ★ Assessment-via-Teaching: Exploring an Alternative Assessment Strategy in Undergraduate Introductory Data Science Course</b>	<i>Talk</i>	<i>Lujie Karen Chen University of Maryland, Baltimore County, Justin Thai University of Maryland, Baltimore County</i>
10:00	<b>2h ★ CAET: Code Analysis and Education Tutor</b>	<i>Talk</i>	<i>Colin Glynn College of Saint Benedict and Saint John's University, Emily Hed College of Saint Benedict and Saint John's University, Abbigail Pexa College of Saint Benedict and Saint John's University, Tyler Pohlmann College of Saint Benedict and Saint John's University, Imad Rahal College of Saint Benedict and Saint John's University, Robert Hesse College of Saint Benedict and Saint John's University</i>
10:00	<b>2h ★ Alternative Evaluation in CS Education Research: A Systematic Literature Map</b>	<i>Talk</i>	<i>Brian Harrington University of Toronto Scarborough, Thezyrie Amarouche University of Toronto Scarborough, Andrew Aucie University of Toronto Scarborough, Shreeansha Bhattacharai University of Toronto Scarborough, Yuxin Chen University of Toronto Scarborough, Raha Gharadaghi University of Toronto Scarborough, Kaiyi Huang University of Toronto Scarborough, Jenna Jiang University of Toronto Scarborough, Linda Lo University of Toronto Scarborough, Malisha Lodi University of Toronto Scarborough, Rohita Nalluri University of Toronto Scarborough, Fawaz Omidiya University of Toronto Scarborough, Anagha Vadarevu University of Toronto Scarborough</i>
10:00	<b>2h ★ The Current Research Landscape of Computing Education in Elementary Settings: A Systematic Literature Review</b>	<i>Talk</i>	<i>Ruohan Liu University of Virginia</i>
10:00	<b>2h ★ A Family of Instruments to Measure Data Science Attitudes</b>	<i>Poster</i>	<i>April Kerby-Helm Winona State University, Michael Posner Villanova University, Alana Unfried California State University, Monterey Bay, Douglas Whitaker Mount Saint Vincent University, Marjorie Bond Monmouth College (Illinois), Leyla Batakci Elizabethtown College</i>
10:00	<b>2h ★ Measuring CS Student Attitudes Toward Large Language Models</b>	<i>Talk</i>	<i>Jason Weber University of California, Irvine, Barbara Martinez Neda University of California, Irvine, Kitana Carbajal Juarez University of California, Irvine, Jennifer Wong-Ma University of California, Irvine, Sergio Gago-Masague University of California, Irvine, Hadar Ziv University of California, Irvine</i>
10:00	<b>2h ★ Becoming Core: Curriculum Planning Tools for Integrating CS into K-5 Content Areas</b>	<i>Talk</i>	<i>Darcy Ronan Sacred Heart University, Heidi Williams Marquette University</i>
10:00	<b>2h ★ Programming Plagiarism Detection with Learner Data</b>	<i>Talk</i>	<i>Yifan Song University of Illinois Urbana-Champaign, Yuanxin Wang Carnegie Mellon University, Christopher Bogart Carnegie Mellon University, Marshall An Carnegie Mellon University, Majd Sakr Carnegie Mellon University</i>
10:00	<b>2h ★ Computer Science Curriculum Trends</b>	<i>Talk</i>	<i>Sean Mackay University at Buffalo, the State University of New York at Buffalo, Adrienne Decker University at Buffalo</i>
10:00	<b>2h ★ Building Awareness of Computational Thinking Pathways across a Large School District</b>	<i>Talk</i>	<i>Alessandra Rangel Digital Promise, Merijke Coenraad Digital Promise, Pati Ruiz Digital Promise, Kyle Dunbar Digital Promise Global, Lisa Milenkovic Broward County Public Schools, Sheryl Arriola Broward County Public Schools, Annmarie Marousky Broward County Public Schools</i>

			<b>10:00 2h ★ Building a Mixed-format Computer Science Assessment for Middle School</b>	K12
	Talk	Jennifer Houchins WestEd, Kim Luttgen WestEd, Rosalind Owen WestEd, Lydia Martinez Rivera WestEd, Matt Silbergliett WestEd, Yvonne Kao WestEd		
	<b>10:00 2h ★ Sokoban: an Assignment for an Object-Oriented and GUI Programming Course</b>			
	Talk	João Paulo Barros Polytechnic Institute of Beja		
	<b>10:00 2h ★ Student Perceptions of Authentic Learning to Learn White-box Testing</b>			
	Talk	Akond Rahman Auburn University, Yue Zhang Auburn University, Fan Wu Tuskegee University, Hossain Shahriar University of West Florida		
	<b>10:00 2h ★ Novices' Perceptions of Web-Search and AI for Programming</b>			
	Talk	James Skripchuk North Carolina State University, John Bacher North Carolina State University, Yang Shi North Carolina State University, Keith Tran North Carolina State University, Thomas Price North Carolina State University		
	<b>10:00 2h ★ Unintentional Barriers for AP Computer Science Principles: A Course Designed for Every Student</b>			
	Talk	Emma McDaniel Georgia State University, Aaja Christie Georgia State University, Anu Bourgeois Georgia State University		
	<b>10:00 2h ★ A generalized framework for describing question randomization</b>			
	Poster	Romina Mahinpei University of British Columbia, Iris Xu University of British Columbia, Steve Wolfman University of British Columbia, Firas Moosvi University of British Columbia Okanagan		
	<b>10:00 2h ★ Data for Healthy Communities: A Public Interest Pilot Course Designed to Develop K-12 Data Literacy</b>			
	Talk	Emily Nutwell The Ohio State University, Kelsey Badger The Ohio State University, Jessica Kulp The Ohio State University		
	<b>10:00 2h ★ Supporting Teacher Understanding of Computational Thinking Integration into Early Elementary Curricula</b>			
	Talk	Heather Sherwood Education Development Center, Alice Kaiser Education Development Center, Camille Ferguson Education Development Center, Anthony Negron New York Hall of Science, Ray Ferrer New York Hall of Science, Don LaBonte Participate		
	<b>10:00 2h ★ Math IDE: A Platform for Creating with Math</b>			
	Talk	Sierra Wang Stanford University, John C. Mitchell Stanford University, Nick Haber Stanford University, Chris Piech Stanford University		
	<b>10:00 2h ★ Python Programming Education with Semantics-oriented Screen Reading for K-12 Students with Vision Impairments</b>			
	Talk	God'Salvation Oguibe The University of Texas at San Antonio, Lauryn Castro The University of Texas at San Antonio, Katherine Cantrell The University of Texas at San Antonio, Kathy Ewoldt The University of Texas at San Antonio, Leslie Neely The University of Texas at San Antonio, Wei Wang University of Texas at San Antonio, USA		
	<b>10:00 2h ★ Evolution of an integrated, elementary CSforAll curriculum</b>			
	Talk	W. Richards Adrián Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Emrah Pektaş College of Education, University of Amherst of Massachusetts Amherst		
	<b>10:00 2h ★ ThemeRec: Personalizing IDE Themes for Students</b>			
	Talk	Jialiang Tan Lehigh University, Yu Chen William and Mary, Shuyin Jiao North Carolina State University		
	<b>10:00 2h ★ Scaffolded Projects for the Social Good: A Strategy for Deploying Studio Model in CS Education</b>			
	Talk	Stan Kurkovsky Central Connecticut State University, Mikey Goldweber Denison University, Nathan Sommer Xavier University, Chad Williams Central Connecticut State University		
	<b>10:00 2h ★ Exploring Student Misconceptions about Concurrency Using the Domain-Specific Programming Language "Sonic Pi"</b>			
	Talk	Giorgio Delzanno DIBRIS, University of Genova, Giovanna Guerrini DIBRIS- University of Genova, Daniele Traversaro Università degli Studi di Genova		

## 10:00 - 10:45 Community Circle at Online 1

## 10:00 45m ★ Community Circle

Other

*Delaram Yazdansepas Loyola Marymount University, Oluwakemi Ola University of British Columbia, Kristin Stephens-Martinez Duke University*

ONLINE ONLY

## 10:45 - 12:00 Community College, Adult Education &amp; Pathways at Meeting Room D135

Papers

Chair(s): William Kerney

## 10:45 25m ★ Broadening Participation in Adult Education: A Literature Review of Computer Science Education

Talk

*Friday Joseph Agbo Willamette University*

CC

GLOBAL

## 11:10 25m ★ Curricular and Pedagogical Considerations in Computer Science Education: The Role of Community Colleges for the Next Decade

Talk

*Christian Servin El Paso Community College, Elizabeth Hawthorne Rider University, Lori Postner Nassau Community College, Cara Tang Portland Community College, Cindy Tucker Bluegrass Community and Technical College*

CC

## 11:35 25m ★ Understanding California's Computer Science Transfer Pathways

Talk

*Jinya Jiang University of California, San Diego, Richa Kafle University of California, San Diego, Christa Lehr University of Southern Connecticut, Simone Wright University of California, San Diego, Clarissa Guitierrez-Godoy University of California, San Diego, Christine Alvarado University of California San Diego*

CC

## 10:45 - 12:00 Peer Mentoring at Meeting Room D136

Papers

## 10:45 25m ★ Welcoming students to undergraduate Computer Science programs: On-ramps, rest areas, and lane changes

Talk

*Niharika Bhaskar University of California San Diego, Amari Lewis University of California San Diego, Rona Darabi University of California San Diego, Joana Fang University of California Los Angeles, Jingting Liu University of California San Diego, Kristen Vaccaro University of California, San Diego, Joe Gibbs Politz University of California at San Diego, Mia Minnes UC San Diego*

## 11:10 25m ★ The Experience of Near-Peer Computing Mentors: Strengthening and Expanding Women's Computing Identities in Undergraduate Interdisciplinary Contexts

Talk

*Jennifer Rosales Barnard College, Elizabeth Melville Columbia University, Melissa Wright Barnard College, Saima Akhtar Barnard College, Rebecca Wright Barnard College*

## 11:35 25m ★ Virtual Peer Mentoring to Develop a Sense of Belonging During COVID-19 – A Pilot Study

Talk

*Sonal Dekhane Georgia Gwinnett College, Hyesung Park Georgia Gwinnett College, Lorraine Jonassen Georgia Gwinnett College, Wei Jin Georgia Gwinnett College*

MSI

## 10:45 - 12:00 Industry and Internships at Meeting Room E145

Chair(s): Daniela Marghitu

- 10:45 25m ★ **Foot in the Door: Developing Opportunities for Computing Undergraduates to Gain Industry Experience**

*Nimmi Arunachalam Florida International University, Stephanie Lunn Florida International University, Mark Weiss Florida International University, Jason Liu Florida International University, Giri Narasimhan Florida International University*

MSI

- 11:10 25m ★ **Industry Mentoring and Internship Experiences at a Community College Baccalaureate Program in Software Development**

*Kendrick Hang Green River College, Tyler Schrock Green River College, Tina Ostrander Green River College, Roseann Berg Green River College, Tyler Menezes CodeDay, Kevin Wang Mentors in Tech*

MSI

- 11:35 25m ★ **Institutional Perspectives on Formal Work-Based Learning Programs in the UK**

*Talk Jack Parkinson University of Glasgow, Sebastian Dziallas University of the Pacific*

GLOBAL

## 10:45 - 12:00 Large CS1 Classes at Meeting Room E146

Chair(s): Albert Chan Fayetteville State University

- 10:45 25m ★ **A Global Survey of Introductory Programming Courses**

*Talk Raina Mason Southern Cross University, Simon , Brett Becker University College Dublin, Tom Crick Swansea University, James H. Davenport University of Bath*

GLOBAL

ONLINE

IN-PERSON

- 11:10 25m ★ **How We Manage an Army of Teaching Assistants: Experience Report on Scaling a CS1 Course**

*Ildar Akhmetov Northeastern University, Sadaf Ahmed University of Alberta, Kezziah Ayuno University of Alberta*

IN-PERSON

GLOBAL

ONLINE

- 11:35 25m ★ **Mining jewels together: debating about programming threshold concepts in large classes**

*Talk Manuel Selva Université Grenoble Alpes, Francois Broquedis Grenoble INP*

IN-PERSON

GLOBAL

ONLINE

## 10:45 - 12:00 Assessment &amp; Grading at Meeting Rooms B110-112

Chair(s): Amanpreet Kapoor University of Florida, USA

- 10:45 25m ★ **Diverging assessments: What, Why, and Experiences**

*Talk Amin Sakzad Monash University, David Paul University of New England, Judy Sheard Monash University, Ljiljana Brankovic University of New England, Matthew P. Skerritt RMIT University, Nan Li University of Wollongong, Australia, Sepehr Minagar Monash University, Simon , William Billingsley University of New England*

GLOBAL

- 11:10 25m ★ **Mechanical TA 2: Peer Grading With TA and Algorithmic Support**

*Talk Hedayat Zarkoob University of British Columbia, Kevin Leyton-Brown University of British Columbia*

GLOBAL

- 11:35 25m ★ **Rubric for the Quality of Answers to Student Queries about Code**

*Talk Svana Esche Technical University of Darmstadt*

GLOBAL

**10:45 - 12:00 LLM - Attitudes at Meeting Rooms B115-116**

Chair(s): Julio Bahamon UNC Charlotte

**10:45 25m ☆ Trust in Generative AI among Students: An Exploratory Study**

Talk

*Matin Amoozadeh University of Houston, David Daniels University of Houston, Daye Nam Carnegie Mellon University, Aayush Kumar IIT Kanpur, stella chen University of Houston, Michael Hilton Carnegie Mellon University, Sruti Srinivasa Ragavan Indian Institute of Technology (IIT), Kanpur, Amin Alipour University of Houston*

**11:10 25m ☆ Attitudes Towards the Use (and Misuse) of ChatGPT: A Preliminary Study**

Talk

*Michael Rogers University of Wisconsin Oshkosh, Hannah Hillberg University of Wisconsin Oshkosh, Christopher Groves University of Wisconsin Oshkosh*

**11:35 25m ☆ Instructor Perceptions of AI Code Generation Tools – A Multi-Institutional Interview**

Talk

Study

GLOBAL

*Judy Sheard Monash University, Paul Denny The University of Auckland, Arto Hellas Aalto University, Juhu Leinonen Aalto University, Lauri Malmi Aalto University, Simon*

**10:45 - 12:00 Cybersecurity Tools at Meeting Rooms B117-119**

Chair(s): Roberto Hoyle

**10:45 25m ☆ DOJO: Applied Cybersecurity Education In The Browser**

Talk

*Connor Nelson Arizona State University, Yan Shoshitaishvili Arizona State University*

**11:10 25m ☆ PWN Lessons Made Easy With Docker: Toward an Undergraduate Vulnerability Research Cybersecurity Class**

Talk

*TJ O'Connor Florida Institute of Technology, Alex Schmitt Florida Institute of Technology, Chris Stricklan Florida Institute of Technology, Marco Carvalho Florida Institute of Technology, Sneha Sudhakaran Florida Institute of Technology*

**11:35 25m ☆ PWN The Learning Curve: Education-First CTF Challenges**

Talk

*Connor Nelson Arizona State University, Yan Shoshitaishvili Arizona State University*

**10:45 - 12:00 Engaging with Data at Meeting Rooms C120-122**

Chair(s): Sherrene Bogle Cal Poly Humboldt

**10:45 25m ☆ Book Club Model for Engaging with Data Science and Ethics: Using Weapons of Math Destruction**

Talk

*Tammy Vandegrift University of Portland*

**11:10 25m ☆ Digging Data: Using archaeology to teach responsible data practices in a study abroad context**

Talk

*Michelle Trim UMass Amherst, Anthony Tuck University of Massachusetts Amherst, Matthew Rattigan University of Massachusetts Amherst, Cole Reilly University of Massachusetts Amherst*

**11:35 25m ☆ Learning Big Data Systems via Emulation**

Talk

*Wensheng Wu University of Southern California*

**10:45 - 12:00 ACM TOCE: Theory, Beliefs, and Aptitude at Meeting Rooms D137-138 Journal First**

**10:45 25m ☆ Reflections on theory**  
 Talk Lauri Malmi Aalto University

**11:10 25m ☆ Relationship Between Implicit Intelligence Beliefs and Maladaptive Self-Regulation of Learning**  
 Talk Abraham E. Flanigan Georgia Southern University, Markeya S. Peteranetz University of Nebraska-Lincoln, Duane F. Shell University of Nebraska-Lincoln, Leen-Kiat Soh University of Nebraska-Lincoln

**11:35 25m ☆ Validation of a Spanish-Language Version of a Computer Programming Aptitude Test for First-Year University Students**  
 Talk Francisco Vásquez Universidad Técnica Federico Santa María, Juan Felipe Calderón Universidad Andrés Bello, Chile, Federico Meza Universidad Técnica Federico Santa María, Andrea Vásquez Universidad Técnica Federico Santa María  
GLOBAL

**10:45 - 12:00 Microsoft Supporter Session at Meeting Rooms E141-142 Supporter Sessions**

**10:45 75m ☆ Degrees + Credentials—preparing students for the skills-first job marketplace and what this means for changes in CS education**  
 Talk Rachel Wortman Morris Microsoft  
MSI

**10:45 - 12:00 Google Supporter Session at Meeting Rooms E143-144 Supporter Sessions**

**10:45 75m ☆ GenAI and the Future of Computing Education**  
 Talk Leo Porter University of California San Diego, Jamie Gorson Benario Google

**10:45 - 12:00 Re-making CS Departments for Generation CS at Oregon Ballroom 203 Panels**

**10:45 75m ☆ Re-making CS Departments for Generation CS**  
 Talk Kathleen Lehman University of California, Los Angeles, Carla Brodley Northeastern University, Center for Inclusive Computing, Mark Guzdial University of Michigan, Paul Tymann Rochester Institute of Technology, Aman Yadav Michigan State University  
HYBRID

**10:45 - 12:00 Accessibility - Neurodiversity at Oregon Ballroom 204 Papers**

Chair(s): Ellen Spertus Northeastern University

**10:45 25m ☆ A History of BPC: Lessons from our Past Informing our Future Directions**  
 Talk Madison Melton UNC Charlotte, Audrey Rorrer UNC Charlotte

**11:10 25m ☆ Experiences of Undergraduate Computer Science Students Living with Mental Health Conditions**  
 Talk Jie Ji Bryn Mawr College, Christian Murphy Swarthmore College, Brianna Blaser University of Washington, Jennifer Akullian Growth Coaching Institute

**11:35 25m ☆ Neurodiverse Programmers and the Accessibility of Parsons Problems: An Exploratory Multiple-Case Study**  
 Talk Carl Haynes-Magyar Carnegie Mellon University

10:45 - 12:00 Special Session: Microteaching at <span style="border: 1px solid black; padding: 2px;">Portland Ballroom 252</span>				Special Sessions
10:45 75m ★ <b>Microteaching: Binary Heaps, Side-Channel Attacks, Equitable Grading, Java Classes, Loops, and 3D Java</b>				
Talk				Colleen M. Lewis University of Illinois at Urbana-Champaign, Cynthia Lee Stanford University, Adam Blank Caltech, Maria Camarena Maywood Center for Enriched Studies, Manuel Hernandez Bell Gardens High School, Frank Vahid UC Riverside / zyBooks
12:00 - 13:45 <b>Lunch on your own</b>				Logistics
12:00 - 13:45 <b>First Timers' Lunch and 2024 SIGCSE Award for Lifetime Service to the Computer Science Education Community at <span style="border: 1px solid black; padding: 2px;">Portland Ballroom</span></b>				Keynotes / Logistics
This is a ticketed event. Tickets can be purchased as part of your 2024 SIGCSE TS registration.				
This year's First Timers' Lunch is supported by Google.				
12:00	★ <b>First Timers' Lunch</b>			
1h45m	Logistics			
<i>Lunch</i>				
12:30	60m ★ <b>Tales from the Trenches: Using What We've Learned to Move CS Education Forward</b>			
Keynote	Keynotes			HYBRID
	Chris Stephenson			
13:45 - 15:00 <b>Big Picture CS Ed at <span style="border: 1px solid black; padding: 2px;">Meeting Room D135</span></b>				Papers
Chair(s): Julie Smith Institute for Advancing Computing Education				
13:45	25m ★ <b>Confidence vs insight: Big and Rich Data in Computing Education Research</b>			
Talk	Neil Brown King's College London, Mark Guzdial University of Michigan			
14:10	25m ★ <b>Discourse Practices in Computer Science Education</b>			K12
Talk	Yvonne Kao WestEd, David McKinney WestEd, Samuel Berg Oakland Unified School District, Brenda Tuohy Oakland Unified School District, Courtney Ortega Oakland Unified School District			
14:35	25m ★ <b>To be or not to be... an algorithm: the notion according to students and teachers</b>			
Talk	Carlo Bellettini University of Milan, Violetta Lonati University of Milan, Mattia Monga Università degli Studi di Milano, Anna Morpurgo Università degli Studi di Milano			GLOBAL
13:45 - 15:00 <b>Theoretical CS at <span style="border: 1px solid black; padding: 2px;">Meeting Room D136</span></b>				Papers
Chair(s): Wendy Fisher Colorado School of Mines				
13:45	25m ★ <b>Experiences Using Research Processes in an Undergraduate Theory of Computing Course</b>			
Talk	Ryan Dougherty United States Military Academy			
14:10	25m ★ <b>Participatory Governance in the Computer Science Theory Classroom</b>			
Talk	Tim Randolph Columbia University			
14:35	25m ★ <b>Teaching Formal Languages through Programmed Instruction</b>			
Talk	Mostafa Mohammed The University at Buffalo - SUNY, Cliff Shaffer Virginia Tech			

**13:45 - 15:00 Deadlines at Meeting Room E145**

Chair(s): Tingting Zhu University of Toronto Mississauga

- 13:45 25m ★ Effect of Deadlines on Student Submission Timelines and Success in a Fully-Online Self-Paced Course**

*Meng-Chieh Chiu UMass Amherst, Eliot Moss University of Massachusetts at Amherst, Timothy Richards University of Massachusetts Amherst*

- 14:10 25m ★ Implementation of Split Deadlines in a Large CS1 Course**

*Hongxuan Chen University of Illinois at Urbana-Champaign, Ang Li University of Illinois at Urbana-Champaign, Geoffrey Challen University of Illinois at Urbana-Champaign, Kathryn Cunningham University of Illinois Urbana-Champaign*

- 14:35 25m ★ Student Perspectives on Assignment Deadline Policies in Computer Science Courses**

*Joseph Kim Haverford College, Christian Murphy Swarthmore College*

**13:45 - 15:00 Cyber Security & Cognitive Engagement at Meeting Room E146**

Chair(s): Rafa Absar Metro State University

- 13:45 25m ★ A Cybersecurity Summer Camp for High School Students Using Autonomous R/C Cars**

**IN-PERSON ONLINE K12**

*Myounggyu Won University of Memphis, Luke Rivers Carrington University of Memphis, Douglas Manuel Espinoza II University of Memphis, Mohd Hasan Ali University of Memphis, Dipankar Dasgupta University of Memphis*

