

# SIGCSE 2024 Community College Roadmap

## Wednesday, March 20th, 2024

**12:00 - 21:00 Registration**

**[Pre-Function E]**

## Thursday, March 21st, 2024

**08:30 - 10:00 Opening Plenary and Keynote**

**[Portland Ballroom]**

- 08:30 - 09:00 - Day opening
- 09:00 - 10:00 - Todd Zakrajsek [Keynote]

**10:00 - 10:45 Coffee Break and Demos**

**[Exhibit Hall E]**

- Demo 1A: AntiCopyPaster: An Open-Source Ecosystem for Just-in-time Code Duplicates Extraction, Exhibit Hall E

**10:45 - 12:00 Community College, Adult Education & Pathways.**

**[D135]**

- 10:45 - 11:10 - Broadening Participation in Adult Education: A Literature Review of Computer Science Education
- 11:10 - 11:35 - Curricular and Pedagogical Considerations in Computer Science Education: The Role of Community Colleges for the Next Decade
- 11:35 - 12:00 - Understanding California's Computer Science Transfer Pathways

**12:00 - 13:45 Lunch, on your own**

**12:00 - 13:45 First Timers Lunch**

**[Portland Ballroom]**

- 12:30 - 13:30 Tales from the Trenches: Using What We've Learned to Move CS Education Forward, Chris Stephenson [Keynote]

**13:45 - 15:00 LLM - Teaching CS1/CS2**

**[Oregon Ballroom 204]**

- 13:45 - 14:10 - Teaching CS50 with AI: Leveraging Generative Artificial Intelligence in Computer Science Education
- 14:10 - 14:35 - Prompt Problems: A New Programming Exercise for the Generative AI Era
- 14:35 - 15:00 - CS1 with a Side of AI: Teaching Software Verification for Secure Code in the Era of Generative AI

**15:00 - 15:45 - Coffee Break and Demos** **[Exhibit Hall E]**

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

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

- 15:45 - 16:10 - CS1 Instructors: Flexibility in Content Approaches is Justified, and can Enable More Cross-University Cooperation
- 16:10 - 16:35 - Experiences Teaching a CS1 Common Course across 7 Institutions
- 16:35 - 17:00 - When Coding Meets Biology: The tension between access and authenticity in a contextualized coding class

**17:30 - 18:20 - Flock 1j - Discussing the Changing Landscape of Generative AI in Computing Education** **[Portland Ballroom 251]**

**18:30 - 19:20 - Flock 2i - Teaching Ethics In CS Programs - Questions, Models, Resources, Assessments** **[Oregon Ballroom 204]**

**19:30 - 21:30 SIGCSE Reception** **[Oregon Ballrooms 201-202]**

## Friday, March 22nd, 2024

**08:30 - 10:00 - Friday Plenary and 2024 SIGCSE Award for Broadening Participation in Computing Education** **[Portland Ballroom]**

- 08:30 - 09:00 - Morning Plenary
- 09:00- 10:00- Find Your Drop to Add to the River, Jandelyn Plane [Keynote]

**10:00 - 10:45 Coffee Break and Demos** **[Exhibit Hall E]**

- Demo 3A: Bringing a Visual Memory Model to VS Code

**10:00 - 12:00 - Posters** **[Exhibit Hall E]**

- Towards Attention-Based Automatic Misconception Identification in Introductory Programming Courses
- My Learnings from Allowing Large Language Models in Introductory Computer Science Classes
- Centering Ethics in Computing Student's Mind: A Question Directed Approach for Teaching and Learning Tech Ethics
- Increasing Access to CS Instruction in Low-Income Afterschool Settings
- Do Hints Enhance Learning in Programming Exercises? Exploring Students' Problem-Solving and Interactions

**10:45 - 12:00 - CS1 Mental Models** **[C120-122]**

- 10:45 - 11:10 Analogies and Active Engagement: Introducing Computer Science
- 11:10 - 11:35 Conceptual Metaphor Theory in Action: Insights into Student Understanding of Computing Concepts
- 11:35 - 12:00 The Correctness of the Mental Model of Arrays After Instruction for CS1 Students

**12:00-13:45 - Lunch on your own**

**12:45 - 13:35 - Flock 3f - Two-Year Program Conversations: Supporting a Diversity of Students, Articulation Pathways, and More** **[B113-114]**

**13:45 - 15:00 - LLMs, Debugging, and Detection** **[B115-116]**

- 13:45 - 14:10 - Can Language Models Employ the Socratic Method? Experiments with Code Debugging
- 14:10 - 14:35 - Detecting ChatGPT-Generated Code Submissions in a CS1 Course Using Machine Learning Models
- 14:35 - 15:00 - Towards Comprehensive Metrics for Programming Cheat Detection

**15:00 - 15:45 Coffee Break and Demos** **[Exhibit Hall E]**

- Demo 4B: Algot: A Visual, Hands-On Approach to Introductory Computer Science

**15:45 - 17:00 CS1 - Planning Before Coding** **[C120-122]**

- 15:45 - 16:10 - Improving Knowledge of CS1 Terminology Through a Peer Reviewed Translation Activity: Results and Feedback
- 16:10 - 16:35 - Growth in Knowledge of Programming Patterns: A Comparison Study of CS1 vs. CS2 Students
- 16:35 - 17:00 - Observations on the Design of Program Planning Notations for Students

**15:45 - 17:00 - Special Session: CS2023: The Final Report** **[Oregon Ballroom 203]**  
**Computer Science Curricula 2023 (CS2023): The Final Report**

**18:00 - 20:00 Community College Reception** **[Oregon Ballroom 202]**

## Saturday, March 23rd, 2024

**8:30 - 10:00 - Closing Plenary and Keynote** **[Portland Ballroom]**

- 9:00 - 10:00 Inspiring a Galaxy of New Innovators at the Intersection of Art & Science, Rachel Rose [Keynote]

**10:00 - 10:45 Coffee Break and Demos** **[Exhibit Hall E]**

**10:45 - 12:00 - CS1 Tools**

**[C120-122]**

- 10:45 - 11:10 - A Framework that Explores the Cognitive Load of CS1 Assignments Using Pausing Behavior
- 11:10 - 11:35 - Hearing Iterative and Recursive Behavior
- 11:35 - 12:00 - PyodideU: Unlocking Python Entirely in a Browser for CS1

**12:00 - 13:45 Lunch on your own**

**13:45 - 15:00 CS1 - Engagement and Retention**

**[C120-122]**

- 13:45 - 14:10 - Applying CS0/CS1 Student Success Factors and Outcomes to Biggs' 3P Educational Model
- 14:10 - 14:35 - Examining Intention to Major in Computer Science: Perceived Potential and Challenges
- 14:35 - 15:00 - The First Five Years of a Dual Track Programming Series: A Retrospective Analysis

**13:45 - 15:00 - Nifty Assignments**

**[Oregon Ballroom 203]**

- 13:45 - 13:57 - Alphabear Partial Solver
- 13:57 - 14:10 - Exploring the Scurry of Squirrels in Central Park
- 14:10 - 14:22 - Infinity War
- 14:22 - 14:35 - Modular Virtual 3D Cities Assignment
- 14:35 - 14:47 - Simulating Election Votes
- 14:47 - 15:00 - The Fingerprint Assignment: An Interdisciplinary Assessment for CS I Education