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 Zakrzajsek [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
• 11:35 - 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
- 10:45 - 11:00 - A Framework that Explores the Cognitive Load of CS1 Assignments Using Pausing Behavior
- 11:00 - 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
- 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
- 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