- 14:10 25m ★ Can lexical sophistication and cohesion automatically differentiate student engagement in socio-technical platforms?**

**IN-PERSON ONLINE**

*Mahir Akgun Pennsylvania State University, Priya Sharma Pennsylvania State University, Qiyuan Li Pennsylvania State University*

- 14:35 25m ★ Cyber Funfair: Creating immersive and educational experiences for teaching Cyber Physical Systems Security**

**IN-PERSON ONLINE**

*Alan Mills University of the West of England, Jonathan White University of the West of England, Phil Legg University of the West of England*

**13:45 - 15:00 Accessibility - Fairness at Meeting Rooms B113-114**

Chair(s): Justice Walker University of Texas at El Paso

- 13:45 25m ★ Crafting Disability Fairness Learning in Data Science: A Student-Centric Pedagogical Approach**

*Pax Newman Western Washington University, Tyanin Opdahl Western Washington University, Yudong Liu Western Washington University, Scott Wehrwein Western Washington University, Yasmine Elglaly Western Washington University*

- 14:10 25m ★ From Awareness to Action: Teaching Software Accessibility for Neurodiverse Users**

*Devorah Kletenik Brooklyn College, City University of New York, Rachel Minkowitz Cornell Tech, Aleksandra Peric Northeastern Illinois University, Mehmet Sahin Brooklyn College, Rachel F. Adler University of Illinois Urbana-Champaign*

- 14:35 25m ★ Motivated by Inclusion: Evaluating the Impact of Games on Students' Motivation to Design Accessibly Across a Spectrum of Disabilities**

*Devorah Kletenik Brooklyn College, City University of New York, Rachel F. Adler University of Illinois Urbana-Champaign*

<b>13:45 - 15:00</b>	<b>Software Engineering at</b>	<b>Meeting Rooms B117-119</b>	<b>Papers</b>		
<b>Chair(s): Hanieh Shabanian Western New England University</b>					
13:45	25m	★ Taxonomy-Based Human Error Assessment for Senior Software Engineering Students Talk	Benjamin S. Meyers Rochester Institute of Technology, Andrew Meneely Rochester Institute of Technology		
14:10	25m	★ "Working with Large Code Bases:" A Cognitive Apprenticeship Approach to Teaching Software Engineering Talk	Anshul Shah University of California, San Diego, Jerry Yu University of California, San Diego, Adalbert Gerald Soosai Raj University of California, San Diego		
14:35	25m	★ Automating Source Code Refactoring in the Classroom Talk	Eman Abdullah AlOmar Stevens Institute of Technology, Mohamed Wiem Mkaouer University of Michigan - Flint, Ali Ouni ETS Montreal, University of Quebec	<b>GLOBAL</b>	
<b>13:45 - 15:00</b>	<b>Interventions at</b>	<b>Meeting Rooms C120-122</b>	<b>Papers</b>		
<b>Chair(s): Megean Garvin UMBC</b>					
13:45	25m	★ ClearMind Workshop: An ACT-based Intervention Tailored for Academic Procrastination among Computing Students Talk	Yunyi She University of California, San Diego, Korena Klimczak Utah State University, Michael Levin Utah State University, Soohyun Liao University of California in San Diego		
14:10	25m	★ Procrastination vs. Active Delay: How Students Prepare to Code in Introductory Programming Talk	Elizabeth B. Cloude University of Pennsylvania, Jiayi Zhang University Pennsylvania, Ryan Baker University of Pennsylvania, Eric Fouh University of Pennsylvania		
14:35	25m	★ Learners Teaching Novices: An Uplifting Alternative Assessment Talk	Ali Malik Stanford University, Juliette Woodrow Stanford University, Chris Piech Stanford University	<b>GLOBAL</b>	
<b>13:45 - 15:00</b>	<b>ACM TOCE: Broadening Participation at</b>	<b>Meeting Rooms D137-138</b>	<b>Journal First</b>		
13:45	25m	★ Barriers and Supports to Offering Computer Science in High Schools: A Case Study of Structures and Agents Talk	Miranda Parker San Diego State University	<b>K12</b>	
14:10	25m	★ Bolstering the Persistence of Black Students in Undergraduate Computer Science Programs: A Systematic Mapping Study Talk	Alvine Boaye Belle York University, Callum Sutherland York University, Opeyemi Adesina School of Computing,, University of the Fraser Valley, Segla Kpodjedo Ecole de Technologie Supérieure, Nathanael Ojong York University, Lisa Cole York University	<b>MSI</b>	
14:35	25m	★ Tracing Participation Beyond Computing Careers: How Women Reflect on Their Experiences in Computing Programs Talk	Melissa Perez University of Michigan, Patricia Garcia University of Michigan		
<b>13:45 - 15:00</b>	<b>GitHub Supporter Session at</b>	<b>Meeting Rooms E141-142</b>	<b>Supporter Sessions</b>		
13:45	75m	★ Teaching CS100 with Copilot Talk	Jess Tran GitHub, Arelia Jones GitHub		

**13:45 - 15:00 Rephactor Supporter Session at Meeting Rooms E143-144****Supporter Sessions****13:45 75m ☆ Rephactor: the online textbook that works for you***Talk Tom Way Rephactor, John Lewis***13:45 - 15:00 Increasing the Participation of Black Women in Computer Science Education Research at Oregon Ballroom 203****Panels****13:45 75m ☆ An Ethical Imperative: Increasing the Participation of Black Women in Computer Science Education Research***Tamara Pearson Georgia Institute of Technology, Stefanie Marshall Michigan State University, Yolanda Rankin Emory University, Mia Shaw New York University***MSI****HYBRID****13:45 - 15:00 LLM - Teaching CS1/CS2 at Oregon Ballroom 204****Papers***Chair(s): Suzanne Matthews United States Military Academy***13:45 25m ☆ Teaching CS50 with AI: Leveraging Generative Artificial Intelligence in Computer Science Education***Rongxin Liu Harvard University, Carter Zenke Harvard University, Charlie Liu Yale University, Andrew Holmes Harvard University, Patrick Thornton Harvard University, David J. Malan Harvard University***CC****MSI****GLOBAL****14:10 25m ☆ Prompt Problems: A New Programming Exercise for the Generative AI Era***Paul Denny The University of Auckland, Juho Leinonen Aalto University, James Prather Abilene Christian University, Andrew Luxton-Reilly The University of Auckland, Thezyrie Amarouche University of Toronto Scarborough, Brett Becker University College Dublin, Brent Reeves Abilene Christian University***GLOBAL****CC****14:35 25m ☆ CS1 with a Side of AI: Teaching Software Verification for Secure Code in the Era of Generative AI***Amanda Fernandez University of Texas at San Antonio, Kimberly Cornell University at Albany***CC****13:45 - 15:00 Managing Authority When Teaching Computing Ethics at Portland Ballroom 251****Panels****13:45 75m ☆ Managing Authority When Teaching Computing Ethics***Emanuelle Burton College of Engineering, University of Illinois at Chicago, Kristel Clayville University of Illinois**Chicago, Stacy Doore Colby College, Michael Kirkpatrick James Madison University, Michael Goldweber Denison**University***13:45 - 15:00 Special Session: Unlocking Excellence in Educational Research at Portland Ballroom 252****Special Sessions****13:45 75m ☆ Unlocking Excellence in Educational Research: Guidelines for High-Quality Research that Promotes Learning for All***Monica McGill Institute for Advancing Computing Education, Sarah Heckman North Carolina State University, Michael Liut University of Toronto Mississauga, Ismaila Temitayo Sanusi University of Eastern Finland, Claudia Szabo The University of Adelaide***GLOBAL****15:00 - 15:45 Coffee Break at Exhibit Hall E****Logistics****15:00 45m ☆ Coffee and Refreshments***Coffee break***15:00 45m ☆ SIGCSE Coffee Break Show***Other Mark Sherriff University of Virginia***HYBRID**

15:00 - 15:45

Demos at Exhibit Hall E - Demos

Demos

15:00 45m ☆ **Demo 2A: Teaching CS50 with AI: Leveraging Generative Artificial Intelligence in Computer Science Education**

CC

*Rongxin Liu Harvard University, Carter Zenke Harvard University, Charlie Liu Yale University, Andrew Holmes Harvard University, Patrick Thornton Harvard University, David J. Malan Harvard University*

15:00 45m ☆ **Demo 2B: Google Colab for teaching CS and ML**

*Demonstration Corrie Scalisi Google, Katlyn Edwards Google, Julianne DeMars-Smith Google, USA, Key Lee Google, USA*

15:00 45m ☆ **Demo 2C: Let's Build a Traffic Light: Teaching Physical Computing to Children with EdBoard**

*Ruhan Yang ATLAS Institute, University of Colorado Boulder, Ellen Do ATLAS Institute, University of Colorado Boulder*

15:00 - 17:00		ACM Student Research Competition - Posters at Exhibit Hall E - Posters	ACM Student Research Competition
Chair(s): Mohammed Seyam Virginia Tech, Timothy Yuen University of Texas at San Antonio			
15:00	2h	★ <b>Ethics vs. Abstraction: Comparing Learning Outcomes from Ethics-Integrated and Technical-Only Instruction</b> <i>Noelle Brown University of Utah</i>	
15:00	2h	★ <b>SQL Query Evaluation with Large Language Model and Abstract Syntax Trees</b> <i>Lili Xiang Northeastern University</i>	
15:00	2h	★ <b>Enhancing Scratch Programming with Autograding</b> <i>Herart Dominggus Nurue The University of Alabama</i>	
15:00	2h	★ <b>Askers, Answerers, Non-Answerers, and Lurkers: Investigating Online Q&amp;A Platforms Personas and Success in a CS1 Course</b> <i>Nigel Newby University of Pennsylvania</i>	
15:00	2h	★ <b>Cloud-Secure: An Investigation into Firefly and Grey Wolf Optimization Algorithms for Phishing Detection with Machine Learning Classifiers</b> <i>Kelvin Ovabor Computer science Department, The University of Alabama</i>	
15:00	2h	★ <b>A Web Development and Cloud Deployment Framework for a Software Engineering Course</b> <i>Michael Wilkinson Worcester Polytechnic Institute, Ariel Schechter Worcester Polytechnic Institute, Bryce Lukens Worcester Polytechnic Institute, Ian Wright Worcester Polytechnic Institute, Joseph Cardarelli Worcester Polytechnic Institute</i>	
15:00	2h	★ <b>Creating Instructional Elementary Programming Videos for Use in an Adaptive Testing and Remediation System</b> <i>Abigail Jones Northern Kentucky University, Manogya Aryal Northern Kentucky University, Justin Selby Northern Kentucky University, Seth Adjei Northern Kentucky University</i>	
15:00	2h	★ <b>Accessing and Democratizing AI for Whom? Student Learning through an Algorithm-Centered Supply Chain Case Study</b> <i>Ashish Hingle George Mason University</i>	
15:00	2h	★ <b>Understanding support needs in computer science labs</b> <i>Weiyin Xu University of San Diego</i>	
15:00	2h	★ <b>Towards a Verified Implementation of a Network Stack</b> <i>Caitlyn Wilde Lewis and Clark College, Wyeth Greenlaw Rollins Lewis and Clark College, Levi Overcast Evergreen State College</i>	
15:00	2h	★ <b>Exploring K-12 Teachers' Trajectories of Engagement with Critically Conscious Computing</b> <i>Brendan Henrique University of California, Berkeley</i>	
15:00	2h	★ <b>Energizing Web Development in the Exploring Computer Science Curriculum</b> <i>Samuel Mazzone Marquette University</i>	
15:00	2h	★ <b>Revolutionizing Student Engagement and Enrollment through Personalized, AI-Driven Dialog Systems in Higher Education</b> <i>Alexander Fox Elizabethtown College, Joshua Stoner Elizabethtown College, Jingwen Wang Elizabethtown College</i>	
15:00	2h	★ <b>Understanding Engineering Students' Ethical and Algorithmic Decision Preferences through a Consequentialist Framework</b> <i>Edward Kempa University of Florida, Ashish Aggarwal University of Florida</i>	

15:00	<b>2h ★ The Future of the Error Message: Comparing Large Language Models and Novice Programmer Effectiveness in Fixing Errors</b>	
Talk	<i>Brij Howard-Sarin Williams College</i>	
15:00	<b>2h ★ Learning with the Rashomon Augmented Reality Cube (RARc)</b>	
Talk	<i>Candy Arce New Mexico State University, Angie Hernandez New Mexico State University, Ruth Torres Castillo New Mexico State University, Tomas Valdez New Mexico State University, Raena Cota New Mexico State University, Enrico Pontelli</i>	
15:00	<b>2h ★ Mining students' mastery levels from CS placement tests via LLMs</b>	
Talk	<i>Yi Li Boston College, Riteng Zhang Boston College, Danni Qu Boston College, Marques Samary Maíra Boston College</i>	
15:00	<b>2h ★ Understanding Outcome Expectancy in a CS1 Course</b>	
Talk	<i>Griffin Pitts University of Florida, Ashish Aggarwal University of Florida</i>	
15:00	<b>2h ★ Enhancing American Sign Language Classification by Leveraging Hand Landmark Extraction</b>	
Talk	<i>Benjamin Guerrieri The College of New Jersey</i>	
15:00	<b>2h ★ A Comparative Study of Few-Shot vs. Zero-Shot Prompting to Generate Quick and Useful Responses to Students' Periodic Reflections</b>	
Talk	<i>Ethan Hurley UNC Charlotte - College of Computing and Informatics, Joel Okyere-Badoo UNC Charlotte - College of Computing and Informatics</i>	
15:00	<b>2h ★ Simplifying Signaling Pathway Reconstruction with Containerized Random Walk Algorithms</b>	
Talk	<i>Yancheng Liu Reed College, Anna Ritz Reed College</i>	
15:00	<b>2h ★ Is ChatGPT the academic Catalyst we've all been waiting for?</b>	
Talk	<i>Raneem Mousa Simmons university, Nanette Veilleux Simmons University</i>	
15:00	<b>2h ★ Undergraduate Facilitators as Role Models for Middle School Learners within an AI Summer Camp</b>	K12
Talk	<i>Carly Solomon University of Florida</i>	
15:00	<b>2h ★ Understanding Undergraduate Students' Participation in Computing Clubs</b>	
Talk	<i>Brooke Nelson University of Florida, Amanpreet Kapoor University of Florida, USA, Christina Gardner-McCune Herbert Wertheim College of Engineering, University of Florida, Gainesville, FL, USA</i>	
15:00	<b>2h ★ Recommendation System Algorithm Application to Increase Interdisciplinary Undergraduate Course Collaborations</b>	
Talk	<i>Julianna Iannini The College of New Jersey, Kyla Ramos The College of New Jersey, Joe Petrecca The College of New Jersey</i>	
15:00	<b>2h ★ Edit, Run, Error, Repeat: Learning Analytics To Find The Most Improved Programming Student</b>	
Talk	<i>Johan Snider Uppsala University</i>	

15:45 - 17:00

**Communication & Help in Large Courses at Meeting Room D136****Papers**

Chair(s): Sara Hooshangi Virginia Tech

- 15:45 **25m** ★ **HelpMe: Student Help Seeking using Office Hours and Email**  
Talk *Kevin Shukang Wang The University of British Columbia, Ramon Lawrence The University of British Columbia*
- 16:10 **25m** ★ **Experience Report: Meet the Professor - A Large-Course Intervention for Increasing Rapport**  
Talk *William Griswold UC San Diego*
- 16:35 **25m** ★ **Student Interaction with Instructor Emails in Introductory and Upper-Year Computing Courses**  
Talk *Angela Zavaleta Bernuy University of Toronto, Runlong Ye University of Toronto, Naaz Sibia University of Toronto Mississauga, Rohita Nalluri University of Toronto Scarborough, Joseph Jay Williams University of Toronto, Andrew Petersen University of Toronto, Eric Smith University of Texas at Austin, Bogdan Simion University of Toronto Mississauga, Michael Liut University of Toronto Mississauga*

15:45 - 17:00

**Pedagogy - Flexible Modalities at Meeting Room E145****Papers**

Chair(s): Jesse Ha Montclair State University

- 15:45 **25m** ★ **Do Behavioral Factors Influence the Extent to which Students Engage with Formative Practice Opportunities?**  
Talk *Ashish Aggarwal University of Florida, Manas Adepu University of Florida, Alex Garcia-Marin University of Florida, Christina Gardner-McCune Herbert Wertheim College of Engineering, University of Florida, Gainesville, FL, USA*
- 16:10 **25m** ★ **EIT: Earnest Insight Toolkit for Evaluating Students' Earnestness in Interactive Lecture Participation Exercises**  
Talk *Mihran Miroyan UC Berkeley, Shiny Weng UC Berkeley, Rahul Shah UC Berkeley, Lisa Yan University of California, Berkeley, Narges Norouzi University of California, Berkeley*
- 16:35 **25m** ★ **Traditional vs. Flexible Modalities in a Data Structures Class**  
Talk *Shanon Reckinger University of Illinois at Chicago, Joe Hummel Northwestern University, Sarah Heckman North Carolina State University*

15:45 - 17:00

**Miscellaneous online at Meeting Room E146****Papers**

Chair(s): Zhikai Gao North Carolina State University

- 15:45 **25m** ★ **An Accessible Blocks-based Programming Language for Students with and without Visual Impairments**  
Talk *Moumita Tabassum University of Alabama, Jeff Gray University of Alabama, Derrick Smith University of Alabama in Huntsville*
- 16:10 **25m** ★ **Hint Cards for Common Ozobot Robot Issues: Supporting Feedback for Learning Programming in Elementary Schools**  
Talk *Luisa Greifenstein University of Passau, Ute Heuer Universität Passau, Gordon Fraser University of Passau*
- 16:35 **25m** ★ **Investigating Students' Usage of Self-regulation of Learning Scaffolding in a Computer-Based Programming Learning Environment**  
Talk *Leonardo Humberto Silva IFNMG-Salinas, Anabela Gomes University of Coimbra, António Mendes University of Coimbra*

15:45 - 17:00

**Global at Meeting Rooms B110-112****Papers**

Chair(s): Joël Porquet-Lupine University of California, Davis

- 15:45 25m ☆ Computer Science Education - What Can We Learn from Japan?**

*Talk*

*Markus Sprenger TU Dresden, Nadine Bergner RWTH Aachen University, Thiemo Leonhardt TU Dresden, Ryuta Yamamoto Shizuoka University*

**GLOBAL**

- 16:10 25m ☆ NaijaCoder: Participatory Design for Early Algorithms Education in the Global South**

*Talk*

*Daniel Alabi Columbia University, Atinuke Adegbile Global Integrated Education Volunteers Association (GIEVA), Lekan Afuye Cornell University, Philip Abel Twilio, Inc., Alida Monaco ICF International*

**MSI****GLOBAL**

- 16:35 25m ☆ AI Teaches the Art of Elegant Coding: Timely, Fair, and Helpful Style Feedback in a Global Course**

*Talk*

*Juliette Woodrow Stanford University, Ali Malik Stanford University, Chris Piech Stanford University*

**GLOBAL**

15:45 - 17:00

**Accessibility - Inclusive Design at Meeting Rooms B113-114****Papers**

Chair(s): Jaromir Savelka Carnegie Mellon University

- 15:45 25m ☆ Accessible to Whom? Bringing Accessibility to Blocks**

*Talk*

*Andreas Stefik University of Nevada at Las Vegas, USA, William Allee University of Nevada, Las Vegas, Gabriel Contreras University of Nevada, Las Vegas, Timothy Kluthe University of Nevada, Las Vegas, Alex Hoffman University of Nevada, Las Vegas, Brianna Blaser University of Washington, Richard Ladner University of Washington*



- 16:10 25m ☆ Beyond HCI: The Need for Accessibility Across the CS Curriculum**

*Talk*

*Yasmine Elglaly Western Washington University, Catherine Baker Creighton University, Anne Ross Bucknell University, Kristen Shinohara Rochester Institute of Technology*



- 16:35 25m ☆ From Workshops to Classrooms: Faculty Experiences with Implementing Inclusive Design Principles**

*Pankati Patel Kean University, Dahana Moz-Ruiz Kean University, Rosalinda Garcia Oregon State University, Amreeta Chatterjee Oregon State University, Patricia Morreale Kean University, Margaret Burnett Oregon State University*

15:45 - 17:00

**Lightning Talks 1 at Meeting Rooms B115-116****Lightning Talks**

Chair(s): Eric Fouh University of Pennsylvania, Lisa Lacher University of Houston-Clear Lake

- 15:45 10m ★ A Vision for the Next 15 Years of Computing Education**  
Talk Adrienne Decker University at Buffalo, Mark Weiss Florida International University
- 15:55 10m ★ Creative Labs in a CS1 Course: Self-directed Labs Enhance Inclusivity in Computer Science Learning**  
Talk Melinda McDaniel Georgia Institute of Technology
- 16:06 10m ★ Exposing the Hidden Curriculum with a First Year Computing Seminar**  
Talk Derek Riley Milwaukee School of Engineering, Katherine Panciera Milwaukee School of Engineering
- 16:17 10m ★ Integrating Critical Analysis of Society and Technology into K-12 Computing Through Teacher Co-Design**  
Talk Anne Drew Hu Michigan State University, Aman Yadav Michigan State University
- 16:27 10m ★ Keeping Software Engineering Curriculum Relevant**  
Talk Simon Sultana Reedley College, James Kiper Miami University, Brent Auernheimer California State University, Fresno, Gursimran Singh Walia Augusta University
- 16:38 10m ★ Quantifying the Effects of Advanced Placement Computer Science Principles on Participation and Diversity in AP CS**  
Talk Daniela Ganelin Stanford University, Thomas S. Dee Stanford University
- 16:49 10m ★ Self-efficacy Interventions for CS1**  
Talk Alex Lishinski University of Tennessee, Hanhui Bao The University of Tennessee, Knoxville, Joshua Rosenberg University of Tennessee

15:45 - 17:00

**Internships & Diversity at Meeting Rooms B117-119****Papers**

Chair(s): Miracle Etim-Andy University of Maryland

- 15:45 25m ★ Micro-internships and Career Focused Programs as Mechanisms for Diversifying Computing**  
Talk Kristina Kramarczuk University of Maryland, College Park, Kate Atchison University of Maryland, College Park, Monica Hilliard University of Maryland, Jandelyn Plane University of Maryland, College Park / Ripon College, Sally Bond The Program Evaluation Group-LLC, Caitlin Rudy University of Maryland, David Weintrop University of Maryland
- 16:10 25m ★ Sealing the Deal: Factors That Promote Computing Interns' Interest in Computing Careers**  
Talk Kathleen Lehman University of California, Los Angeles, Kaitlyn N. Stormes Momentum, UCLA School of Education and Information Studies, Katie Smith Temple University, Julia Lapan University of Virginia
- 16:35 25m ★ The Diversity-Hire Narrative in CS: Sources, Impacts, and Responses**  
Talk Christopher Perdriau University of Illinois at Urbana-Champaign, Vidushi Ojha University of Illinois at Urbana-Champaign, Kaitlynn Gray Harvey Mudd College, Brent Lagesse University of Washington Bothell, Colleen M. Lewis University of Illinois at Urbana-Champaign

**15:45 - 17:00 Beyond CS at Meeting Rooms C120-122****Papers**

Chair(s): Susan Hammond Lipscomb University

**15:45 25m ★ Adopting Foundational Data Science Curriculum with Diverse Institutional Contexts****Talk**

*Vandana P. Janeja University of Maryland, Baltimore County, Maria Sanchez University of Maryland, Baltimore County, Yi Xuan Khoo University of Maryland, Baltimore County, Claudia Von Vacano University of California, Berkeley, Lujie Karen Chen University of Maryland, Baltimore County*

**MSI****16:10 25m ★ Seeing the Whole Elephant --- A Comprehensive Framework for Data Education****Talk**

*Iain Cruickshank Army Cyber Institute, Nathaniel Bastian United States Military Academy, Jean Blair United States Military Academy, Christa Chewar United States Military Academy, Edward Sobieski United States Military Academy*

**16:35 25m ★ Student Motivations and Expectations for an Introductory Programming Course in Biology****Talk**

*Austin Zuckerman UC San Diego & SDSU, Math & Science Education, Lily Vo UC San Diego, Psychology, Ashley Juavinett UC San Diego, Neurobiology*

**15:45 - 17:00 Small Colleges and Beyond, LLMs and More at Meeting Rooms D137-138****Papers**

Chair(s): Colleen Bamford County College of Morris

**15:45 25m ★ Implications of ChatGPT for Data Science Education****Talk**

*Yiyin Shen University of Wisconsin-Madison, Xinyi Ai University of California San Diego, Adalbert Gerald Soosai Raj University of California, San Diego, Rogers Jeffrey Leo John Independent Researcher, Meenakshi Syamkumar University of Wisconsin-Madison*

**GLOBAL****16:10 25m ★ Playing with Matches: Adopting Gale--Shapley for Managing Student Enrollments Beyond CS2****Talk**

*Anna Rafferty Carleton College, David Liben-Nowell Carleton College, Dave Musicant Carleton College, Emy Farley Bowdoin, Allie Lyman Carleton College, Ann May Carleton College*

**16:35 25m ★ The Case for LLM Workshops: The Responsible Use of Large Language Models by Faculty at Small Liberal Arts Universities****Talk**

*Chris Bopp St. Bonaventure University, Anne Foerst St. Bonaventure University, Brian Kellogg St. Bonaventure University*

**15:45 - 17:00 Microsoft Supporter Session at Meeting Rooms E141-142****Supporter Sessions****15:45 75m ★ Teaching Modern Web Development with Python****Talk**

*Pamela Fox Microsoft*

**15:45 - 17:00 NSF Supporter Session at Meeting Rooms E143-144****Supporter Sessions****15:45 75m ★ The NSF Project Showcase****Talk**

*Tamara Nelson-Fromm University of Michigan, Mia Minnes UC San Diego, Monica McGill Institute for Advancing Computing Education, Neena Thota University of Massachusetts, Bill Tomlinson University of California, Irvine*

**15:45 - 17:00 Interviewing the Teaching Faculty Hiring Process at Oregon Ballroom 203****Panels****15:45 75m ★ Interviewing the Teaching Faculty Hiring Process****Talk**

*Geoffrey Challen University of Illinois at Urbana-Champaign, Victoria Dean Olin College of Engineering, Nate Derbinsky Northeastern University, Matt Wang University of Washington, Jacqueline Smith University of Toronto*

**GLOBAL****HYBRID**

**15:45 - 17:00 New Approaches to CS1 at Oregon Ballroom 204**

Chair(s): Pedro Guillermo Feijóo-García Georgia Institute of Technology

- 15:45 25m ★ **CS1 Instructors: Flexibility in Content Approaches is Justified, and can Enable More Cross-University Cooperation**

*Frank Vahid UC Riverside / zyBooks*

CC

- 16:10 25m ★ **Experiences Teaching a CS1 Common Course across 7 Institutions**

*Frank Vahid UC Riverside / zyBooks, Ashley Pang UC Riverside*

CC

- 16:35 25m ★ **When Coding Meets Biology: The tension between access and authenticity in a contextualized coding class**

*Austin Zuckerman UC San Diego & SDSU, Math & Science Education, Ashley Juavinett UC San Diego, Neurobiology*

CC

**15:45 - 17:00 Special Session: Innovative Strategies for genAI at Portland Ballroom 252**

Special Sessions

- 15:45 75m ★ **Innovative Strategies for genAI in CS Courses**

*Talk Jill Westerlund University of Alabama, Sandra Czajka Riverside Brookfield High School, Andrew Kuemmel University of Wisconsin***17:30 - 18:20 Flock 1a at Meeting Room D136**

Birds of a Feather

- 17:30 50m ★ **Sourcing Projects for CS Capstones: Challenges and Strategies**

*Talk Fisayo Omojokun Georgia Institute of Technology, Kellyann Fitzpatrick Georgia Institute of Technology***17:30 - 18:20 Flock 1b at Meeting Rooms B110-112**

Birds of a Feather

- 17:30 50m ★ **Disability and Accessibility in Computer Science Education**

*Talk Richard Ladner University of Washington, Brianna Blaser University of Washington, Andreas Stefik University of Nevada at Las Vegas, USA, Amy Ko University of Washington, Raja Kushalnagar Gallaudet University***17:30 - 18:20 Flock 1c at Meeting Rooms B113-114**

Birds of a Feather

- 17:30 50m ★ **Humanitarian Open Source in the Classroom**

*Talk Gregory W. Hislop Drexel University, Philadelphia, PA, USA, Heidi J.C. Ellis Western New England University, Darci Burdge Nassau Community College, Cam Macdonell MacEwan University***17:30 - 18:20 Flock 1d at Meeting Rooms B115-116**

Birds of a Feather

- 17:30 50m ★ **Building Community for Graduate Students in CS Education Research**

*Talk Tamara Nelson-Fromm University of Michigan, Grace Barkhuff Georgia Institute of Technology, Jayne Everson University of Washington, Morgan Fong University of Illinois, Urbana-Champaign, Elijah Rivera Brown University***17:30 - 18:20 Flock 1e at Meeting Rooms B117-119**

Birds of a Feather

- 17:30 50m ★ **Platform or Foundational Concept? Approaches to Teaching Modern Web Development**

*Michael Stewart James Madison University, Michael Kirkpatrick James Madison University*

**17:30 - 18:20 Flock 1f at Meeting Rooms C120-122**

**Birds of a Feather**

17:30 50m ★ **Creating university CS teacher preparation programs**

*Talk*

*Michelle Friend University of Nebraska Omaha, Jennifer Rosato College of St. Scholastica, Nathan H. Bean Kansas State University, Russell Feldhausen Kansas State University, Joshua Weese Kansas State University*

**17:30 - 18:20 Flock 1g at Meeting Rooms D137-138**

**Birds of a Feather**

17:30 50m ★ **Directing Undergraduate Studies: Sharing Practices and Problems**

*Talk*

*Bill Siever Washington University in St. Louis*

**17:30 - 18:20 ABET Supporter Session at Meeting Rooms D139-140**

**Supporter Sessions**

17:30 50m ★ **ABET Accreditation Updates**

*Talk*

**17:30 - 18:20 Flock 1h at Oregon Ballroom 203**

**Birds of a Feather**

17:30 50m ★ **Minority Service Institution Meet-Up**

*Talk*

*Jody Paul Metropolitan State University of Denver*

**MSI**

**17:30 - 18:20 Flock 1i at Oregon Ballroom 204**

**Birds of a Feather**

17:30 50m ★ **BOF: Grading for Equity in Computer Science Courses**

*Talk*

*David Largent Ball State University, Manuel A. Pérez-Quiñones University of North Carolina Charlotte, Christian Roberson Florida Southern College, Linda Wilson Texas Lutheran University, Adrienne Decker University at Buffalo, Stephen Edwards Virginia Tech*

**17:30 - 18:20 Flock 1j at Portland Ballroom 251**

**Birds of a Feather**

17:30 50m ★ **Discussing the Changing Landscape of Generative AI in Computing Education**

*Talk*

*Stephen MacNeil Temple University, Juho Leinonen Aalto University, Paul Denny The University of Auckland, Natalie Kiesler DIPF | Leibniz Institute for Research and Information in Education, Arto Hellas Aalto University, James Prather Abilene Christian University, Brett Becker University College Dublin, Michel Wermelinger The Open University, Karen Reid University of Toronto*

**CC**

**17:30 - 18:20 Flock 1k at Portland Ballroom 252**

**Birds of a Feather**

17:30 50m ★ **Birds of a Feather Who'd Like to Share Software Together: Teaching Tools that Improve Efficiency and Outcomes**

*Talk*

*Doug Lloyd Harvard University, Carter Zenke Harvard University, David J. Malan Harvard University*

**18:30 - 19:20 Flock 2a at Meeting Room D136**

**Birds of a Feather**

18:30 50m ★ **Computing as a University Graduation Requirement**

*Talk*

*Zachary Dodds Harvey Mudd College, Yuan Garcia Mills High School, Vidushi Ojha University of Illinois at Urbana-Champaign, Mark Guzdial University of Michigan, Tamara Nelson-Fromm University of Michigan, Valerie Barr Bard College, Stephanos Matsumoto Olin College of Engineering*

**18:30 - 19:20 Flock 2b at Meeting Rooms B110-112****Birds of a Feather**

- 18:30 50m ★ **Equity and Inclusion Considerations in CS Education for Students Living with Mental Health and Medical Conditions**

*Maya Israel University of Florida, Catherine Law Oregon State University, Christian Murphy Swarthmore College*

**18:30 - 19:20 Flock 2c at Meeting Rooms B113-114****Birds of a Feather**

- 18:30 50m ★ **Experiences With Computer-Based Testing (CBT)**

*Talk Armando Fox UC Berkeley, Dan Garcia UC Berkeley, Cinda Heeren University of British Columbia, Firas Moosvi University of British Columbia Okanagan, Mariana Silva University of Illinois at Urbana Champaign, Matthew West University of Illinois at Urbana-Champaign , Craig Zilles University of Illinois at Urbana-Champaign*

**18:30 - 19:20 Flock 2d at Meeting Rooms B115-116****Birds of a Feather**

- 18:30 50m ★ **POGIL in Computer Science for Beginners and Experts**

*Talk Olga Glebova University of Connecticut, Helen Hu Westminster University, Kendra Walther University of Southern California*

**18:30 - 19:20 Flock 2e at Meeting Rooms B117-119****Birds of a Feather**

- 18:30 50m ★ **K-12 CS Teacher Education: What are we teaching and to whom? How do we know we are moving the needle?**

*Charity Freeman University of Illinois at Urbana-Champaign, Todd Lash University of Illinois at Urbana-Champaign*

**18:30 - 19:20 Flock 2f at Meeting Rooms C120-122****Birds of a Feather**

- 18:30 50m ★ **Can We Build an Excellent Undergraduate TA Program? Fostering Collaboration and Developing Best Practices**

*Talk Melinda McDaniel Georgia Institute of Technology, Fisayo Omojokun Georgia Institute of Technology, Mary Hudacheck-Buswell Georgia Institute of Technology*

**18:30 - 19:20 Flock 2g at Meeting Rooms D137-138****Birds of a Feather**

- 18:30 50m ★ **Topics for an Introductory Data Science Course**

*Talk Michael Posner Villanova University, April Kerby-Helm Winona State University*

**18:30 - 19:20 MongoDB Supporter Session at Meeting Rooms E141-142****Supporter Sessions**

- 18:30 50m ★ **Schema Design Patterns for MongoDB and Other Modern Databases**

*Talk Daniel Coupal MongoDB*

**18:30 - 19:20 Flock 2h at Oregon Ballroom 203****Birds of a Feather**

- 18:30 50m ★ **A Town Meeting: SIGCSE Committee on Expanding the Women-in-Computing Community**

*Wendy Powley Queen's University, Gloria Townsend DePauw University*

**18:30 - 19:20 Flock 2i at Oregon Ballroom 204****Birds of a Feather****18:30 50m ☆ Teaching Ethics In CS Programs - Questions, Models, Resources, Assessments****Talk**

Vance Ricks Northeastern University, Meica Magnani Northeastern University, Casey Fiesler University of Colorado Boulder, Grace Barkhuff Georgia Institute of Technology, Stacy Doore Colby College, Alexi Brooks University of Wisconsin-Stout, Michael Zimmer Marquette University

CC

**18:30 - 19:20 Flock 2j at Portland Ballroom 251****Birds of a Feather****18:30 50m ☆ Mentoring, AI, and the End of Affirmative Action: Connecting with SIGCSE Reads****Talk**

Nanette Veilleux Simmons University, Rebecca Bates Minnesota State University, Mankato, Judy Goldsmith University of Kentucky, Valerie Summet Rollins College

**18:30 - 19:20 Flock 2k at Portland Ballroom 252****Birds of a Feather****18:30 50m ☆ Cultivating and Celebrating LGBTQ+ Community in Computing Education****Talk**

Joslenne Peña Macalester College, Megumi Kivuva University of Washington, Seattle, Mara Kirdani-Ryan University of Washington, Francisco Castro New York University, Amy Ko University of Washington

**19:30 - 21:30 SIGCSE Reception at Oregon Ballrooms 201-202****Logistics**

Please join us for this opportunity to network and socialize.

**Fri 22 Mar**Displayed time zone: **Pacific Time (US & Canada)**

<b>07:30 - 19:30</b>	<b>Registration at</b> <b>Pre-Function E</b>	<b>Logistics</b>
<b>08:00 - 22:00</b>	<b>Quiet Room at</b> <b>Meeting Room E147</b>	<b>Logistics</b>
<b>08:30 - 10:00</b>	<b>Friday Plenary and 2024 SIGCSE Award for Broadening Participation in Computing Education at</b> <b>Portland Ballroom</b>	<b>Keynotes / Logistics</b>
08:30 30m ★ <b>Morning Plenary</b> <i>Day opening</i>	Logistics	<b>HYBRID</b>
09:00 60m ★ <b>Find Your Drop to Add to the River</b> <i>Keynote</i>	Keynotes <i>Jandelyn Plane University of Maryland, College Park / Ripon College</i>	<b>HYBRID</b>
<b>10:00 - 10:45</b>	<b>Coffee Break at</b> <b>Exhibit Hall E</b>	<b>Logistics</b>
10:00 45m ★ <b>Coffee and Refreshments</b> <i>Coffee break</i>		
10:00 45m ★ <b>SIGCSE Coffee Break Show</b> <i>Other</i>	<i>Mark Sherriff University of Virginia</i>	<b>HYBRID</b>
<b>10:00 - 10:45</b>	<b>Demos at</b> <b>Exhibit Hall E - Demos</b>	<b>Demos</b>
10:00 45m ★ <b>Demo 3A: Bringing a Visual Memory Model to VS Code</b> <i>Demonstration</i>	<i>Matt Schwartz Kansas State University, Nathan H. Bean Kansas State University, Joshua Weese Kansas State University, Russell Feldhausen Kansas State University</i>	<b>CC</b>
10:00 45m ★ <b>Demo 3B: UW CSE351 Virtual Memory Simulator</b> <i>Demonstration</i>	<i>Kunchen Dai University of Washington, Justin Hsia University of Washington, Seattle</i>	
10:00 45m ★ <b>Demo 3C: Algovision - an algorithm visualization tool</b> <i>Demonstration</i>	<i>Ludek Kucera Charles University</i>	
<b>10:00 - 17:00</b>	<b>Exhibits Open at</b> <b>Exhibit Hall E - Exhibits</b>	<b>Logistics</b>

10:00 - 12:00 Posters 2 at Exhibit Hall E - Posters				Posters
Chair(s): Meghan Allen University of British Columbia, Ashish Aggarwal University of Florida				
10:00	2h	★ Automated Support for Flexible Extensions Talk	Jordan Schwartz UC Berkeley, Madison Bohannan UC Berkeley, Jacob Yim UC Berkeley, Yuerou Tang University of California, Berkeley, Dana Benedicto UC Berkeley, Charisse Liu Stanford University, Armando Fox UC Berkeley, Lisa Yan University of California, Berkeley, Narges Norouzi University of California, Berkeley	
10:00	2h	★ Towards Attention-Based Automatic Misconception Identification in Introductory Programming Courses Talk	Muntasir Hoq North Carolina State University, Jessica Vandenberg North Carolina State University, Bradford Mott North Carolina State University, James Lester North Carolina State University, Narges Norouzi University of California, Berkeley, Bita Akram North Carolina State University	CC
10:00	2h	★ Using Survival Analysis to Model Students' Patience in Online Office Hour Queues Talk	Zhikai Gao North Carolina State University, Adam Gaweda North Carolina State University, Collin Lynch North Carolina State University, Sarah Heckman North Carolina State University, Damilola Babalola North Carolina State University, Gabriel Silva de Oliveira North Carolina State University	
10:00	2h	★ Incorporating Technical Interview Preparation into an HBCU Pre-Freshman Programming Bootcamp Talk	Whitney Nelson Morehouse College, Kinnis Gosha Morehouse College, Talitha Washington AUC Data Science Initiative, Nina Gilbert Morehouse College	MSI
10:00	2h	★ Analyzing Student and Instructor Comments using NLP Talk	Zack Butler Rochester Institute of Technology, Ivona Bezakova Rochester Institute of Technology, Shaoxuan Xu Rochester Institute of Technology, Angelina Brilliantova Rochester Institute of Technology (RIT)	
10:00	2h	★ My Learnings from Allowing Large Language Models in Introductory Computer Science Classes Talk	Rasika Bhalerao Northeastern University	CC
10:00	2h	★ Thoughtfully designing an Industry Mentor program for undergraduates in CS and mathematics Talk	Victoria Hong St Joseph's University - New York, Cheyne Glass State University of New York at New Paltz	
10:00	2h	★ SQLearn: Automated SQL Statement Assessment using Structure-based Analysis Talk	Sumukhi Ganesan Khoury College of Computer Sciences, Tianchou Gong Khoury College of Computer Sciences, Yihong Wang Khoury College of Computer Sciences, Jeongkyu Lee Khoury College of Computer Sciences	
10:00	2h	★ Centering Ethics in Computing Student's Mind: A Question Directed Approach for Teaching and Learning Tech Ethics Talk	Udayan Das Saint Mary's College of California	CC
10:00	2h	★ Blurring the boundaries between science, math and computer science Talk	Chris Orban Ohio State University	
10:00	2h	★ Advancing Equity through a Research-Practice Partnership: A Case Study of a Professional Development Initiative for Educators of Color Talk	Joshua Childs The University of Texas at Austin, Kait Ogden University of Texas at Austin, Carol Fletcher Texas Advanced Computing Center, Allen Antoine The University of Texas at Austin, Texas, USA, Stephanie N. Baker The University of Texas at Austin, Trae Madrigal University of Texas at Austin	
10:00	2h	★ Do Hints Enhance Learning in Programming Exercises? Exploring Students' Problem-Solving and Interactions Talk	Giang Bui University of Toronto Mississauga, Nicholas Susanto University of Toronto Mississauga, Naaz Sibia University of Toronto Mississauga, Angela Zavaleta Bernuy University of Toronto, Michael Liut University of Toronto Mississauga, Andrew Petersen University of Toronto	CC GLOBAL

10:00	<b>2h ★ Elementary teachers engaging with learning trajectories to create professional learning goals around computer science integration</b>	Talk	Jennifer Albert <i>The Citadel</i> , Candace Joswick <i>University of Texas at Arlington</i> , Deepti Joshi <i>The Citadel</i> , Robin Jocius <i>University of Texas - Arlington</i> , Melanie Blanton <i>The Citadel</i> , Bob Petrusis <i>EPRE Consulting</i>	
10:00	<b>2h ★ Leveraging science fiction to prepare students for Tech Battles</b>	Talk	Jessica Lucchetta <i>University of Trento</i> , Andrea Saiani <i>Witted Srl</i> , Milena Stoycheva <i>Junior Achievement Bulgaria</i> , Lorenzo Angeli <i>University of Trento</i>	GLOBAL
10:00	<b>2h ★ Belonging in POGIL Gateway Classes</b>	Talk	Olga Glebova <i>University of Connecticut</i> , Charity Lovitt <i>University of Washington Bothell</i> , Giselle Mak <i>University of Washington Bothell</i> , Darian Castillo <i>University of Washington Bothell</i> , Matthew Horn <i>Utah Valley University</i> , Tracey Murray <i>Capital University</i>	
10:00	<b>2h ★ Discovering Computer Science: A High School CS Course Co-developed by College &amp; High School Teachers</b>	Talk	Pauline White <i>Siena College</i> , Robin Flatland <i>Siena College</i> , James Matthews <i>Siena College</i> , Jesse Moya <i>Siena College</i> , Kathryn Schiller <i>University at Albany</i>	K12
10:00	<b>2h ★ Increasing Diversity of Computing Course Participation Using A Summer Bridge Program</b>	Talk	Elias Gonzalez <i>University of Maryland</i> , Kate Atchison <i>University of Maryland, College Park</i>	
10:00	<b>2h ★ Computational Thinking in STEM Teaching: Preservice Teachers' Conceptualizations and Practices</b>	Talk	Wei Wei <i>University of California, Los Angeles</i> , Jesse Ha <i>Montclair State University</i> , Kimberley Gomez <i>University of California, Los Angeles</i> , Anuradha Ghosh <i>Montclair State University</i>	
10:00	<b>2h ★ Towards More Efficient Office Hours for Large Courses: Using Cosine Similarity to Efficiently Construct Student Help Groups</b>	Talk	John R. Hott <i>University of Virginia</i> , Mark Floryan <i>University of Virginia</i> , Nada Basit <i>University of Virginia</i>	
10:00	<b>2h ★ Solar Weather, Simulation, and AI in Middle School: Developing a Case Study</b>	Talk	Esther Douglass <i>Hillsdale Public School</i> , Katherine G. Herbert <i>Montclair State University</i> , Vaibhav Anu <i>Montclair State University</i> , Sumi Hagiwara <i>department of Teaching and Learning, Montclair State University</i> , Thomas Marlowe <i>Seton Hall University</i>	K12
10:00	<b>2h ★ Middle School CS Curriculum and Standards Alignment</b>	Talk	Daisy Rutstein <i>edCount, LLC</i> , Satabdi Basu <i>SRI International</i> , Hui Yang <i>SRI International</i> , Arif Rachmatullah <i>SRI International</i> , Carol Tate <i>SRI International</i>	K12 GLOBAL
10:00	<b>2h ★ Elementary Latinx Students Apply Growth Mindset while Creating in Scratch</b>	Talk	Dana Saito-Stehberger <i>University of California, Irvine</i> , Jennifer Houchins <i>WestEd</i> , Mark Warschauer <i>University of California, Irvine</i>	
10:00	<b>2h ★ Champion, Collaborator, Curator, Anchor: Supporting K-12 Teachers to Integrate Computational Thinking</b>	Talk	Merijke Coenraad <i>Digital Promise</i> , Alessandra Rangel <i>Digital Promise</i> , Quinn Burke <i>Digital Promise Global</i> , Kelly Mills <i>Digital Promise Global</i> , Pati Ruiz <i>Digital Promise</i> , Kyle Dunbar <i>Digital Promise Global</i>	
10:00	<b>2h ★ On a Path to Indigenization and Decolonization of Computer Science Teaching</b>	Talk	Sarah Carruthers <i>Vancouver Island University</i>	GLOBAL
10:00	<b>2h ★ A Novel Scaffolded Assessment Bridging Concepts and Code</b>	Talk	Nathaniel Weinman <i>University of California, Berkeley</i> , Armando Fox <i>UC Berkeley</i> , Jack Boreczky <i>University of California, Berkeley</i>	
10:00	<b>2h ★ LEARNDB: A Comprehensive Toolkit for Database Education</b>	Talk	Guangming Xing <i>Western Kentucky University</i> , Tawfiq Salem <i>Purdue University</i> , Gongbo Liang <i>Texas A &amp; M University - San Antonio</i>	
10:00	<b>2h ★ Almost Correct Solvers for Combinational Logic Assignments</b>	Talk	Sunjae Park <i>Wentworth Institute of Technology</i>	

	10:00	<b>2h ★ Enhancing Automated Feedback in On-Going Assignments</b>	GLOBAL
	Talk	<i>Huanyi Chen University of Waterloo, Paul A. S. Ward University of Waterloo</i>	
	10:00	<b>2h ★ "Their religion is yoga": Understanding the role of Spirituality for Black Women in Computing</b>	MSI
	Talk	<i>Miracle Etim-Andy University of Maryland, Sheena Erete University of Maryland College Park, Yolanda Rankin Emory University</i>	
	10:00	<b>2h ★ The Landscape of Disability-Related K-12 Computing Education Research</b>	
	Talk	<i>Julie Smith Institute for Advancing Computing Education, Monica McGill Institute for Advancing Computing Education</i>	
	10:00	<b>2h ★ Increasing Access to CS Instruction in Low-Income Afterschool Settings</b>	CC K12
	Talk	<i>Jared Ordona Lim Georgia Institute of Technology, Grace Barkhuff Georgia Institute of Technology, Judith Uchidiuno Georgia Institute of Technology</i>	
	10:00	<b>2h ★ Analyzing State-Level High School CS Teacher Certification Through Dataset Exploration</b>	K12
	Talk	<i>Sujeeth Goud Ramagoni Marquette University, Dennis Brylow Marquette University</i>	
	10:00	<b>2h ★ Poprawa: A Gradebook Library for Alternatively-Graded Courses</b>	
	Talk	<i>Zachary Kurmas Grand Valley State University</i>	
	10:00	<b>2h ★ Generalizing the CS Course-based Undergraduate Research Experience (CURE)</b>	
	Talk	<i>Amanda Fernandez University of Texas at San Antonio</i>	
	10:00	<b>2h ★ Student Preconceptions of Artificial Intelligence: Results from Single Institution Survey</b>	
	Talk	<i>Noah Q. Cowit University of Colorado, Boulder, Casey Fiesler University of Colorado Boulder</i>	
	10:00	<b>2h ★ Bridging the Gap: Computational Thinking as a Pathway to Equitable Math Education for Neurodiverse Learners</b>	
	Talk	<i>Kate Kastelein Maine Mathematics and Science Alliance, Kelsie Dawson Maine Mathematics and Science Alliance, Rhonda Tate Maine Mathematics and Science Alliance</i>	
	10:00	<b>2h ★ Using high school student perspectives to develop an IoT-based CS curriculum</b>	K12
	Talk	<i>Pramod Abichandani New Jersey Institute of Technology, Craig laboni New Jersey Institute of Technology, Prateek Shekhar New Jersey Institute of Technology</i>	
	10:00	<b>2h ★ Striking a Chord through a Mixed-Methods Study of Music-Based Learning to Leverage Music and Creativity to Bridge the Gender Gap in Computer Science</b>	
	Talk	<i>Fatemeh Jamshidi Auburn University, Maryam Bigonah Auburn University, Daniela Marghitu</i>	
	10:00	<b>2h ★ Using Notional Machines to Automatically Assess Students' Comprehension of Their Own Code</b>	
	Talk	<i>Joey Bevilacqua Software Institute, USI Università della Svizzera italiana, Luca Chioldini USI Lugano, Igor Moreno Santos USI Lugano, Matthias Hauswirth USI Lugano</i>	
	10:00	<b>2h ★ Teaching Algorithm Design: A Literature Review</b>	
	Talk	<i>Jonathan Liu University of Chicago, Seth Poulsen Utah State University, Hongxuan Chen University of Illinois at Urbana-Champaign, Grace Williams University of Chicago, Yael Gertner University of Illinois Urbana-Champaign, Diana Franklin University of Chicago</i>	
	10:00 - 10:45	<b>Community Circle at Online 1</b>	Logistics
	10:00	<b>45m ★ Community Circle</b>	ONLINE ONLY
	Other	<i>Delaram Yazdansepas Loyola Marymount University, Oluwakemi Ola University of British Columbia, Kristin Stephens-Martinez Duke University</i>	

## 10:45 - 12:00 Persistence in CS and Retention at Meeting Room D135

Chair(s): Jennifer Wong-Ma University of California, Irvine

- 10:45 25m ★ **What factors influence persistence in project-based programming courses at community colleges?**

*Chris Bogart Carnegie Mellon University, Marshall An Carnegie Mellon University, Eric Keylor Carnegie Mellon University, Pawanjeet Singh Carnegie Mellon University, Jaromir Savelka Carnegie Mellon University, Majd Sakr Carnegie Mellon University*

- 11:10 25m ★ **A Longitudinal Study of the Relationship between Early Undergraduate Research and Academic Outcomes in Computer Science**

*Kamen Redfield University of California, San Diego, Sukham Sidhu University of California, San Diego, Zackary Glazewski University of California, Santa Barbara, Cynthia Lee Stanford University, Diba Mirza University of California Santa Barbara, Christine Alvarado University of California San Diego*

- 11:35 25m ★ **Exploring Computing Students' Sense of Belonging Before and After a Collaborative Learning Course**

*Morgan Fong University of Illinois, Urbana-Champaign, Shan Huang University of Illinois at Urbana-Champaign, Abdussalam Alawini University of Illinois at Urbana Champaign, Mariana Silva University of Illinois at Urbana Champaign, Geoffrey Herman University of Illinois at Urbana-Champaign*

## 10:45 - 12:00 K-12 Big Picture at Meeting Room D136

Chair(s): Bill Siever Washington University in St. Louis

- 10:45 25m ★ **Bringing Teachers and Researchers together through Participatory Design and Cooperative Prototyping in Computing Education**

*Line Have Musaeus Center for Computational Thinking & Design, Aarhus University, Marianne Graves Petersen Aarhus University, Clemens Nylandsted Klokmose Aarhus University*

GLOBAL

- 11:10 25m ★ **Piloting a Diagnostic Tool to Measure AP CS Principles Teachers' Knowledge Against CSTA Teacher Standard 1**

*Monica McGill Institute for Advancing Computing Education, Joseph Tise Institute for Advancing Computing Education, Adrienne Decker University at Buffalo*

- 11:35 25m ★ **Small Steps, Big Progress: Analyzing District Led Goals to Advance CS Education**

*Alexis Cobo CSforALL, Stephanie Wortel-London CSforALL, Leigh Ann Delyser CSforALL, Darius Ellis James CodeCrew*

GLOBAL

## 10:45 - 12:00 EngageCSEdu at Meeting Room E145

- 10:45 75m ★ **EngageCSEdu Special Issue on Responsible Computing**

*Talk Brian O'Neill , Olivier St-Cyr*

**10:45 - 12:00 Generative AI at Meeting Room E146****Papers**

Chair(s): Andreas Stefik University of Nevada at Las Vegas, USA

- 10:45 25m ★ Use of AI-driven Code Generation Models in Teaching and Learning Programming: a Systematic Literature Review**
- Doga Cambaz Delft University of Technology, Xiaoling Zhang Delft University of Technology*

IN-PERSON

GLOBAL

ONLINE



- 11:10 25m ★ Exploring the Impact of Generative AI for StandUp Report Recommendations in Software Capstone Project Development**
- Andres Neyem Computer Science Department, Pontificia Universidad Católica de Chile, Juan Pablo Sandoval Computer Science Department, Pontificia Universidad Católica de Chile, Marcelo Mendoza Computer Science Department, Pontificia Universidad Católica de Chile, Leonardo Centellas Computer Science Department, Pontificia Universidad Católica de Chile, Luis Armando Gonzalez Pontificia Universidad Católica de Chile, Carlos Paredes Computer Science Department, Pontificia Universidad Católica de Chile*

IN-PERSON

ONLINE

- 11:35 25m ★ ChatGPT in the Classroom: An Analysis of Its Strengths and Weaknesses for Solving Undergraduate Computer Science Questions**
- Ishika Joshi Indraprastha Institute of Information Technology, Delhi, Ritvik Budhiraja Indraprastha Institute of Information Technology, Delhi, Harshal Dev Indraprastha Institute of Information Technology, Delhi, Jahnvi Kadia Indraprastha Institute of Information Technology, Delhi, M. Osama Attaullah Indraprastha Institute of Information Technology, Delhi, Sayan Mitra Indraprastha Institute of Information Technology, Delhi, Harshal D. Akolekar Indian Institute of Technology, Jodhpur, Dhruv Kumar Indraprastha Institute of Information Technology, Delhi*

IN-PERSON

ONLINE

**10:45 - 12:00 K-12: AI, NLP, and Data Literacy at Meeting Rooms B110-112****Papers**

Chair(s): Ke Yang University of Texas at San Antonio

- 10:45 25m ★ ChemAlstry: A Novel Software Tool for Teaching Model Training in K-8 Education**
- Fred Martin University of Texas at San Antonio, Vaishali Mahipal University of Massachusetts Lowell, Garima Jain University of Massachusetts Lowell, Srija Ghosh University of Massachusetts Lowell, Ismaila Temitayo Sanusi University of Eastern Finland*

K12



- 11:10 25m ★ Integrating Natural Language Processing in Middle School Science Classrooms: An Experience Report**
- Gloria Ashiya Katuka University of Florida, Srijita Chakrabarty Indiana University, Hyejeong Lee Indiana University, Sunny Dhama University of Florida, Toni Earle-Randell University of Florida, Mehmet Celepkolu University of Florida, Kristy Elizabeth Boyer University of Florida, Krista Glazewski North Carolina State University, Cindy Hmelo-Silver Indiana University, Tom McKlin The Findings Group*

K12

- 11:35 25m ★ Empowering Digital Natives: InstaClone - a Novel Approach to Data Literacy Education in the Age of Social Media**
- Anna Hartl Technical University of Munich, Elena Starke Technical University of Munich, Angelina Voggenreiter Technical University of Munich, Doris Holzberger Technical University of Munich, Tilman Michaeli TU Munich, Jürgen Pfeffer Technical University of Munich*

GLOBAL

10:45 - 12:00	<b>Quantitative Approaches to Understanding BPC Efforts at Meeting Rooms B113-114</b> <b>Chair(s): Paul Tymann Rochester Institute of Technology</b>	Papers
10:45	<b>25m ★ Evaluating Identity and Belonging in Computer Science Students: Instrument Adaptation and Analysis</b> <b>Talk</b> <i>Stephanie Werner University of Illinois, Illinois Workforce and Education Research Collaborative (IWERC), Ying Chen University of Illinois, Illinois Workforce and Education Research Collaborative (IWERC)</i>	<span style="border: 1px solid black; padding: 2px;">MSI</span> <span style="border: 1px solid black; padding: 2px;">GLOBAL</span>
11:10	<b>25m ★ A Quantitative Methodological Review of Research on Broadening Participation in Computing, 2005-2022</b> <b>Talk</b> <i>Linda Sax UCLA, Chantra Nhien Momentum, UCLA School of Education and Information Studies, Kaitlyn N. Stormes Momentum, UCLA School of Education and Information Studies</i>	<span style="border: 1px solid black; padding: 2px;">MSI</span>
11:35	<b>25m ★ Does Curricular Complexity in Computer Science Influence the Representation of Women CS Graduates?</b> <b>Talk</b> <i>Albert Lionelle Khoury College of Computer Sciences, Northeastern University, McKenna Quam Northeastern University, Carla Brodley Northeastern University, Center for Inclusive Computing, Catherine Gill Northeastern University</i>	<span style="border: 1px solid black; padding: 2px;">GLOBAL</span> 
10:45 - 12:00	<b>Lightning Talks 2 at Meeting Rooms B115-116</b> <b>Chair(s): Eric Fouh University of Pennsylvania, Lisa Lacher University of Houston-Clear Lake</b>	Lightning Talks
10:45	<b>10m ★ A Comparative Study on Student and Faculty Perceptions of Online Computing Labs</b> <b>Talk</b> <i>Yunfei Hou California State University, San Bernardino, Miranda McIntyre California State University, San Bernardino, Jesus Herrera California State University, San Bernardino, Joyce Fu University of California, Riverside, Hani Aldirawi California State University, San Bernardino</i>	
10:55	<b>10m ★ Active Learning at Large-Scale: Using Video Tutorials to Learn by Teaching</b> <b>Talk</b> <i>Pedro Guillermo Feijóo-García Georgia Institute of Technology, Nimisha Roy Georgia Institute of Technology</i>	
11:06	<b>10m ★ Develop Innovative Virtual Reality Interaction Designs for the Learning of Computer Science Concepts and Theories</b> <b>Talk</b> <i>Chunming Gao Central Washington University</i>	
11:17	<b>10m ★ How can we leverage Static Analysis and Large Language Models to Engage Students in Software Quality Improvement</b> <b>Talk</b> <i>Eman Abdullah AlOmar Stevens Institute of Technology, Mohamed Wiem Mkaouer University of Michigan - Flint</i>	
11:27	<b>10m ★ Moving forward with LogicWriterActual, a web app for early undergraduate writing with mathematical logic</b> <b>Talk</b> <i>Bruce Char Drexel University, Jeremy Johnson Drexel University, USA, Steve Earth Drexel University, Philadelphia, PA, USA</i>	
11:38	<b>10m ★ The Role of Probing and Clarifying Questions for Teaching Fellows in Computer Science: Guiding Student Growth</b> <b>Talk</b> <i>Yuliia Zhukovets Harvard University, Carter Zenke Harvard University, David J. Malan Harvard University</i>	
11:49	<b>10m ★ Using Natural Language Processing to Explore Instructional Change Strategies in Undergraduate Science Education Literature</b> <b>Talk</b> <i>Emily Bolger Department of Computational Mathematics, Science, and Engineering; Michigan State University, Marcos Caballero Michigan State University</i>	

<b>10:45 - 12:00</b>	<b>Cybersecurity - crosscutting and diversity at</b>	<b>Meeting Rooms B117-119</b>	<b>Papers</b>
<b>Chair(s): Madison Thomas North Carolina State University</b>			
10:45	<b>25m</b>	<b>★ A Critical Review of Cybersecurity Education in the United States</b>	
	<i>Talk</i>	<i>James Crabb Washington State University, Chris Hundhausen Oregon State University, USA, Assefaw Gebremedhin Washington State University</i>	
11:10	<b>25m</b>	<b>★ Cybersecurity as a Crosscutting Concept Across an Undergrad Computer Science Curriculum: An Experience Report</b>	<b>GLOBAL</b>
	<i>Talk</i>	<i>Azqa Nadeem University of Twente, Netherlands</i>	
11:35	<b>25m</b>	<b>★ Remote Controlled Cyber: Toward Engaging and Educating a Diverse Cybersecurity Workforce</b>	<b>MSI</b>
	<i>Talk</i>	<i>Curtice Gough Florida Institute of Technology, Carl Mann Florida Institute of Technology, Cherisse Ficke Florida Institute of Technology, Maureen Namukasa Florida Institute of Technology, Meredith Carroll Florida Institute of Technology, TJ O'Connor Florida Institute of Technology</i>	
<b>10:45 - 12:00</b>	<b>CS1 Mental Models at</b>	<b>Meeting Rooms C120-122</b>	<b>Papers</b>
<b>Chair(s): Svana Esche Technical University of Darmstadt</b>			
10:45	<b>25m</b>	<b>★ Analogies and Active Engagement: Introducing Computer Science</b>	<b>CC</b>
	<i>Talk</i>	<i>Jennifer Parham-Mocello Oregon State University, Martin Erwig Oregon State University, Margaret Niess Oregon State University</i>	
11:10	<b>25m</b>	<b>★ Conceptual Metaphor Theory in Action: Insights into Student Understanding of Computing Concepts</b>	<b>CC</b>
	<i>Talk</i>	<i>Colton Harper University of Nebraska-Lincoln, Keith Tran North Carolina State University, Steve Cooper University of Nebraska, Lincoln</i>	
11:35	<b>25m</b>	<b>★ The Correctness of the Mental Model of Arrays After Instruction for CS1 Students</b>	<b>CC</b>
	<i>Talk</i>	<i>Syeda Fatema Mazumder University of North Carolina at Charlotte, Manuel A. Pérez-Quiñones University of North Carolina Charlotte</i>	
<b>10:45 - 12:00</b>	<b>Tools at</b>	<b>Meeting Rooms D137-138</b>	<b>Papers</b>
<b>Chair(s): Christopher Moretti Princeton University, USA</b>			
10:45	<b>25m</b>	<b>★ Need a Programming Exercise Generated in Your Native Language? ChatGPT's Got Your Back: Automatic Generation of Non-English Programming Exercises Using OpenAI GPT-3.5</b>	
	<i>Talk</i>	<i>Mollie Jordan North Carolina State University, Kevin Ly University of California, San Diego, Adalbert Gerald Soosai Raj University of California, San Diego</i>	
11:10	<b>25m</b>	<b>★ GitKit: Learning Free and Open Source Collaboration in Context</b>	<b>GLOBAL</b>
	<i>Talk</i>	<i>Grant Braught Dickinson College, Stoney Jackson Western New England University, Cam Macdonell MacEwan University, Lori Postner Nassau Community College, Wesley Shumar Drexel University, Karl Wurst Worcester State University</i>	
11:35	<b>25m</b>	<b>★ Idea Builder: Motivating Idea Generation and Planning through Storyboarding</b>	
	<i>Talk</i>	<i>Wengran Wang North Carolina State University, Ally Limke North Carolina State University, Mahesh Bobbadi North Carolina State University, Amy Isvik North Carolina State University, Veronica Catete North Carolina State University, Tiffany Barnes North Carolina State University, Thomas Price North Carolina State University</i>	
<b>10:45 - 12:00</b>	<b>NSF Supporter Session at</b>	<b>Meeting Rooms D139-140</b>	<b>Supporter Sessions</b>
<b>Chair(s): Allyson Kennedy National Science Foundation</b>			
10:45	<b>75m</b>	<b>★ Demystifying the NSF merit review and grant writing process</b>	
	<i>Talk</i>	<i>Allyson Kennedy National Science Foundation</i>	

**10:45 - 12:00 GitHub Supporter Session at Meeting Rooms E141-142****Supporter Sessions**

- 10:45 75m ★ Making the most of GitHub Copilot in your computer science courses with Rob Crystal-Ornelas, PhD (Data Analyst) and Zenara Daley (Senior Software Engineer)**  
**Talk** *Rob Crystal-Ornelas GitHub, Zenara Daley GitHub*

GLOBAL

**10:45 - 12:00 Advancing LGBTQIA+ Voices at Oregon Ballroom 203****Panels**

- 10:45 75m ★ Broadening Participation in Computing Education: Advancing LGBTQIA+ Voices**  
**Talk** *Wendy Dubow NCWIT, Stephanie T. Jones Northwestern University, Stacey Sexton Sagefox Consulting Group, Sri Yash Tadimalla UNC Charlotte*

HYBRID

**10:45 - 12:00 LLM - tools at Oregon Ballroom 204****Papers**

Chair(s): Geoffrey Herman University of Illinois at Urbana-Champaign

- 10:45 25m ★ Evaluating Automatically Generated Contextualised Programming Exercises**  
**Talk** *Andre del Carpio Gutierrez The University of Auckland, Paul Denny The University of Auckland, Andrew Luxton-Reilly The University of Auckland*

GLOBAL

- 11:10 25m ★ A Fast and Accurate Machine Learning Autograder for the Breakout Assignment**  
**Talk** *Evan Liu Stanford University, David Yuan Stanford University, Syed Ahmed Oakland University, Elyse Cornwall Stanford University, Juliette Woodrow Stanford University, Kaylee Burns Stanford University, Allen Nie Stanford University, Emma Brunskill Stanford University, Chris Piech Stanford University, Chelsea Finn Stanford University*

- 11:35 25m ★ Beyond Traditional Teaching: Designing a virtual teaching assistant using LLMs for CS education**  
**Talk** *Mengqi Liu Mcgill university, Faten M'Hiri Mcgill university*

GLOBAL

**10:45 - 12:00 Technology We Can't Live Without at Portland Ballroom 251****Panels**

- 10:45 75m ★ Technology We Can't Live Without!**

**Talk** *Dan Garcia UC Berkeley, Della Dastur Stratford San Jose Middle School, Kimberly Hermans Troy High School, Nery Chapeton-Lamas MiraCosta College, Ariel Ortiz Tecnologico de Monterrey*

**12:00 - 13:45 Lunch on your own****Logistics****12:00 - 13:45 Global Lunch at Meeting Rooms C125-126****Logistics**

This is a ticketed event for attendees from outside the United States. Tickets can be purchased as part of your 2024 SIGCSE TS registration.

- 12:00 - 13:30 Spiffy STAR Assessments With PrairieLearn (Skill-specific, Tagged to competencies, Autograded, Randomized) at Meeting Rooms D137-138**

**Affiliated Events**

Event URL: <https://www.prairielearn.com/sigcse2024>

- 12:00 90m ★ Spiffy STAR Assessments With PrairieLearn (Skill-specific, Tagged to competencies, Autograded, Randomized)**  
**Other**

*Mariana Silva University of Illinois at Urbana Champaign, Firas Moosvi University of British Columbia Okanagan, Daniel Garcia University of California Berkeley, Armando Fox UC Berkeley*

**12:45 - 13:35 Flock 3a at Meeting Room D136****Birds of a Feather****12:45 50m ☆ Integrating Computer Science in Elementary Education****Talk***Lisa Garbrecht University of Texas at Austin, Texas Advanced Computing Center, Stephanie N. Baker The University of Texas at Austin, Zhuoying Wang The University of Texas at Austin***12:45 - 13:35 Flock 3b at Meeting Room E145****Birds of a Feather****12:45 50m ☆ Engaging Rural Populations in Computer Science****Talk***Nathan H. Bean Kansas State University, Russell Feldhausen Kansas State University, Joshua Weese Kansas State University, Michelle Friend University of Nebraska Omaha***12:45 - 13:35 Flock 3c at Meeting Rooms B110-112****Birds of a Feather****12:45 50m ☆ Connecting the Computer Science Teachers Association (CSTA) Western Chapters****Talk***Lauren Bricker University of Washington, Randy Macdonald Corvallis High School, Sean Glantz CSTA/Bend Senior High School***K12****12:45 - 13:35 Flock 3d at Meeting Rooms B113-114****Birds of a Feather****12:45 50m ☆ Finding Neurodivergent Community in Computing Education****Talk***Mara Kirdani-Ryan University of Washington, Omar Ibrahim University of Illinois Chicago***12:45 - 13:35 Flock 3e at Meeting Rooms B115-116****Birds of a Feather****12:45 50m ☆ Community-based Service Learning: Best Practices in Software Projects with Community Partners****Talk***Michael Goldweber Denison University, Stan Kurkovsky Central Connecticut State University, Chad Williams Central Connecticut State University, Nathan Sommer Xavier University***12:45 - 13:35 Flock 3f at Meeting Rooms B117-119****Birds of a Feather****12:45 50m ☆ Two-Year Program Conversations: Supporting a Diversity of Students, Articulation Pathways, and More****Talk***William Kerney , Laura Malave St. Petersburg Community College, William Pulling Fanshawe College, Cara Tang Portland Community College***CC****12:45 - 13:35 Flock 3g at Meeting Rooms C120-122****Birds of a Feather****12:45 50m ☆ Computing, Education, and Capitalism****Talk***Amy Ko University of Washington, Francisco Castro New York University, Aakash Gautam University of Pittsburgh, Anne Drew Hu Michigan State University, Sara Kingsley Carnegie Mellon University, Michael Lachney Michigan State University, Aman Yadav Michigan State University*

**12:45 - 13:35 Flock 3h at Oregon Ballroom 204****Birds of a Feather****12:45 50m ★ BOF: Hispanics in Computing****Talk***Brianna Posadas Virginia Tech, Oscar Veliz Northeastern University, Patricia Ordóñez University of Maryland, Baltimore County, Manuel A. Pérez-Quiñones University of North Carolina Charlotte***MSI****GLOBAL****12:45 - 13:35 Flock 3i at Portland Ballroom 251****Birds of a Feather****12:45 50m ★ Primarily Undergraduate Institution Faculty****Talk***Victoria Dean Olin College of Engineering, Lynn Kirabo Harvey Mudd College, Sophia Krause-Levy University of San Diego, Cynthia Taylor Oberlin College***12:45 - 13:35 Flock 3j at Portland Ballroom 252****Birds of a Feather****12:45 50m ★ Teaching Track Faculty in Computer Science****Talk***Laney Strange Northeastern University, Olga Glebova University of Connecticut, Melinda McDaniel Georgia Institute of Technology, Chris Gregg Stanford University***13:45 - 15:00 Widening the Pipeline at Meeting Room D135****Papers****Chair(s): Hyesung Park Georgia Gwinnett College****13:45 25m ★ Breaking Stereotypes and Feeding the STEM Pipeline****Talk***Naja Mack Morgan State University, Michael Adeleke Morgan State University, Elijah Ballou Morgan State University, Destiny Davis Morgan State University, Vincent Ingram Morgan State University, Katlyn Cox Morgan State University***14:10 25m ★ CATCHing CS Equity: Counselors, Administrators, and Teachers Collaborating Holistically for Systemic Change****Talk***Manee Ngozi M Nnamani Massachusetts Institute of Technology, Salome Otero Massachusetts Institute of Technology - Teaching Systems Lab, Julie Smith Institute for Advancing Computing Education, Josh Sheldon Massachusetts Institute of Technology - Teaching Systems Lab, Deborah Boisvert CSforMA, Inc., Justin Reich Massachusetts Institute of Technology - Teaching Systems Lab***14:35 25m ★ Multi-Pronged Pedagogical Approaches to Broaden Participation in Computing and Students' Computing Persistence: A robustness analysis of the STARS Computing Corps' impact on students' intentions to persist in computing****Talk***Lauren Wyatt Kent State University, Susan Fisk Kent State University, Clarissa Thompson Kent State University, Jamie Payton Temple University, Veronica Catete North Carolina State University, Audrey Rorrer UNC Charlotte, Tiffany Barnes North Carolina State University, Tom McKlin The Findings Group***MSI**

13:45 - 15:00

**K-12 Teacher Training at Meeting Room D136****Papers**

Chair(s): Leigh Ann Delyser CSforALL

- 13:45 25m ★ **Artificial Intelligence in Compulsory K-12 Computer Science Classrooms: A Scalable Professional Development Offer for Computer Science Teachers**  
**Talk** Franz Jetzinger TU Munich, Sven Baumer TU Munich, Tilman Michaeli TU Munich  
GLOBAL
- 14:10 25m ★ **Harmonizing Scratch Encore: Scaffolding K-8 Teachers in Customizing Culturally Responsive Computing Materials**  
**Talk** Minh Tran University of Chicago, Heather Killen University of Maryland, Jen Palmer University of Chicago, David Weintrop University of Maryland, Diana Franklin University of Chicago
- 14:35 25m ★ **Programming-Integrated Mathematics Learning for Future Elementary Teachers and non-STEM Majors**  
**Talk** Hyejin Park Drake University, Eric Manley Drake University

13:45 - 15:00

**Upper Level / Systems / IOT at Meeting Room E145****Papers**

Chair(s): Scott Valcourt Northeastern University

- 13:45 25m ★ **Experiences Teaching a Wireless for the Internet of Things Course Co-operatively at Multiple Universities**  
**Talk** Nabeel Nasir University of Virginia, Viswajith Govinda Rajan University of Virginia, Pat Pannuto University of California, San Diego, Branden Ghena Northwestern University, Bradford Campbell University of Virginia
- 14:10 25m ★ **Smart Use of Smart Devices in Your Home: A Smart Home Security and Privacy Workshop for the General Public**  
**Talk** Tushar Jois City College of New York, Tina Pavlovich Dartmouth College, Brigid McCarron Dartmouth College, David Kotz Dartmouth College, Timothy Pierson Dartmouth College  
GLOBAL
- 14:35 25m ★ **Using Embedded Xinu to Teach Operating Systems on Baremetal RISC-V**  
**Talk** Alexander Gebhard Marquette University, Jack Forden Marquette University, Oliver Laufenberg Marquette University, Dennis Brylow Marquette University  
GLOBAL

13:45 - 15:00

**Grading & Teams at Meeting Room E146****Papers**

Chair(s): Alvaro Monge Northeastern University, USA

- 13:45 25m ★ **A Peer Grading Approach for Open-ended Programming Projects Based on Binary System and Swiss System**  
**Talk** Liang Zhang Beihang University, Tianyi Chen Beihang University, Yue Zong Beihang University, Xiaopeng Gao Beihang University  
IN-PERSON ONLINE
- 14:10 25m ★ **Clearn: a cost-conscious student-led online judge for a large programming course**  
**Talk** Valeria Herskovic Pontificia Universidad Católica de Chile, Jorge Munoz-Gama Pontificia Universidad Católica de Chile, Fernando Balladares Pontificia Universidad Católica de Chile, Pablo Flores Pontificia Universidad Católica de Chile, Nicolas Quiroz Pontificia Universidad Católica de Chile  
IN-PERSON GLOBAL ONLINE
- 14:35 25m ★ **Attribution of Work in Programming Teams with Git Reporter**  
**Talk** Michael Guttmann Graz University of Technology, Aleksandar Karakaš Graz University of Technology, Denis Helic Modul University Vienna GmbH  
IN-PERSON ONLINE

## 13:45 - 15:00 Global and Software Engineering at Meeting Rooms B110-112

Chair(s): Paul W. McBurney

- 13:45 25m ★ **Application of Collaborative Learning Paradigms within Software Engineering Education: A Systematic Mapping Study**

*Rita Garcia Unity and Victoria University of Wellington, Christoph Treude Singapore Management University, Andrew Valentine The University of Melbourne*

GLOBAL

- 14:10 25m ★ **Improving Software Engineering Teamwork with Structured Feedback**

*Victor Huang Weiqi Carnegie Mellon University, Kori Krueger Morgan State University, Taya Cohen Carnegie Mellon University, Michael Hilton Carnegie Mellon University*

- 14:35 25m ★ **The Development of Students' Professional Competencies on a Work-Based Software Engineering Program**

*Matthew Barr University of Glasgow, Oana Andrei University of Glasgow, Alistair Morrison University of Glasgow, Syed Waqar Nabi University of Glasgow*

GLOBAL

## 13:45 - 15:00 Physical Computing in K-12 Education at Meeting Rooms B113-114

Chair(s): Julio Bahamon UNC Charlotte

- 13:45 25m ★ **Cultural-Centric Computational Embroidery**

*Megumi Kivuva University of Washington, Seattle, Jayne Everson University of Washington, Camilo Montes De Haro University of Washington, Seattle, Amy Ko University of Washington*



- 14:10 25m ★ **Failure Artifact Scenarios to Understand High School Students' Growth in Troubleshooting Physical Computing Projects**

*Luis Morales-Navarro University of Pennsylvania, Deborah Fields Utah State University, Deepali Barapatre University of Pennsylvania, Yasmin Kafai University of Pennsylvania*

- 14:35 25m ★ **The Integration of Computational Thinking and Making in the Classroom**

*David Magda University of Florida, Christina Gardner-McCune Herbert Wertheim College of Engineering, University of Florida, Gainesville, FL, USA, Yerika Jimenez University of Florida, Sharon Chu University of Florida, Abhishek Kulkarni University of Florida*

## 13:45 - 15:00 LLMs, Debugging, and Detection at Meeting Rooms B115-116

Chair(s): John Edwards Utah State University

- 13:45 25m ★ **Can Language Models Employ the Socratic Method? Experiments with Code Debugging**

*Erfan Al-Hossami UNC Charlotte, Razvan Bunescu UNC Charlotte, Justin Smith UNC Charlotte, Ryan Teehan New York University*

CC

GLOBAL

- 14:10 25m ★ **Detecting ChatGPT-Generated Code Submissions in a CS1 Course Using Machine Learning Models**

*Muntasir Hoq North Carolina State University, Yang Shi North Carolina State University, Juho Leinonen Aalto University, Damiola Babalola North Carolina State University, Collin Lynch North Carolina State University, Thomas Price North Carolina State University, Bita Akram North Carolina State University*

CC

- 14:35 25m ★ **Towards Comprehensive Metrics for Programming Cheat Detection**

*Frank Vahid UC Riverside / zyBooks, Ashley Pang UC Riverside, Benjamin Denzler University of California, Riverside*

CC

		<b>13:45 - 15:00 Active Learning at Meeting Rooms B117-119</b>		Papers
		Chair(s): Shanon Reckinger University of Illinois at Chicago		
13:45	25m	★ Putting the Service into Service Learning: A Report on a Survey of CS Faculty Talk	Avery Harrell University of Colorado Boulder, Sidney Lentz University of Colorado Boulder, Fujiko Robledo Yamamoto University of Colorado Boulder, Amy Voids University of Colorado Boulder, Lecia Barker University of Colorado Boulder	
14:10	25m	★ A Review of Cognitive Apprenticeship Methods in Computing Education Research Talk	Anshul Shah University of California, San Diego, Adalbert Gerald Soosai Raj University of California, San Diego	
14:35	25m	★ Bite-Sized Experiential Education for Computer and Information Science Talk	Julia Dean CU Boulder, Lecia Barker University of Colorado Boulder, Amy Voids University of Colorado Boulder	
		<b>13:45 - 15:00 Engaging Tools at Meeting Rooms C120-122</b>		Papers
		Chair(s): Lama Hamandi Northeastern University		
13:45	25m	★ Disentangling the Learning Gains from Reading a Book Chapter and Completing Proof Blocks Problems Talk	Seth Poulsen Utah State University, Yael Gertner University of Illinois Urbana-Champaign, Hongxuan Chen University of Illinois at Urbana-Champaign, Benjamin Cosman University of California San Diego, Matthew West University of Illinois at Urbana-Champaign, Geoffrey Herman University of Illinois at Urbana-Champaign	
14:10	25m	★ Solving Proof Block Problems Using Large Language Models Talk	Seth Poulsen Utah State University, Sami Sarsa Aalto University, James Prather Abilene Christian University, Juho Leinonen Aalto University, Brett Becker University College Dublin, Arto Hellas Aalto University, Paul Denny The University of Auckland, Brent Reeves Abilene Christian University	GLOBAL
14:35	25m	★ Using Worked Examples for Engaging in Epistemic Programming Projects Talk	Sven Hüsing Paderborn University, Carsten Schulte University of Paderborn, Sören Sparmann Paderborn University, Mario Bolte Paderborn University	GLOBAL
		<b>13:45 - 15:00 Undergraduate Finals at Meeting Rooms D137-138</b>		ACM Student Research Competition
		+D		
		Finalists in the Undergraduate ACM SRC competition will be presenting during this time.		
		<b>13:45 - 15:00 Microsoft Supporter Session at Meeting Rooms E141-142</b>		Supporter Sessions
13:45	75m	★ Visual Studio Code for Education and Future-Ready Skills in CS Classrooms Talk	Dr. Adam Smeets Microsoft, Austin Cory Bart University of Delaware, USA	
		<b>13:45 - 15:00 Codio Supporter Session at Meeting Rooms E143-144</b>		Supporter Sessions
13:45	75m	★ A Panel of Leading Educators Discussing the Major Challenges and Opportunities in CS Education Panel	Armando Fox UC Berkeley, Eric Fouh University of Pennsylvania	
		<b>13:45 - 15:00 Liberal Arts Computing Curricula at Oregon Ballroom 203</b>		Panels
13:45	75m	★ A Panel for Distinctive Computing Curricula: Programs Aligned with Liberal Arts Institutional and Departmental Identity Talk	Andrea Tartaro Furman University, Amanda Holland-Minkley Washington & Jefferson College, Mario Nakazawa Berea College, David Reed Creighton University	HYBRID

**Papers****13:45 - 15:00 Ethics & Social Justice at Oregon Ballroom 204**

Chair(s): Emanuelle Burton College of Engineering, University of Illinois at Chicago

- 13:45 25m ★ **Do Embedded Ethics Modules Have Impact Beyond the Classroom?** GLOBAL  
*Talk* Diane Horton University of Toronto, David Liu University of Toronto, Sheila McIlraith University of Toronto, Nina Wang University of Toronto, Steven Coyne University of Toronto
- 14:10 25m ★ **Teaching Ethics and Activism in a Human-Computer Interaction Professional Master's Program**  
*Talk* Veronica Rivera Stanford University, Norman Su University of California, Santa Cruz
- 14:35 25m ★ **The Need for More Justice-Oriented Courses in Undergraduate Computer Science Curricula**  
*Talk* Sukanya Kannan Moudgalya University of Tennessee, Knoxville, Amanda Zeller University of Tennessee, Knoxville

**13:45 - 15:00 Equitable Professional Learning for K12 Computer Science Teachers at Portland Ballroom 251** Panels

- 13:45 75m ★ **Equitable Professional Learning for K12 Computer Science Teachers** K12  
*Talk* Shana V. White Kapor Center, Allison Scott Kapor Center for Social Impact, Aman Yadav Michigan State University, Diane Levitt Cornell Tech

**13:45 - 15:00 Special Session: BPC Activities at Portland Ballroom 252** Special Sessions

- 13:45 75m ★ **Selecting BPC Activities: Discussion of the Feasibility, Relevance, and Sustainability of 60+ Activities from BPCnet.org** MSI  
*Talk* Briana Scurry University of North Carolina, Chapel Hill, Colleen M. Lewis University of Illinois at Urbana-Champaign, Luther Tychonievich University of Illinois Urbana-Champaign

**15:00 - 15:45 Coffee Break at Exhibit Hall E** Logistics

- 15:00 45m ★ **Coffee and Refreshments**

*Coffee break*

- 15:00 45m ★ **SIGCSE Coffee Break Show**

*Other* Mark Sherriff University of VirginiaHYBRID**15:00 - 15:45 Demos at Exhibit Hall E - Demos** Demos

- 15:00 45m ★ **Demo 4A: Providing Students with Standardized, Cloud-Based Programming Environments at Term's Start (for Free)**

*Demonstration* Rongxin Liu Harvard University, Charlie Liu Yale University, Carter Zenke Harvard University, David J. Malan Harvard University

- 15:00 45m ★ **Demo 4B: Algot: A Visual, Hands-On Approach to Introductory Computer Science**

*Demonstration* Sverrir Thorgeirsson ETH Zurich, Theo B. Weidmann ETH Zurich, Sara Hooshangi Virginia TechGLOBALCC

- 15:00 45m ★ **Demo 4C: Embedding executable code in slides for introductory programming: the case of Interactive Code Playgrounds**

*Demonstration* Lorenzo Angeli University of Trento, Luca De Menego University of Trento, Maurizio Marchese University of TrentoGLOBAL

**15:00 - 17:00 Posters 3 at Exhibit Hall E - Posters**

Chair(s): Meghan Allen University of British Columbia, Ashish Aggarwal University of Florida

15:00	<b>2h</b>	<b>Star</b>	<b>Analogy in Upper Division Computer Science Courses</b>	
	<i>Talk</i>		Maria R. Ebling United States Military Academy, West Point, Ryan Dougherty United States Military Academy, Nicholas J. Clark United States Military Academy, West Point	
15:00	<b>2h</b>	<b>Star</b>	<b>The Potential of Humanitarian Applications to Increase Interest and Motivation of Underrepresented Student Groups</b>	<b>MSI</b>
	<i>Talk</i>		Lori Postner Nassau Community College, Heidi J.C. Ellis Western New England University, Gregory W. Hislop Drexel University, Philadelphia, PA, USA, Wesley Shumar Drexel University	
15:00	<b>2h</b>	<b>Star</b>	<b>Supporting Mastery Learning Through an Adaptive Grade Portal</b>	
	<i>Talk</i>		Connor Bernard University of California, Berkeley, Dev Ahluwalia University of California, Berkeley, Madelen Flores University of California, Berkeley, Wilson Chu University of California, Berkeley, Yuanhan Li University of California, Berkeley, Dan Garcia UC Berkeley	
15:00	<b>2h</b>	<b>Star</b>	<b>Achieving Diversity in AI-focused Graduate Research Traineeships</b>	
	<i>Talk</i>		Cecilia O. Alm Rochester Institute of Technology, Esa Rantanen Dept. of Psychology, Kristen Shinohara School of Information, Ferat Sahin Dept. of Electrical and Microelectronic Engineering, Chelsea Baileyshea Compass Evaluation, Reynold Bailey Rochester Institute of Technology	
15:00	<b>2h</b>	<b>Star</b>	<b>Why Learn This? Visualizing Pathways between CS Course Topics and Careers</b>	
	<i>Talk</i>		Stacey Levine Georgia State University, Anu Bourgeois Georgia State University	
15:00	<b>2h</b>	<b>Star</b>	<b>Special education teachers evaluating the accessibility of CS educational robotics</b>	
	<i>Talk</i>		Andrew B. Bennett University of Florida, Maya Israel University of Florida, Joanne R. Barrett University of Florida, Debra Kelly Thomas Broward County School District, Jason McKenna VEX Robotics	
15:00	<b>2h</b>	<b>Star</b>	<b>Exploring Technology for Accessibility Through a First-Year Writing Seminar</b>	
	<i>Talk</i>		Pamela Cutter Kalamazoo College	
15:00	<b>2h</b>	<b>Star</b>	<b>Understanding the Role of Temperature in Diverse Question Generation by GPT-4</b>	
	<i>Talk</i>		Arav Agarwal Carnegie Mellon University, Karthik Mittal Carnegie Mellon University, Aidan Doyle Carnegie Mellon University, Pragnya Sridhar Carnegie Mellon University, Zipiao Wan Carnegie Mellon University, Jacob Doughty Carnegie Mellon University, Jaromir Savelka Carnegie Mellon University, Majd Sakr Carnegie Mellon University	
15:00	<b>2h</b>	<b>Star</b>	<b>Learning Software Engineering Principles with Program Wars v.3.0</b>	<b>GLOBAL</b>
	<i>Talk</i>		Md. Hasan Tareque University of Lethbridge, John Anvik University of Lethbridge	
15:00	<b>2h</b>	<b>Star</b>	<b>Embracing Mathematical Conjecture Through Coding and Computational Thinking</b>	
	<i>Talk</i>		Sarah Castle University of Idaho	
15:00	<b>2h</b>	<b>Star</b>	<b>Using Concept Maps for Notional Machine Selection in CS1</b>	
	<i>Talk</i>		Ethan Richards Colorado School of Mines, Sonia Spindt Cherry Creek Schools, Gabriel Fierro Colorado School of Mines	
15:00	<b>2h</b>	<b>Star</b>	<b>Augmenting Computer Science Undergraduate TA Training Programs to Benefit Recruitment, Refinement, and Retention</b>	
	<i>Talk</i>		Julie Gawenda University of Illinois Chicago, Adam Koehler University of Illinois Chicago, Agne Nakvosaite University of Illinois Chicago	
15:00	<b>2h</b>	<b>Star</b>	<b>Implementation and Evaluation of Equitable Practices in an Introductory CS Course</b>	
	<i>Talk</i>		Nadia Najjar University of North Carolina at Charlotte, Debarati Basu Embry-Riddle Aeronautical University	
15:00	<b>2h</b>	<b>Star</b>	<b>Supporting Instructors Adoption of Peer Instruction</b>	
	<i>Talk</i>		Xingjian Gu University of Michigan, Barbara Ericson University of Michigan, Zihan Wu University of Michigan	
15:00	<b>2h</b>	<b>Star</b>	<b>Barriers to Equitable CS Expansion: Perceptions of Secondary Teachers of Computer Science during COVID-19</b>	
	<i>Talk</i>		Robert Schwarzhaupt American Institutes for Research, Ryan Torbey American Institutes for Research, Bridina Lemmer American Institutes for Research, Joseph Wilson American Institutes for Research	

15:00	<b>2h ★ Circuit Tiles: Mixing Culture, Crafts, and Circuits to Inspire Diversity in Computing</b>	Talk	Maria Lopez-Delgado University of Maryland, Baltimore County	
15:00	<b>2h ★ Introducing Theoretical Computer Science Education in Social Sciences and Economics Degrees</b>	Talk	Rafael del Vado Virseda Universidad Complutense de Madrid	GLOBAL
15:00	<b>2h ★ Impacts of Academic Preparedness on CS1 Performance</b>	Talk	Barbara Martinez Neda University of California, Irvine, Flor Morales University of California, Irvine, Kitana Carbajal Juarez University of California, Irvine, Jennifer Wong-Ma University of California, Irvine, Sergio Gago-Masague University of California, Irvine	
15:00	<b>2h ★ A Systematic Literature Mapping of COVID-19 Papers in Computer Science Education</b>	Talk	Brian Harrington University of Toronto Scarborough, Sharon Alex University of Toronto Scarborough, Leon Lee University of Toronto Scarborough, Colin Lin University of Toronto Scarborough, Zixiao Ren University of Toronto Scarborough, Youxin Tan University of Toronto Scarborough, Conroy Trinh University of Toronto Scarborough, shengsong xu University of Toronto Scarborough, Austin Yang University of Toronto Scarborough	GLOBAL
15:00	<b>2h ★ Web-based Course Assessment System of Student Learning Outcomes: A Pilot Study</b>	Talk	Daniel Ojeda Kean University, Patricia Morreale Kean University, Daehan Kwak Kean University	
15:00	<b>2h ★ An LLM-based Reflection Analysis Tool for Identifying and Addressing Challenging Topics</b>	Talk	Nasrin Dehbozorgi Kennesaw State University, Mourya Teja Kunuku Kennesaw State University	
15:00	<b>2h ★ Programming Language Knowledge Transfer that Teachers Observe in their Classrooms</b>	Talk	Jennifer Houchins WestEd, Rosalind Owen WestEd, Bryan Matlen WestEd, Yvonne Kao WestEd	
15:00	<b>2h ★ Should we teach computing ethics to master's students?</b>	Talk	Grace Barkhuff Georgia Institute of Technology, Judith Uchidiuno Georgia Institute of Technology, Ellen Zegura Georgia Institute of Technology	
15:00	<b>2h ★ Validation of a Bebras-Based Test to Assess Computational Thinking Abilities in First-Year College Students</b>	Talk	Federico Meza Universidad Técnica Federico Santa María, Andrea Vásquez Universidad Técnica Federico Santa María, Daniel San Martín Universidad Técnica Federico Santa María	GLOBAL
15:00	<b>2h ★ Incorporating Retakes in a Robotics Class with Labs</b>	Talk	Janine Hoelscher University of North Carolina at Chapel Hill, Bryce Ikeda University of North Carolina at Chapel Hill, Daniel Szafrir University of North Carolina at Chapel Hill, Ron Alterovitz University of North Carolina at Chapel Hill	
15:00	<b>2h ★ A Comparative Analysis of Tools &amp; Task Types for Measuring Computational Problem-Solving</b>	Talk	Engin Bumbacher HEP Vaud, Jérôme Breider EPFL, Richard Davis EPFL	GLOBAL
15:00	<b>2h ★ More than a checklist: Redesigning a UI/UX curriculum to emphasize accessibility</b>	Talk	Talie Massachi Brown University	
15:00	<b>2h ★ Engaging Students from Rural Communities in AI Education with Game-Based Learning</b>	Talk	Alex Goslen North Carolina State University, Anisha Gupta North Carolina State University, Smrithi Muthukrishnan North Carolina State University, Raven Midgett North Carolina State University, Wookhee Min North Carolina State University, Jessica Vandenberg North Carolina State University, Veronica Catete North Carolina State University, Bradford Mott North Carolina State University	
15:00	<b>2h ★ Motivating and Increasing the Relevance of Elementary Computer Science in Rural Communities</b>	Talk	Dajung Diana Oh American Institutes for Research, Kathryn M. Rich American Institutes for Research, Katie Bosch-Wilson Idaho STEM Action Center, Heather Cunningham Boot Up Professional Development	

15:00	<b>2h ★ Programming Assignment Ungrading as a License to Learn: Implementing Specifications Grading in the Undergraduate Web Development Classroom</b>	Raghav V. Sampangi Dalhousie University, Eric Poitras Dalhousie University, Mayra Barrera Machuca Dalhousie University	GLOBAL
15:00	<b>2h ★ Developing Interactive Exercise Materials for Machine Learning Using Spreadsheets</b>	Atsuhiko Maeda Kanagawa Institute of Technology	GLOBAL
15:00	<b>2h ★ Enhancing Programming Education through Game-Based Learning: Design and Implementation of a Puyo Puyo-Inspired Teaching Tool</b>	TIAN RUOCHEN Waseda University, Daisuke Saito Takachiho University, Hironori Washizaki Waseda University, Yoshiaki Fukazawa Waseda University, Hiroshi Kobayashi System Information Co.,Ltd, Ayumi Tsuji System Information Co.,Ltd	GLOBAL
15:00	<b>2h ★ Towards Reuse of Resources and Replication of Results to Improve Instruction on Refactoring Conditionals for Novice Programmers</b>	Cecily Heiner Oregon Institute of Technology, Dana Nelson Oregon Institute of Technology	
15:00	<b>2h ★ Support Patterns in Classrooms Implementing a Computer Science and Physical Computing Curriculum</b>	Nga Hoang University of Colorado Boulder, Jeffrey Bush University of Colorado Boulder, Indrani Dey University of Wisconsin-Madison	
15:00	<b>2h ★ Use of Large Language Models for Extracting Knowledge Components in CS1 Programming Exercises</b>	Rose Niousha University of California, Berkeley, Muntasir Hoq North Carolina State University, Bita Akram North Carolina State University, Narges Norouzi University of California, Berkeley	
15:00	<b>2h ★ Supporting Mastery Learning with Flexible Extensions</b>	Yuerou Tang University of California, Berkeley, Jacob Yim UC Berkeley, Jordan Schwartz UC Berkeley, Madison Bohannan UC Berkeley, Dana Benedicto UC Berkeley, Charisse Liu Stanford University, Armando Fox UC Berkeley, Lisa Yan University of California, Berkeley, Narges Norouzi University of California, Berkeley	
15:00	<b>2h ★ Exploring Collaboration as a Bridge to K-8 CS Integration</b>	Justin Cannady University of Minnesota - Twin Cities, Jennifer Rosato College of St. Scholastica, Paul Schonfeld University of Minnesota - Twin Cities	
15:00	<b>2h ★ Community Building and Joyful Learning in Computer Science Education Through Online At-Scale Seminars</b>	Ana Rusch Georgia Institute of Technology, Eric Ianni Georgia Institute of Technology	
15:00	<b>2h ★ Cracking the Cultural Code: Understanding the Cultural Barriers for Asian International CS Students in the US</b>	Sandeep Shapit North Carolina State University, Madison Thomas North Carolina State University, Janet Brock North Carolina State University, Tiffany Barnes North Carolina State University	
15:00	<b>2h ★ The Relationships Between Modality, Peer Instruction Discussion, and Class Sentiment in Hybrid Courses</b>	Salma El Otmani Duke University, Janet Jiang Duke University, Shao-Heng Ko Duke University, Kristin Stephens-Martinez Duke University	

<b>15:45 - 17:00</b>	<b>Socially Relevant Computing for Middle-School Students at Meeting Room D135</b> <b>Chair(s): Tyler Menezes CodeDay</b>	<b>Papers</b>
<b>15:45 25m</b>	<b>★ Investigating Middle School Students' Early Experience in Learning Computer Science Through Creating Apps for Social Good</b>	<span style="border: 1px solid black; padding: 2px;">K12</span>
	<i>Gillian Bausch University at Albany, Lijun Ni University at Albany, Elizabeth Thomas-Cappello University at Albany, SUNY, Fred Martin University of Texas at San Antonio, Bernardo Feliciano University of Massachusetts Lowell, Foozieh Mirderikvand University of Massachusetts Lowell</i>	
<b>16:10 25m</b>	<b>★ Iterative Design of a Socially-Relevant and Engaging Middle School Data Science Unit</b>	<span style="border: 1px solid black; padding: 2px;">K12</span>
	<i>David McKinney WestEd, Chloe Morton WestEd, Brenda Tuohy Oakland Unified School District, Samuel Berg Oakland Unified School District, Audrey Karlstad Oakland Unified School District, Courtney Ortega Oakland Unified School District, Zelda Allison Oakland Unified School District, Griffin Munzel Oakland Unified School District, Max Washburn Oakland Unified School District, Yvonne Kao WestEd</i>	
<b>16:35 25m</b>	<b>★ Talking Techquity: Teaching the Equity and Social Justice Impacts of Computing in Middle School Classrooms</b>	<span style="border: 1px solid black; padding: 2px;">K12</span>
	<i>Merijke Coenraad Digital Promise, David Weintrop University of Maryland</i>	
<b>15:45 - 17:00</b>	<b>Visual Approaches at Meeting Room D136</b>	<b>Papers</b>
	<b>Chair(s): Joel Adams Calvin University</b>	
<b>15:45 25m</b>	<b>★ Analyzing-Evaluating-Creating: Assessing Computational Thinking and Problem Solving in Visual Programming Domains</b>	<span style="border: 1px solid black; padding: 2px;">GLOBAL</span>
	<i>Ahana Ghosh Max Planck Institute for Software Systems, Liina Malva Max Planck Institute for Software Systems, Adish Singla Max Planck Institute for Software Systems</i>	
<b>16:10 25m</b>	<b>★ Recursion in Secondary Computer Science Education: A Comparative Study of Visual Programming Approaches</b>	<span style="border: 1px solid black; padding: 2px;">GLOBAL</span>
	<i>Sverrir Thorgeirsson ETH Zurich, Lennart Lais ETH Zürich, Theo B. Weidmann ETH Zurich, Zhendong Su ETH Zurich</i>	
<b>16:35 25m</b>	<b>★ Visual CryptoED: A Role-Playing and Visualization Tool for K-12 Cryptography Education</b>	
	<i>Pranathi Rayavaram University of Massachusetts Lowell, Sahithi Charitha Dindukuri University of Massachusetts Lowell, Krishna Vellamchety University of Massachusetts Lowell, Justin Marwad University of Massachusetts Lowell, Maryam Abbasalizadeh University of Massachusetts Lowell, Claire Seungeun Lee University of Massachusetts Lowell, Sashank Narain University of Massachusetts Lowell</i>	
<b>15:45 - 17:00</b>	<b>Software Engineering &amp; Soft Skills at Meeting Room E146</b>	<b>Papers</b>
	<b>Chair(s): Mia Minnes</b>	
<b>15:45 25m</b>	<b>★ Software Engineering Education Must Adapt and Evolve for an LLM Environment</b>	<span style="border: 1px solid black; padding: 2px;">IN-PERSON</span> <span style="border: 1px solid black; padding: 2px;">GLOBAL</span> <span style="border: 1px solid black; padding: 2px;">ONLINE</span>
	<i>Vassilka Kirova Nokia Bell Labs, Cyril S. Ku William Paterson University, Joseph Laracy Seton Hall University, Thomas Marlowe Seton Hall University</i>	
<b>16:10 25m</b>	<b>★ From Degree to Developer: the Creation and Evolution of a CS Course Designed to Bridge the Academia-Industry Gap</b>	<span style="border: 1px solid black; padding: 2px;">IN-PERSON</span> <span style="border: 1px solid black; padding: 2px;">ONLINE</span>
	<i>Jonathan Cazalas Florida Southern College, Christian Roberson Florida Southern College, Zeeshan Furqan Discovery Inc</i>	
<b>16:35 25m</b>	<b>★ Exploring Student Motivation in Integration of Soft Skills Training within Three Levels of Computer Science Programs</b>	<span style="border: 1px solid black; padding: 2px;">IN-PERSON</span> <span style="border: 1px solid black; padding: 2px;">GLOBAL</span> <span style="border: 1px solid black; padding: 2px;">ONLINE</span>
	<i>En-Shiu Annie Lee University of Toronto, Luki Danukarjanto FOCUS.inspired, Sicong Huang University of Toronto, Sadia Sharmin University of Toronto, Shou-Yi Hung University of Toronto, Tong Su University of Toronto</i>	

15:45 - 17:00

**Testing and Academic Integrity at Meeting Rooms B110-112****Papers**

Chair(s): Kim Titus North Carolina State University

- 15:45 25m ★ Comparing the Security of Three Proctoring Regimens for Bring-Your-Own-Device Exams**

*Rishi Gulati University of Illinois at Urbana-Champaign, Matthew West University of Illinois at Urbana-Champaign , Craig Zilles University of Illinois at Urbana-Champaign, Mariana Silva University of Illinois at Urbana Champaign*

- 16:10 25m ★ "I didn't know": Examining Student Understanding of Academic Dishonesty in Computer Science**

*Michael Liut University of Toronto Mississauga, Anna Ly University of Toronto Mississauga, Jessica Jia-Ni Xu University of Toronto, Justice Benson Western Washington University, Paul Vrbik The University of Queensland, Caroline Hardin Western Washington University*

GLOBAL

- 16:35 25m ★ One Solution to Addressing Assessment Logistical Problems: An experience setting up and operating an in-person testing center**

*Kelly Downey UC Riverside, Kris Miller University of California, Riverside, Mariana Silva University of Illinois at Urbana Champaign, Craig Zilles University of Illinois at Urbana-Champaign*

15:45 - 17:00

**Social Justice and Equity at Meeting Rooms B113-114****Papers**

Chair(s): Carl Haynes-Magyar Carnegie Mellon University

- 15:45 25m ★ Designing for Equity in Education Via Computational Thinking: A Case Study**

*Talk Ryoko Yamaguchi Plus Alpha Research and Consulting, Cyntrica Eaton Technologies Consulting Group*

- 16:10 25m ★ "It Can Relate to Real Lives": Attitudes and Expectations in Justice-Centered Data Structures & Algorithms for Non-Majors**

*Anna Batra University of Washington, Iris Zhou University of Washington, Suh Young Choi University of Washington, Chongjiu Gao University of Washington, Yanbing Xiao University of Washington, Sonia Fereidooni University of Washington, Kevin Lin University of Washington, Seattle*

- 16:35 25m ★ Undergraduate Student Attitudes towards a Social Justice Context in a Programming Project**

*Aadarsh Padiyath University of Michigan, Ann Arbor, Kyle Ashburn University of North Carolina, Chapel Hill, Barbara Ericson University of Michigan*

15:45 - 17:00

**CS0 and CS1 at Meeting Rooms B115-116****Papers**

Chair(s): Miranda Parker San Diego State University

- 15:45 25m ★ Challenges and Approaches to Teaching CS1 in Prison**

*Talk Emma Hogan University of California, San Diego, Ruoxuan Li Columbia University, Adalbert Gerald Soosai Raj University of California, San Diego, William Griswold UC San Diego, Leo Porter University of California San Diego*

- 16:10 25m ★ Community Action Computing: A Data-centric CS0 Course**

*Talk Ayaan M. Kazerouni California Polytechnic State University, San Luis Obispo, Jane Lehr California Polytechnic State University, Zoë Wood California Polytechnic State University*

- 16:35 25m ★ Socially Responsible Computing in an Introductory Course**

*Aakash Gautam University of Pittsburgh, Anagha Kulkarni San Francisco State University, Sarah Hug Colorado Evaluation & Research Consulting, Jane Lehr California Polytechnic State University, Ilmi Yoon San Francisco State University*

	<b>15:45 - 17:00</b>	<b>Automating Assessment at Meeting Rooms B117-119</b>	<b>Papers</b>
	Chair(s): Jack Sun University of Toronto		
15:45	25m	★ Advancing Automated Assessment Tools — Opportunities for Innovations in Upper-level Computing Courses: A Position Paper Talk <i>Steffan Hooper University of Auckland, Burkhard Wünsche University of Auckland, Andrew Luxton-Reilly The University of Auckland, Paul Denny The University of Auckland, Haoran Feng University of Auckland</i>	GLOBAL
16:10	25m	★ Generating Multi-Part Autogradable Faded Parsons Problems From Code-Writing Exercises Talk <i>Serena Caraco University of California, Berkeley, Nelson Lojo University of California, Berkeley, Michael Verdicchio The Citadel, Armando Fox UC Berkeley</i>	
16:35	25m	★ Learning with Style: Improving Student Code-Style Through Better Automated Feedback Talk <i>Liam Saliba The University of Melbourne, Elisa Shioji The University of Melbourne, Eduardo Araujo Oliveira The University of Melbourne, Shaanan Cohney University of Melbourne, Jianzhong Qi The University of Melbourne</i>	GLOBAL
	<b>15:45 - 17:00</b>	<b>CS1 - Planning Before Coding at Meeting Rooms C120-122</b>	<b>Papers</b>
	Chair(s): Gustavo Rodriguez-Rivera Purdue University		
15:45	25m	★ Improving Knowledge of CS1 Terminology Through a Peer Reviewed Translation Activity: Results and Feedback Talk <i>Suad Alaofi University College Dublin, Seán Russell University College Dublin</i>	CC GLOBAL
16:10	25m	★ Growth in Knowledge of Programming Patterns: A Comparison Study of CS1 vs. CS2 Students Talk <i>Sara Nurollahian University of Utah, Anna Rafferty Carleton College, Noelle Brown University of Utah, Eliane Wiese University of Utah</i>	CC
16:35	25m	★ Observations on the Design of Program Planning Notations for Students Talk <i>Elijah Rivera Brown University, Shriram Krishnamurthi Brown University, Kathi Fisler Brown University</i>	CC
	<b>15:45 - 17:00</b>	<b>Graduate Finals at Meeting Rooms D137-138</b>	<b>ACM Student Research Competition</b>
	Finalists in the Graduate ACM SRC competition will be presenting during this time.		
	<b>15:45 - 17:00</b>	<b>Google Supporter Session at Meeting Rooms E141-142</b>	<b>Supporter Sessions</b>
15:45	75m	★ Making CS Education Accessible for All Students Talk <i>Maya Israel University of Florida, Jason McKenna VEX Robotics, Andrew B. Bennett University of Florida</i>	
	<b>15:45 - 17:00</b>	<b>Special Session: CS2023: The Final Report at Oregon Ballroom 203</b>	<b>Special Sessions</b>
15:45	75m	★ Computer Science Curricula 2023 (CS2023): The Final Report Talk <i>Amruth Kumar Ramapo College, Rajendra K. Raj Rochester Institute of Technology (RIT)</i>	CC HYBRID

	<b>15:45 - 17:00</b>	<b>LLMs - Error message and Coding struggles at</b>	<b>Oregon Ballroom 204</b>	<b>Papers</b>
		Chair(s): Celine Latulipe University of Manitoba		
15:45	25m	★ A Large Scale RCT on Effective Error Messages in CS1 Talk	Sierra Wang Stanford University, John C. Mitchell Stanford University, Chris Piech Stanford University	GLOBAL 
16:10	25m	★ dcc --help: Transforming the Role of the Compiler by Generating Context-Aware Error Explanations with Large Language Models Talk	Andrew Taylor University of New South Wales, Sydney, Alexandra Vassar University of New South Wales, Sydney, Jake Renzella University of New South Wales, Sydney, Hammond Pearce University of New South Wales, Sydney	GLOBAL
16:35	25m	★ Exploring Novice Programmers' Testing Behavior: A first step to define coding struggle Talk	Gabriel Silva de Oliveira North Carolina State University, Zhihui Gao North Carolina State University, Sarah Heckman North Carolina State University, Collin Lynch North Carolina State University	
	<b>15:45 - 17:00</b>	<b>Demystifying CS for Elementary Teachers at</b>	<b>Portland Ballroom 251</b>	<b>Panels</b>
15:45	75m	★ Using Computational Thinking to Demystify Computer Science for Elementary Teachers Talk	Diane Levitt Cornell Tech, Dylana Garfus-Knowles Ashland School District, Wyman Khuu KIPP NYC, Sara Siddappa NYC Dept. of Education, PS 89 Cypress Hills Community School	K12
	<b>15:45 - 17:00</b>	<b>Special Session: Advancing Social Justice through Data Science at</b>	<b>Portland Ballroom 252</b>	<b>Special Sessions</b>
15:45	75m	★ Advancing Social Justice through Data Science Talk	Ana Smaranda Sandu Wellesley College, RN Uma North Carolina Central University, John Bartucz University of Minnesota, Laney Strange Northeastern University	MSI
	<b>17:10 - 18:00</b>	<b>SIGCSE Business Meeting at</b>	<b>Oregon Ballroom 203</b>	<b>Logistics</b>
17:10	50m	★ SIGCSE Business Meeting Meeting		HYBRID
	<b>18:00 - 19:00</b>	<b>Consortium for Computing Sciences in Colleges (CCSC) Business Meeting at</b>	<b>Meeting Rooms C120-122</b>	<b>Affiliated Events</b>
18:00	60m	★ Consortium for Computing Sciences in Colleges (CCSC) Business Meeting Meeting		
	<b>18:00 - 19:00</b>	<b>Minority Serving Institutions (MSI) Meeting at</b>	<b>Meeting Rooms D137-138</b>	<b>Affiliated Events</b>
18:00	60m	★ Minority Serving Institutions (MSI) Meeting Meeting	Jody Paul Metropolitan State University of Denver, Debzani Deb Winston-Salem State University	MSI
	<b>18:00 - 19:00</b>	<b>NCWIT Reception at</b>	<b>Oregon Ballroom 201</b>	<b>Affiliated Events</b>
18:00	60m	★ NCWIT Reception Other		

	<b>18:00 - 20:00</b>	<b>Community College Reception sponsored by ABET at Oregon Ballroom 202</b>	<b>Affiliated Events</b>
	18:00	<b>2h</b> ★ Community College Reception sponsored by ABET <i>Other</i>	<b>CC</b>
	<b>18:00 - 20:00</b>	<b>TeachAI: Guidance on the Future of CS Education in an Age of AI at Portland Ballroom 252</b>	<b>Affiliated Events</b>
	18:00	<b>2h</b> ★ TeachAI: Guidance on the Future of CS Education in an Age of AI <i>Other</i>	
	<b>18:10 - 18:50</b>	<b>Technical Symposium Steering Committee Consultation Session at Oregon Ballroom 203</b>	<b>Logistics</b>
	18:10	<b>40m</b> ★ Technical Symposium Steering Committee Consultation Session <i>Meeting</i>	<b>HYBRID</b>
	<b>19:00 - 22:00</b>	<b>Workshop at Meeting Room D135</b>	<b>Workshops</b>
	19:00	<b>3h</b> ★ Workshop 308: Machine Learning on the Move: Teaching ML Kit for Firebase in a <i>Talk</i> Mobile Apps Course <i>Todd Sproull Washington University in St. Louis, Doug Shook Washington University in St. Louis</i>	
	<b>19:00 - 22:00</b>	<b>Workshop at Meeting Room D136</b>	<b>Workshops</b>
	19:00	<b>3h</b> ★ Workshop 301: Research Expansion and Infrastructure Investment for Capacity <i>Talk</i> Building <i>Sonal Dekhane Georgia Gwinnett College, Subrata Acharya National Science Foundation</i>	
	<b>19:00 - 22:00</b>	<b>Workshop at Meeting Room E145</b>	<b>Workshops</b>
	19:00	<b>3h</b> ★ Workshop 303: Project-based activities to introduce hardware in a software-focused <i>Talk</i> course <i>Lama Hamandi Northeastern University, Mark Miller Northeastern University and Learningtech.org, Shivakumar Mathapathi Northeastern University</i>	
	<b>19:00 - 22:00</b>	<b>Workshop at Meeting Room E146</b>	<b>Workshops</b>
	19:00	<b>3h</b> ★ Workshop 306: A Quantum Abacus for Teaching Quantum Algorithms <i>Talk</i> <i>Dan-Adrian German Indiana University Bloomington, Marcelo Pias Federal University of Rio Grande, Qiao Xiang Xiamen University</i>	<b>GLOBAL</b>
	<b>19:00 - 22:00</b>	<b>Workshop at Meeting Rooms B110-112</b>	<b>Workshops</b>
	19:00	<b>3h</b> ★ Workshop 305: Exploring Java Programming after Java Version 8 <i>Talk</i> <i>Shawn Lupoli Texas A&amp;M University, Heather Stephens Oracle</i>	

19:00 - 22:00 Workshop at Meeting Rooms B113-114				Workshops
19:00	3h	★	Workshop 307: Providing Students with Standardized, Cloud-Based Programming Environments at Term's Start (for Free)	Talk <i>David J. Malan Harvard University, Rongxin Liu Harvard University, Carter Zenke Harvard University, Doug Lloyd Harvard University</i>
19:00 - 22:00 Workshop at Meeting Rooms B115-116				Workshops
19:00	3h	★	Workshop 304: Transform Your Computer Science Course with Specifications Grading	Talk <i>David Largent Ball State University, Christian Roberson Florida Southern College, Linda Wilson Texas Lutheran University, Manuel A. Pérez-Quiñones University of North Carolina Charlotte</i>
19:00 - 22:00 Workshop at Meeting Rooms B117-119				Workshops
19:00	3h	★	Workshop 302: Effective DEI Committees: Sharing and Refining Key Practices	Talk <i>Erika Dawson Head University of Massachusetts Amherst, Colleen M. Lewis University of Illinois at Urbana-Champaign, Luther Tychonievich University of Illinois Urbana-Champaign</i>
19:00 - 22:00 Game Night! at Meeting Rooms C125-126				Logistics
19:00	3h	★	Game Night!	Social Event
19:00 - 22:00 Workshop Online at Online 1				Workshops
19:00	3h	★	Workshop 311: Moving Beyond Game Design: Building Teacher Confidence with Scientific Modeling by Transitioning from Game Design to EcoSystem Programming	Talk <i>Corrina Perrone Smith AgentSheets, Inc., Nadia Repenning AgentSheets, Inc.</i>
				ONLINE ONLY

**Sat 23 Mar**Displayed time zone: **Pacific Time (US & Canada)**

<b>07:30 - 16:00</b>	<b>Registration at</b> <b>Pre-Function E</b>	<b>Logistics</b>
<b>08:00 - 16:00</b>	<b>Quiet Room at</b> <b>Meeting Room E147</b>	<b>Logistics</b>
<b>08:30 - 10:00</b>	<b>Closing Plenary and Keynote at</b> <b>Portland Ballroom</b>	<b>Keynotes / Logistics</b>
08:30 30m ★ <b>Closing Remarks</b> <i>Day opening</i>	Logistics	<b>HYBRID</b>
09:00 60m ★ <b>Inspiring a Galaxy of New Innovators at the Intersection of Art &amp; Science</b> <i>Keynote</i>	Keynotes <i>Rachel Rose Industrial Light &amp; Magic</i>	<b>HYBRID</b>
<b>10:00 - 10:45</b>	<b>Coffee Break at</b> <b>Exhibit Hall E</b>	<b>Logistics</b>
10:00 45m ★ <b>Coffee and Refreshments</b> <i>Coffee break</i>		
10:00 45m ★ <b>SIGCSE Coffee Break Show</b> <i>Other</i>	<i>Mark Sherriff University of Virginia</i>	<b>HYBRID</b>
<b>10:00 - 10:45</b>	<b>Demos at</b> <b>Exhibit Hall E - Demos</b>	<b>Demos</b>
10:00 45m ★ <b>Demo 5A: Embodied Code: Creative Coding in Virtual Reality</b> <i>Demonstration</i>	<i>Ryan Lay University of California, San Diego, Rhea Bhutada University of California, San Diego, Alejandro Lobo University of California, San Diego, Robert Twomey University of Nebraska-Lincoln, Amy Eguchi University of California, San Diego, Ying Choon Wu University of California, San Diego</i>	
10:00 45m ★ <b>Demo 5B: An environment for algorithmic essays</b> <i>Demonstration</i>	<i>Michel Wermelinger The Open University, Michael Snowden The Open University</i>	<b>GLOBAL</b>
10:00 45m ★ <b>Demo 5C: Snap! 9 – Support for Teachers and Programming with Data</b> <i>Demonstration</i>	<i>Michael Ball UC Berkeley, Dan Garcia UC Berkeley, Victoria Phelps UC Berkeley, Yuan Garcia Mills High School</i>	<b>K12</b>
<b>10:00 - 12:00</b>	<b>Exhibits Open at</b> <b>Exhibit Hall E - Exhibits</b>	<b>Logistics</b>

**10:00 - 12:00 Posters 4 at Exhibit Hall E - Posters**

Chair(s): Meghan Allen University of British Columbia, Ashish Aggarwal University of Florida

10:00	<b>2h</b>	<b>Talk</b>	<b>Enhancing Code Tracing Question Generation with Refined Prompts in Large Language Models</b>	Aysa Xuemo Fan University of Illinois Urbana-Champaign, Rully Agus Hendrawan University of Pittsburgh, Yang Shi North Carolina State University, Qianou Ma Carnegie Mellon University
10:00	<b>2h</b>	<b>Talk</b>	<b>Leveraging Kotter's 8 Stage Model of Organizational Change to Understand Broadening Participation in Computing</b>	Kari George University of Illinois at Urbana-Champaign, Max Fowler University of Illinois, Vidushi Ojha University of Illinois at Urbana-Champaign, Morgan Fong University of Illinois, Urbana-Champaign, Kathleen Isenegger University of Illinois at Urbana-Champaign, Christopher Perdriau University of Illinois at Urbana-Champaign, Mariam Saffar Perez University of Illinois at Urbana-Champaign, Yael Gertner University of Illinois Urbana-Champaign, Colleen M. Lewis University of Illinois at Urbana-Champaign
10:00	<b>2h</b>	<b>Talk</b>	<b>Enhancing Formative Feedback at Scale with the Intelligent Feedback Assistant</b>	Rifa Jamal University of New South Wales, Sydney, Jake Renzella University of New South Wales, Sydney
10:00	<b>2h</b>	<b>Talk</b>	<b>Using Computational Thinking to Learn Creative Writing and Performance Arts: summer experiences of story creation projects</b>	Ruth Torres Castillo New Mexico State University, Tomas Valdez New Mexico State University, Enrico Pontelli, Horacio Gonzalez New Mexico State University, Erick Nevarez New Mexico State University, Raena Cota New Mexico State University
10:00	<b>2h</b>	<b>Talk</b>	<b>Restorying with AI Art among Latinx Elementary Students</b>	Leiny Garcia University of California, Irvine, Santiago Ojeda-Ramirez University of California, Irvine, Mark Warschauer University of California, Irvine
10:00	<b>2h</b>	<b>Talk</b>	<b>Exploring AIFORGOOD Summer Camp Curriculum to Foster Middle School Students' Understanding of Artificial Intelligence</b>	Kwon Kyungbin Indiana University Bloomington, Keunjae Kim Indiana University Bloomington, Anne Leftwich Indiana University, Krista Glazewski North Carolina State University, Matthew Brown Indiana University Bloomington, Haesol Bae University at Albany, Tina Closser Indiana University Bloomington
10:00	<b>2h</b>	<b>Talk</b>	<b>Immersing Undergraduates in Interdisciplinary Course Collaborations</b>	S. Monisha Pulimood The College of New Jersey, Diane C. Bates The College of New Jersey, Kim Pearson The College of New Jersey
10:00	<b>2h</b>	<b>Talk</b>	<b>Using Generative AI to Support PK-12 Teaching and Learning: Developing Sample Lessons and More</b>	Pati Ruiz Digital Promise, Alessandra Rangel Digital Promise, Merijke Coenraad Digital Promise
10:00	<b>2h</b>	<b>Talk</b>	<b>Integrating &amp; Implementing K-12 Computing Pathways across Six School Districts—Challenges &amp; Opportunities</b>	Quinn Burke Digital Promise Global, Merijke Coenraad Digital Promise, Alessandra Rangel Digital Promise, Kyle Dunbar Digital Promise Global, Kelly Mills Digital Promise Global
10:00	<b>2h</b>	<b>Talk</b>	<b>Designing Create Tech: A Discussion of Previous Camp Iterations and Outcomes</b>	Charlotte Avery University of Maryland, College Park
10:00	<b>2h</b>	<b>Talk</b>	<b>Parallel Islands: A Parallel Computing Educational Video Game</b>	Melissa Cameron Virginia Tech, Margaret Ellis Virginia Tech, Dimitrios Nikolopoulos Virginia Tech
10:00	<b>2h</b>	<b>Talk</b>	<b>Perfect Snake: Exploring Algorithms Through the Snake Game</b>	William Weinberger University of Southern California, Jingsai Liang Westminster University, Xi Chen Utah Valley University
10:00	<b>2h</b>	<b>Talk</b>	<b>Effects of Prior Academic Experience in Introductory Level Data Science Course</b>	Noshaba Bhalli University of Maryland, Baltimore County, Vandana P. Janeja University of Maryland, Baltimore County, David Harding UC Berkeley

10:00	<b>2h ★ CT Readiness for All: Studying a Framework for Supporting Schoolwide Computational Thinking Integration Across Elementary Curricula</b>	K12
Talk	<i>Heather Sherwood Education Development Center, Babette Moeller Education Development Center, Cheri Fancsali Research Alliance for NYC Schools at NYU</i>	
10:00	<b>2h ★ A Case Study of Taking AP Computer Science Principles (AP CSP): A Student's Perspective</b>	
Talk	<i>Sarah Cameron University of West Florida, Tony Pham University of West Florida, Sikha Bagui University of West Florida</i>	
10:00	<b>2h ★ Advice for the First Time Hardware CTF Organizer</b>	
Talk	<i>Chad Mourning Ohio University</i>	
10:00	<b>2h ★ Integrating Personalized Parsons Problems with Multi-Level Textual Explanations to Scaffold Code Writing</b>	
Talk	<i>Xinying Hou University of Michigan, Barbara Ericson University of Michigan, Xu Wang University of Michigan</i>	
10:00	<b>2h ★ Reimagining CS Courses for High School Students</b>	K12
Talk	<i>Julie Smith Institute for Advancing Computing Education, Bryan Twarek Computer Science Teachers' Association, Monica McGill Institute for Advancing Computing Education</i>	
10:00	<b>2h ★ Designing Theory of Computing Backwards</b>	
Talk	<i>Ryan Dougherty United States Military Academy</i>	
10:00	<b>2h ★ Reducing Barriers to Entry by Removing Prerequisites for a CS1 Introductory Programming Course</b>	
Talk	<i>Udayan Das Saint Mary's College of California, Chris Fulton Loyola University Chicago</i>	
10:00	<b>2h ★ Understanding the Leadership Structure and Mentoring Model of an Extracurricular Robotics Team: Key Findings from a Case Study</b>	
Talk	<i>Hitender K Oswal University of Washington, Jonathan Wick Western Washington University, Seth Tandon University of Southern California, Ashley Brewster Science and Math Institute, Sushil K Oswal University of Washington</i>	
10:00	<b>2h ★ Style Anomalies Can Suggest Cheating in CS1 Programs</b>	
Talk	<i>Benjamin Denzler University of California, Riverside, Frank Vahid UC Riverside / zyBooks, Ashley Pang UC Riverside</i>	
10:00	<b>2h ★ An Experience Report on Teaching a Large Introductory Programming Course in Hybrid Mode</b>	GLOBAL
Talk	<i>Shyama Sastha Krishnamoorthy Srinivasan IIT-Delhi, Avi Gupta Indraprastha Institute of Information Technology Delhi, Pankaj Jalote IIT Delhi</i>	
10:00	<b>2h ★ Supporting Student Engagement in K-12 AI Education with a Card Game Construction Toolkit</b>	
Talk	<i>Hansol Lim North Carolina State University, Wookhee Min North Carolina State University, Jessica Vandenberg North Carolina State University, Veronica Catete North Carolina State University, Judith Uchidiuno Georgia Institute of Technology, Bradford Mott North Carolina State University</i>	
10:00	<b>2h ★ Assessing the Efficacy of Goal-Based Scenarios in Scaling AI Literacy for Non-Technical Learners</b>	
Talk	<i>Ying Jui Tseng Carnegie Mellon University, Ruiwei Xiao Carnegie Mellon University, Christopher Bogart Carnegie Mellon University, Jaromir Savelka Carnegie Mellon University, Majd Sakr Carnegie Mellon University</i>	
10:00	<b>2h ★ Linguistic Pedagogical Approaches to Transfer in Computer Science</b>	
Talk	<i>Rosalind Owen WestEd</i>	
10:00	<b>2h ★ Computer Science Kickstart: An Innovative Bootcamp to Ignite Passion in First-Year Female-Identifying University Students</b>	
Talk	<i>Stella Kaval University of California, Berkeley, Mallika Reddy University of California, Berkeley, Abigail O'Neill University of California, Berkeley</i>	

10:00	<b>2h ★ An investigation on Task Difficulty: Does Task Difficulty Depend on the Technology Used in Task Completion?</b>	<i>Mahir Akgun Pennsylvania State University, Sacip Toker Atılım University</i>
10:00	<b>2h ★ Scaling Collaborative Learning: Using the Community Digital Library to Enrich Course Content</b>	<i>Kevin Ros University of Illinois at Urbana-Champaign, ChengXiang Zhai University of Illinois at Urbana-Champaign</i>
10:00	<b>2h ★ A Cross-Case Analysis of Experienced Educators in CS Inclusion</b>	<i>Wei Yan University of Florida, Andrew B. Bennett University of Florida, Alexis Cobo University of Florida, Maya Israel University of Florida</i>
10:00	<b>2h ★ Student (Self) Assessment, Feedback, and Relatability in CS-2 Game Programming Assignments</b>	<i>Veena Ravishankar University of Mary Washington, Jessica Zeitz University of Mary Washington</i>
10:00	<b>2h ★ Root the (Ballot) Box: Designing Security Engineering Courses with E-Voting</b>	<i>Tushar Jois City College of New York, Atheer Almogbil Johns Hopkins University, Logan Kostick Johns Hopkins University</i>
10:00	<b>2h ★ Evaluating GPT-4 Code Generation as a Grading Mechanism for “Explain-in-Plain-English” Questions</b>	<i>David Smith University of Illinois at Urbana-Champaign, Craig Zilles University of Illinois at Urbana-Champaign</i>
10:00	<b>2h ★ Co-Designing Integrated CS Curriculum Artifacts with K-5 Classroom Teachers</b>	<i>Maverick Berner Marquette University, Maximus Berner St. Norbert College, Darcy Ronan Sacred Heart University, Dennis Brylow Marquette University</i>
10:00	<b>2h ★ A Study of Undergraduate Learning Assistants (ULAs) in Computer Science</b>	<i>Shirin Haji Amin Shirazi University of California, Riverside, Mariam Salloum University of California Riverside, Neftali Watkinson University of California, Riverside</i>
10:00	<b>2h ★ Generative AI as a Resource for Creativity in Computational Physics</b>	<i>Patti Hamerski Oregon State University</i>
10:00	<b>2h ★ Evaluating Storytelling Videos Using YouTube Analytics</b>	<i>Anna Ly University of Toronto Mississauga, Tingting Zhu University of Toronto Mississauga, Andrew Petersen University of Toronto</i>
10:00	<b>2h ★ See Logic In Life: An Individualized Exercise Structure for Making and Sharing Computing Concept Connections</b>	<i>Madalene Spezialetti Trinity College</i>
10:00	<b>2h ★ Experience Helps, but It Isn't Everything: Exploring Causes of Affective State in Novice Programmers</b>	<i>Heidi Reichert North Carolina State University, Sandeep Sthapit North Carolina State University, Benjamin T. Tabarsi North Carolina State University, Ally Limke North Carolina State University, Thomas Price North Carolina State University, Tiffany Barnes North Carolina State University</i>

10:00 - 10:45 **Community Circle at** Online 1

**Logistics**

10:00 45m ★ **Community Circle**  
Other *Delaram Yazdansepas Loyola Marymount University, Oluwakemi Ola University of British Columbia, Kristin Stephens-Martinez Duke University*

ONLINE ONLY

<b>10:45 - 12:00</b>	<b>K12 - Elementary School at</b>	<b>Meeting Room D135</b>	<b>Papers</b>
Chair(s): Jean Salac University of Washington, Seattle			
10:45	25m	★ <b>Gender, Social Interactions and Interests of Characters Illustrated in Scratch and Python Programming Books for Children</b>	<b>Talk</b> <b>GLOBAL</b> <b>K12</b>
		Shirley de Wit Delft University of Technology, Felienne Hermans Vrije Universiteit Amsterdam, Marcus Specht Delft University of Technology, Efthimia Aivaloglou Delft University of Technology	
11:10	25m	★ <b>Novel insights into elementary girls' experiences in physiological computing</b>	<b>Talk</b> <b>K12</b>
		Feiya Luo University of Alabama, Ruohan Liu University of Virginia, Idowu David Awoyemi University of Alabama, Chris Crawford University of Alabama, Fatema Nasrin University of Alabama	
11:35	25m	★ <b>Making Abstraction Concrete in the Elementary Classroom</b>	<b>Talk</b> <b>K12</b>
		Eping Hung Southern Oregon University, Maggie Vanderberg Southern Oregon University, Gladys Krause William & Mary, Eva Skuratowicz Southern Oregon University	
<b>10:45 - 12:00</b>	<b>Culturally Relevant K-12 Computing at</b>	<b>Meeting Room D136</b>	<b>Papers</b>
Chair(s): Satabdi Basu SRI International			
10:45	25m	★ <b>Developing Culturally Sustaining Elementary Computer Science Education with Indigenous Communities</b>	<b>Talk</b> <b>MSI</b> <b>K12</b>
		Kathryn M. Rich American Institutes for Research, Marissa Spang American Institutes for Research, Jill Bowdon American Institutes for Research, Joseph Wilson American Institutes for Research, Heather Cunningham Boot Up Professional Development, Mckay Perkins Boot Up Professional Development	
11:10	25m	★ <b>Scaffolding Minority High School Students' Computer Science Learning: Culturally Relevant Summer Camp</b>	<b>Talk</b> <b>MSI</b> <b>K12</b>
		Jung Won Hur Auburn University, Jay Bhuyan Tuskegee University, Fan Wu Tuskegee University	
11:35	25m	★ <b>Worker-Driven Computing Education: A Proof-of-Concept Study for K12 Culturally Responsive Computing</b>	<b>Talk</b> <b>K12</b>
		Michael Lachney Michigan State University, Brian Ferguson Bey Henry Ford High School, Detroit Public Schools, Samuela Mouzaoir Michigan State University, Christa Robinson Michigan State University	
<b>10:45 - 12:00</b>	<b>Understanding CS Educators at</b>	<b>Meeting Room E145</b>	<b>Papers</b>
Chair(s): Rasika Bhalerao Northeastern University			
10:45	25m	★ <b>A Measurement Invariance Analysis of the Motivation to Teach Computer Science (MTCS) Scale among Female and Male Educators</b>	<b>Talk</b>
		Zhuoying Wang The University of Texas at Austin, Nicole D. Martin The University of Texas at Austin, Stephanie N. Baker The University of Texas at Austin, Madeline Haynes The University of Texas at Austin	
11:10	25m	★ <b>Students Investigating Pedagogy: A Project for Learning about Learning in CS</b>	<b>Talk</b> <b>GLOBAL</b>
		Lauren Himbeault University of Manitoba, Celine Latulipe University of Manitoba	
11:35	25m	★ <b>Unpacking the Unique Role of Black Women Computer Science Educators</b>	<b>Talk</b> <b>MSI</b>
		Tamara Pearson Georgia Institute of Technology, Pamela Leggett-Robinson PLR Consulting	

<b>10:45 - 12:00</b>	<b>LLM - Online at</b>	<b>Meeting Room E146</b>	<b>Papers</b>
Chair(s): Christopher Nitta University of California, Davis			
10:45	25m	★ <b>A Self-Regulated Learning Framework using Generative AI and its Application in CS Educational Intervention Design</b> <i>Prajish Prasad FLAME University, Aamod Sane FLAME University</i>	IN-PERSON    GLOBAL    ONLINE
11:10	25m	★ <b>Improvement in Program Repair Methods using Refactoring with GPT Models</b> <i>Ryosuke Ishizue NTT DATA Group Corporation / Waseda University, Kazunori Sakamoto WillBooster Inc. / Tokyo Online University / Waseda University, Hironori Washizaki Waseda University, Yoshiaki Fukazawa Waseda University</i>	IN-PERSON    GLOBAL    ONLINE
11:35	25m	★ <b>Using GPT-4 to Provide Tiered, Formative Code Feedback</b> <i>Ha Nguyen Utah State University, Vicki Allan Utah State University</i>	IN-PERSON    ONLINE
<b>10:45 - 12:00</b>	<b>Experiential &amp; Guided Learning at</b>	<b>Meeting Rooms B110-112</b>	<b>Papers</b>
Chair(s): Chunming Gao Central Washington University			
10:45	25m	★ <b>Analyzing Differences in Student Engagement Between a Single Narrative Game Intervention and Multiple Narrative Games Intervention in an Undergraduate Computer Organization and Architecture Class</b> <i>Declan McClintock Michigan State University, Charles Owen Michigan State University</i>	
11:10	25m	★ <b>Exploring the Effects of a Collaborative Guided Inquiry Learning Approach on Performance and Retention of Underrepresented Minority Students across Multiple Sections in an Introductory Programming Course</b> <i>Paul Salvador Inventado California State University Fullerton, Joshua Caleb Dy Google</i>	MSI
11:35	25m	★ <b>Fixing Your Own Smells: Adding a Mistake-Based Familiarisation Step When Teaching Code Refactoring</b> <i>Ivan Tan Singapore Management University, Chris Poskitt Singapore Management University</i>	GLOBAL
<b>10:45 - 12:00</b>	<b>BPC at</b>	<b>Meeting Rooms B113-114</b>	<b>Papers</b>
Chair(s): Michael Miljanovic Ontario Tech University			
10:45	25m	★ <b>Fostering Race-Conscious Literacies in Computer Science Teacher Education</b> <i>Sukanya Kannan Moudgalya University of Tennessee, Knoxville</i>	MSI
11:10	25m	★ <b>Intersectional Biases Within an Introductory Computing Assessment</b> <i>Miranda Parker San Diego State University, He Ren University of Washington, Min Li University of Washington, Chun Wang University of Washington</i>	MSI
11:35	25m	★ <b>U.S. Latines in Computing: A Literature Review</b> <i>Ismael Villegas Molina University of California, San Diego, Audria Montalvo University of California, San Diego, Adalbert Gerald Soosai Raj University of California, San Diego</i>	MSI

10:45 - 12:00

**Lightning Talks 3 at Meeting Rooms B115-116****Lightning Talks**

Chair(s): Eric Fouh University of Pennsylvania, Lisa Lacher University of Houston-Clear Lake

- 10:45 10m ★ A Cross-disciplinary Review of Introductory Undergraduate Data Science Course Content**

*Michael Posner Villanova University, April Kerby-Helm Winona State University, Alana Unfried California State University, Monterey Bay, Douglas Whitaker Mount Saint Vincent University, Marjorie Bond Monmouth College (Illinois), Leyla Batakci Elizabethtown College*

- 10:55 10m ★ Data Analytics for Social Good: A Collaborative Fusion of Computer Science and Social Science**

*Tina Ostrander Green River College, Tim Scharks Green River College, Kendrick Hang Green River College*

- 11:06 10m ★ DEEILS: Data Ethics Embedded Interactive Learning System for Computer Science Students**

*Ke Yang University of Texas at San Antonio*

- 11:17 10m ★ Enabling Widespread Engagement in DS and AI: The Generation AI Curriculum Initiative for Community Colleges**

*Rebecca Schroeder The University of Texas at San Antonio, Jianwei Niu University of Texas at San Antonio, Ashwin Malshe University of Texas at San Antonio, Sue Hum University of Texas at San Antonio, Siobhan Flemming University of Texas at San Antonio, Ian Thacker University of Texas at San Antonio*

- 11:27 10m ★ Moms can be computing leaders, too! Why we need computing community learning centers designed and lead by mothers**

*Patricia Ordóñez University of Maryland, Baltimore County*

- 11:38 10m ★ Registered Reports: A new way to publish papers**

GLOBAL

*Neil Brown King's College London*

- 11:49 10m ★ Scaling Responsible Computing Globally: Lessons from the US, Kenya, and India**

GLOBAL

*Crystal Lee MIT and Mozilla Foundation, Chao Mbogho Mozilla Foundation, Jibu Elias Mozilla Foundation, Joycelyn Streator Prairie View A&M University, Kathy Pham Harvard University, Ziyaad Bhorat University of Southern California, Steve Azeka Columbia University*

10:45 - 12:00

**Networking and Security at Meeting Rooms B117-119****Papers**

Chair(s): Ghita Amor-Tijani Northeastern University

- 10:45 25m ★ Designing and Delivering a Post-Quantum Cryptography Course**

*Talk Thomas J. Borrelli Rochester Institute of Technology, Monika Polak University of Rochester, Stanislaw Radziszowski Rochester Institute of Technology*

- 11:10 25m ★ ALAN: Assessment-as-Learning Authentic tasks for Networking**

GLOBAL

*Talk Sepehr Minagar Monash University, Amin Sakzad Monash University, Guido Tack Monash University, Carsten Rudolph Monash University, Judy Sheard Monash University*

- 11:35 25m ★ How do Computing Students Conceptualize Cybersecurity? Survey Results and Strategies for Curricular Integration**

*Noah Q. Cowit University of Colorado, Boulder, Vidushi Ojha University of Illinois at Urbana-Champaign, Casey Fiesler University of Colorado Boulder*

	<b>10:45 - 12:00</b>	<b>CS1 Tools at Meeting Rooms C120-122</b>	<b>Papers</b>
Chair(s): Sergio Gago-Masague University of California, Irvine			
10:45	25m	★ <b>A Framework that Explores the Cognitive Load of CS1 Assignments Using Pausing Behavior</b> <i>Talk</i> Joshua Urry Utah State University, John Edwards Utah State University	<b>CC</b>
11:10	25m	★ <b>Hearing Iterative and Recursive Behavior</b> <i>Talk</i> Joel Adams Calvin University, Hayworth Anderson Calvin University	<b>CC</b> <b>GLOBAL</b>
11:35	25m	★ <b>PyodideU: Unlocking Python Entirely in a Browser for CS1</b> <i>Talk</i> Thomas Jefferson Stanford University, Chris Gregg Stanford University, Chris Piech Stanford University	<b>CC</b> <b>GLOBAL</b>
	<b>10:45 - 12:00</b>	<b>ACM SIGCAS at Meeting Rooms D137-138</b>	<b>Sister Sessions</b>
10:45	75m	★ <b>ACM SIGCAS presents: What kind of world should computing build?</b> <i>Talk</i> Michelle Trim UMass Amherst, Samuel Mann Otago Polytechnic, Richard Blumenthal Regis University	
	<b>10:45 - 12:00</b>	<b>Enduring Lessons from ‘Computer Science for All’ for AI Education in Schools at Oregon Ballroom 203</b>	<b>Panels</b>
10:45	75m	★ <b>Enduring Lessons from ‘Computer Science for All’ for AI Education in Schools</b> <i>Talk</i> Shuchi Grover Looking Glass Ventures / Stanford University, Deborah Fields Utah State University, Yasmin Kafai University of Pennsylvania, Shana V. White Kapor Center, Carla Strickland UChicago STEM Education	<b>K12</b> <b>HYBRID</b>
	<b>10:45 - 12:00</b>	<b>Equitable Grading at Oregon Ballroom 204</b>	<b>Papers</b>
Chair(s): Kevin Lin University of Washington, Seattle			
10:45	25m	★ <b>Evaluating mastery-oriented grading in an intensive CS1 course</b> <i>Talk</i> Igor dos Santos Montagner Insper, Rafael Corsi Ferrao Insper, Andrew Kurauchi Insper, Mariana Silva University of Illinois at Urbana Champaign, Craig Zilles University of Illinois at Urbana-Champaign	<b>GLOBAL</b>
11:10	25m	★ <b>Specifications and Contract Grading in Computer Science Education</b> <i>Talk</i> Brian Harrington University of Toronto Scarborough, Abdalaziz Galal University of Toronto, Rohita Nalluri University of Toronto Scarborough, Faiza Nasirah University of Toronto, Anagha Vadarevu University of Toronto Scarborough	<b>GLOBAL</b>
11:35	25m	★ <b>Transforming Grading Practices in the Computing Education Community</b> <i>Talk</i> Adrienne Decker University at Buffalo, Stephen Edwards Virginia Tech, Brian McSkimming University of Oklahoma, Bob Edmison Virginia Tech, Audrey Rorrer UNC Charlotte, Manuel A. Pérez-Quiñones University of North Carolina Charlotte	
	<b>10:45 - 12:00</b>	<b>AI in Computing Education from Research to Practice at Portland Ballroom 251</b>	<b>Panels</b>
10:45	75m	★ <b>AI in Computing Education from Research to Practice</b> <i>Talk</i> Bita Akram North Carolina State University, Juho Leinonen Aalto University, Narges Norouzi University of California, Berkeley, James Prather Abilene Christian University, Lisa Zhang University of Toronto Mississauga	<b>GLOBAL</b>
	<b>10:45 - 12:00</b>	<b>2024 SIGCSE Test of Time Award at Portland Ballroom 252</b>	<b>Keynotes</b>
10:45	75m	★ <b>A Puzzling Programming Pedagogy: The Persistent Presence of Parsons Problems</b> <i>Talk</i> Paul Denny The University of Auckland, Andrew Luxton-Reilly The University of Auckland, Beth Simon University of California San Diego	<b>GLOBAL</b>

12:00 - 13:45 Lunch on your own

**12:00 - 13:30 SIGCSE Lunch and Outstanding Contribution to Computer Science Education Award Presentation at Portland Ballroom Keynotes / Logistics**

Everyone is welcome to attend the 2024 SIGCSE Award for Outstanding Contribution to Computer Science Education Presentation. Lunch can be purchased as part of your registration.

12:00 30m ★ **SIGCSE Lunch**  
Lunch Logistics

12:30 60m ★ **The computational revolution and our professional responsibility**  
Keynote Keynotes  
*Michael Caspersen Aarhus University*

HYBRID

**13:45 - 15:00 High-School Camps, Courses, and Community at Meeting Room D135 Papers**  
Chair(s): Lauren Bricker University of Washington

13:45 25m ★ **A High School Camp on Algorithms and Coding in a Small Island Developing State**  
Talk *Daniel Fokum The University of the West Indies, Zaria Chen Shui The University of the West Indies, Mona Campus, Kerene Wright The University of the West Indies, Mona, Orr Paradise University of California, Berkeley, Gunjan Mansingh The University of the West Indies, Mona Campus, Daniel Coore University of the West Indies*  
MSI GLOBAL K12

14:10 25m ★ **Bringing Social Computing to Secondary School Classrooms**  
Talk *Kianna Bolante University of Washington, Kevin Chen Cleveland STEM High School, Quan Ze Chen University of Washington, Amy Zhang University of Washington, Seattle*

14:35 25m ★ **Designing and Piloting a High School CS+X Topics Course**  
Talk *Kathleen Isenegger University of Illinois at Urbana-Champaign, Max Fowler University of Illinois, Yael Gertner University of Illinois Urbana-Champaign, Raya Hegeman-Davis University of Wyoming, Leonard Pitt University of Illinois Urbana-Champaign*

**13:45 - 15:00 Novel Feedback at Meeting Room D136 Papers**  
Chair(s): Bina Ramamurthy University at Buffalo, SUNY, USA

13:45 25m ★ **Not Just Training, Also Testing: High School Youths' Perspective-Taking through Peer Testing Machine Learning-Powered Applications**  
Talk *Luis Morales-Navarro University of Pennsylvania, Meghan Shah University of Pennsylvania, Yasmin Kafai University of Pennsylvania*

14:10 25m ★ **Stump-the-teacher: using student-generated examples during explicit debugging instruction**  
Talk *Chris Kerslake Simon Fraser University*

GLOBAL

K12

14:35 25m ★ **"Help Me Solve It" or "Solve It For Me": Effects of Feedback on Children Building and Programming Robots**  
Talk *Luisa Greifenstein University of Passau, Isabella Graßl University of Passau, Ute Heuer Universität Passau, Gordon Fraser University of Passau*

GLOBAL

K12

**13:45 - 15:00 Pedagogy - Cognitive Learning at Meeting Room E145****Papers**

Chair(s): Pamela Cutter Kalamazoo College

**13:45 25m ☆ Writing between the lines: how novices construct Java programs**

Talk

*Neil Brown King's College London, Victoria Mac King's College London, Pierre Weill-Tessier King's College London, Michael Kölling King's College London*

GLOBAL

**14:10 25m ☆ Comparing Cognitive Load Among Undergraduate Students Programming in Python and the Visual Language Algol**

Talk

*Sverrir Thorgeirsson ETH Zurich, Theo B. Weidmann ETH Zurich, Karl-Heinz Weidmann University of Applied Sciences Vorarlberg, Zhendong Su ETH Zurich*

GLOBAL

**14:35 25m ☆ Recognizing Patterns in Productive Failure**

Talk

*Phil Steinhorst University of Münster, Germany, Christof Duhme University of Münster, Xiaoyi Jiang University of Münster, Jan Vahrenhold Westfälische Wilhelms-Universität Münster*

GLOBAL

**13:45 - 15:00 Reaching New Audiences at Meeting Room E146****Papers**

Chair(s): Hedayat Zarkoob University of British Columbia

**13:45 25m ☆ CONTENTR: An Experiential Game for Teaching Value Tradeoffs in Social Media Governance**

Talk

*Anna Lenhart University of Maryland, Sarah Gilbert Cornell University, Katie Shilton University of Maryland*

IN-PERSON

ONLINE

**14:10 25m ☆ Reaching Black Women interested in Computing: The importance of organizational ties**

Talk

*Bailey Brown Spelman College, Rebecca Zarch SageFox Consulting Group, Amanda Menier SageFox Consulting Group, Talia Goldwasser SageFox Consulting Group, Megean Garvin UMBC, Celeste Lee Spelman College, Jayce R. Warner Gibson Consulting Group, Tamara Pearson Georgia Institute of Technology*

MSI

IN-PERSON

ONLINE

**14:35 25m ☆ Investigating Student Mistakes in Introductory Data Science Programming**

Talk

*Anjali Singh University of Michigan School of Information, Anna Fariha , Christopher Brooks University of Michigan, Gustavo Soares Microsoft, Austin Z. Henley Microsoft, Ashish Tiwari Microsoft, Chethan M Microsoft, Heeryung Choi MIT, Sumit Gulwani Microsoft*

ONLINE

IN-PERSON

**13:45 - 15:00 AI in K-12 at Meeting Rooms B110-112****Papers**

Chair(s): Kimberly Hermans Troy High School

**13:45 25m ☆ Scratch-NB: A Scratch Extension for Introducing K-12 Learners to Supervised Machine Learning**

Talk

*Patricio Quiroz Department of Computer Science, University of Chile, Francisco J. Gutierrez Department of Computer Science, University of Chile*

GLOBAL

K12

**14:10 25m ☆ Artificial Intelligence Unplugged: Designing Unplugged Activities for a Conversational AI Summer Camp**

Talk

*Yukyeong Song University of Florida, Xiaoyi Tian University of Florida, Nandika Regatti University of Florida, Gloria Ashiya Katuka University of Florida, Kristy Elizabeth Boyer University of Florida, Maya Israel University of Florida*

K12

**14:35 25m ☆ Teaching AI to K-12 Learners: Lessons, Issues, and Guidance**

Talk

*Shuchi Grover Looking Glass Ventures / Stanford University*

K12



**13:45 - 15:00 Intersectional Analysis at Meeting Rooms B113-114**

Chair(s): Kathryn Cunningham University of Illinois Urbana-Champaign

- 13:45 25m ★ Collecting, Analyzing, and Acting on Intersectional, Longitudinal Data and Talk Pass/Fail/Withdraw Rates in Computing Courses**

*Felix Muzny Northeastern University, Megan Giordano Northeastern University, Center for Inclusive Computing, Emma Sommers Northeastern University, Carla Bradley Northeastern University, Center for Inclusive Computing*

- 14:10 25m ★ Computing Self-Efficacy in Undergraduate Students: A Multi-Institutional and Talk Intersectional Analysis**

*Vidushi Ojha University of Illinois at Urbana-Champaign, Leah West Harvey Mudd College, Colleen M. Lewis University of Illinois at Urbana-Champaign*

- 14:35 25m ★ The Choice is Yours: Intersectional Studies versus Studies of Intersectional Talk Populations in Computing Education Research**

*Yolanda Rankin Emory University, Sheena Erete University of Maryland College Park, Jakita Thomas Auburn University, Nichole Pinkard Northwestern University*

**13:45 - 15:00 Training Teachers and Tutors at Meeting Rooms B115-116**

Chair(s): Matthias Hauswirth USI Lugano

- 13:45 25m ★ Brief, Just-in-Time Teaching Tips to Support Computer Science Tutors Talk**

*Alan Y. Cheng Stanford University, Ellie Tanimura Stanford University, Joseph Tey Stanford University, Andrew C. Wu Stanford University, Emma Brunsell Stanford University*

- 14:10 25m ★ Experiences in Delivering Online CS Teacher Professional Development Talk**

*Jina Wilde University of Texas at San Antonio, Emiliano Beltran University of Texas at San Antonio, Michael Zawatski University of Texas at San Antonio, Amanda Fernandez University of Texas at San Antonio, Priya Prasad University of Texas at San Antonio, Timothy Yuen University of Texas at San Antonio*

- 14:35 25m ★ Towards Establishing a Training Program to Support Future CS Teaching-focused Faculty**

*Mohammed Farghally Virginia Tech, Mohammed Seyam Virginia Tech, Cliff Shaffer Virginia Tech*

**13:45 - 15:00 Pedagogy - Projects and Capstone at Meeting Rooms B117-119**

Chair(s): Dianna Xu Bryn Mawr College

- 13:45 25m ★ An Experience Report: Integrating Oral Communication and Public Speaking Training in a CS Capstone Course Talk**

*Shirin Haji Amin Shirazi University of California, Riverside, Mariam Salloum University of California Riverside, Annika Speer University of California, Riverside, Neftali Watkinson University of California, Riverside*

- 14:10 25m ★ How Pre-class Programming Experience Influences Students' Contribution to Their Team Project: A Statistical Study Talk**

*Jialin Cui North Carolina State University, Runqiu Zhang University of Virginia, Ruochi Li North Carolina State University, Fangtong Zhou North Carolina State University, Yang Song University of North Carolina Wilmington, Edward Gehring North Carolina State University*

- 14:35 25m ★ Pairing Ungrading with Project-Based Learning in CS1 for Inherently Flexible Course Design Talk**

*Gillian Smith Worcester Polytechnic Institute*

## 13:45 - 15:00 CS1 - Engagement and Retention at Meeting Rooms C120-122

Chair(s): Xi Chen Utah Valley University

- 13:45 25m ★ **Applying CS0/CS1 Student Success Factors and Outcomes to Biggs' 3P Educational Model**

*Adrian Salguero University of California, San Diego, Ismael Villegas Molina University of California, San Diego, Lauren Margulieux Georgia State University, Quintin Cutts University of Glasgow, UK, Leo Porter University of California San Diego*

CC

- 14:10 25m ★ **Examining Intention to Major in Computer Science: Perceived Potential and Challenges**

*Naaz Sibia University of Toronto Mississauga, Giang Bui University of Toronto Mississauga, Bingcheng Wang University of Toronto, Yinyue Tan University of Toronto, Angela Zavaleta Bernuy University of Toronto, Christina Bauer University of Vienna, Joseph Jay Williams University of Toronto, Michael Liut University of Toronto Mississauga, Andrew Petersen University of Toronto*

CC

GLOBAL

- 14:35 25m ★ **The First Five Years of a Dual Track Programming Series: A Retrospective Analysis**

*Christopher Nitta University of California, Davis, Kurt Eiselt University of California, Davis*

CC

## 13:45 - 15:00 Nifty Assignments at Oregon Ballroom 203

## Nifty Assignments

Chair(s): Nick Parlante Stanford University, Julie Zelenski Stanford University, Dave Reed Creighton University, Michael Guerzhoy University of Toronto

- 13:45 12m ★ **Alphabear Partial Solver**

*Talk Ryan Dougherty United States Military Academy*

CC

HYBRID

- 13:57 12m ★ **Exploring the Scurry of Squirrels in Central Park**

*Talk Rachel Frisbie Department of Computational Mathematics, Science, and Engineering; Michigan State University, Devin Silvia Department of Computational Mathematics, Science, and Engineering; Michigan State University, Marcos Caballero Michigan State University, Rachel Roca Department of Computational Mathematics, Science, and Engineering; Michigan State University, Amanda Bowerman Computational Mathematics, Science, and Engineering, Krithi Sachithanand Computational Mathematics, Science, and Engineering*

CC

HYBRID

- 14:10 12m ★ **Infinity War**

*Talk Yashas Ravi Rutgers University (self), Ana Paula Centeno Rutgers University*

CC

HYBRID

- 14:22 12m ★ **Modular Virtual 3D Cities Assignment**

*Talk Christopher Tralie Ursinus College*

CC

HYBRID

- 14:35 12m ★ **Simulating Election Votes**

*Talk Aleksandr Popov National Research University Higher School of Economics*

CC

HYBRID

GLOBAL

- 14:47 12m ★ **The Fingerprint Assignment: An Interdisciplinary Assessment for CS I Education**

*Talk Christian Servin El Paso Community College, Ivan Alonso El Paso Community College, Emiliano Garcia El Paso Community College*

CC

HYBRID

## 13:45 - 15:00 Data Science and Computer Science in K-12 at Portland Ballroom 251

## Panels

- 13:45 75m ★ **Computing in Data Science or Data in Computer Science? Exploring the Relationship between Data Science and Computer Science in K-12 Education**

*David Weintrop University of Maryland, Zarek Drozda University of Chicago, Kathi Fisler Brown University, Justice Walker University of Texas at El Paso*

K12

15:30 - 18:30 Workshop at Meeting Room D135				Workshops
15:30	3h	★	Workshop 405: Visual Data Science with Blockly-DS Talk	GLOBAL <i>Luiz Barboza CESAR, Rafael Ferreira Mello Federal Rural University of Pernambuco, Erico Souza Teixeira CESAR</i>
15:30 - 18:30 Workshop at Meeting Room D136				Workshops
15:30	3h	★	Workshop 407: AI Enhanced Learning: Powering Curated Videos with Generative Intelligence. Talk	<i>Ananda Gunawardena Rutgers University, Princeton University, Naina Chaturvedi Rutgers University</i>
15:30 - 18:30 Workshop at Meeting Room E145				Workshops
15:30	3h	★	Workshop 408: From Informal Ed to the University – Hands-on Use of the BBC Micro:bit in CS1 Courses Post-COVID Talk	<i>Albert Chan Fayetteville State University, Tieming Geng Fayetteville State University, Joseph Kabbes Fayetteville State University, Mingxian Jin Fayetteville State University, Longfei Wu Fayetteville State University</i>
15:30 - 18:30 Workshop at Meeting Room E146				Workshops
15:30	3h	★	Workshop 404: Decompose Graphics to Compose Programs in Python with PyTamaro Talk	<i>Luca Chiodini USI Lugano, Matthias Hauswirth USI Lugano</i>
15:30 - 18:30 Workshop at Meeting Rooms B110-112				Workshops
15:30	3h	★	Workshop 403: Hands-on Accessibility Teaching Training for Computer Science Instructors Talk	<i>Catherine Baker Creighton University, Yasmine Elglaly Western Washington University, Kristen Shinohara Rochester Institute of Technology, Kate Sonka Teach Access, Rolando Mendez Teach Access</i>
15:30 - 18:30 Workshop at Meeting Rooms B113-114				Workshops
15:30	3h	★	Workshop 406: Creating an on-ramp to programming for arts and humanities students with teaspoon languages and custom block languages Talk	<i>Mark Guzdial University of Michigan</i>
15:30 - 18:30 Workshop at Meeting Rooms B115-116				Workshops
15:30	3h	★	Workshop 401: Autograding Python Code with the Pedal Framework: Feedback Beyond Unit Tests Talk	<i>Austin Cory Bart University of Delaware, USA, Luke Gusukuma Virginia Commonwealth University</i>
15:30 - 18:30 Workshop at Meeting Rooms B117-119				Workshops
15:30	3h	★	Workshop 402: 3D Java: Using Physical Objects to Make Abstract Concepts Concrete Talk	<i>Colleen M. Lewis University of Illinois at Urbana-Champaign</i>

**15:30 - 17:00 K-12 Meet-Up at Meeting Rooms C125-126****Affiliated Events****15:30 90m ☆ K-12 Meet-Up  
Meeting****K12****15:30 - 18:30 Workshop Online at Online 1****Workshops****15:30 3h ☆ Workshop 412: Igniting Curiosity with BJC Sparks: A Transformative Curriculum for  
Talk Middle and High School Computer Science***Dan Garcia UC Berkeley, Mary Fries EDC, Michael Ball University of California, Berkeley, Lauren Mock University of California, Berkeley***K12****ONLINE ONLY****15:30 - 18:30 Workshop Online at Online 2****Workshops****15:30 3h ☆ Workshop 411: Ninth SPLICE Workshop on Technology and Data Infrastructure for CS  
Talk Education Research***Clifford Shaffer Virginia Tech, Peter Brusilovsky University of Pittsburgh, Thomas Price North Carolina State University, Tiffany Barnes North Carolina State University***ONLINE ONLY**

