February 27th - March 2nd, Minneapolis, Minnesota, USA

The SIGCSE Technical Symposium is the largest computing education conference worldwide organized by ACM SIGCSE. It attracts over 1,500 researchers, educators, and others interested in improving computing education in K-12 and higher education.

SIGCSE 2019 CONFERENCE SCHEDULE

Please note the following:

- Room assignment is subject to change.
- Title and abstract information will be updated after camera-ready versions are submitted.
- Other session information will be posted after November 16th notifications.
- Putting together the schedule is quite challenging as we have to avoid conflicts for authors with multiple presentations. As a result, assignments of time/day is considered final and cannot be changed.

Keynote Speakers

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SIGCSE 2019 50th Celebration

FEBRUARY 27 - MARCH 2

Upcoming Dates

| Feb 27 | SIGCSE 2019 |

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News

- November 26, 2018: Workshops posted.
- November 8, 2018: Program posted. (Who's who)
- July 31, 2018: Initial venue, hotel, and registration information.
- July 9, 2018: EasyChair open and Policy updates.
- June 19, 2018: Updates to reviewer guidelines.
- May 29, 2018: SIGCSE 2019 Author guidelines available!
- Mar 3, 2018: SIGCSE 2019 site launches!
Sister Session SIGGRAPH

10:45 AM - 12:00 PM
Fri Mar 1, 2019
Hyatt: Lake Calhoun (4th floor)

Description

SIGGRAPH Education Approaches

Speaker

Erik Brunvand

3 Subsessions

Real-Time Motion Capture for Performing Arts and Stage
Fri Mar 1, 2019
10:45 AM - 11:10 AM
Hyatt: Lake Calhoun (4th floor)
How can software engineers and artists work effectively together to create real-time CG for performing arts on stage? We answer that with Limitless Space System (LSS) and a live performance. Since 2012, LSS evolved to ...
Read More

Speakers:
Serguei Mokhov
Mehek Talwar
Miao Song
Amandeep Kaur
Kreentha Gudavalli
Sudhir Mudur

Creating Compelling Virtual Reality and Interactive Content for Higher Education
Fri Mar 1, 2019
11:10 AM - 11:35 AM
Hyatt: Lake Calhoun (4th floor)
This talk proposes a case study examining how Carnegie Mellon University's Dietrich College of Humanities sponsored production of its own interactive experiences, including interactive virtual reality, for educational use in the classroom. In 2017 ...
Read More

Speakers:
Jaehwe Cho
Tsung-Yu (Jack) Tsai
Sarabeth Boak
Ralph Vituccio

Groovy Graphics Assignments
Fri Mar 1, 2019
11:35 AM - 12:00 PM
Hyatt: Lake Calhoun (4th floor)
Inspired by SIGCSE “Nifty Assignments,” Groovy Graphics Assignments are course assignments relating to computer graphics and interactive techniques that have been designed, tested and made available to the SIGGRAPH community by educators at all levels ...
Read More

Speaker:
Andrew Duchowski
8:30am

Computing for the Social Good in Computer Science Education
⏰ 8:30am - 12:00pm, Feb 27
📍 Hyatt: Greenway A (2nd floor)

Pre-Symposium

Speakers

Michael Goldweber
Xavier University

Lisa Kaczmarczyk
Lisa Kaczmarczyk PhD Consulting, LLC

Department Chairs Roundtable
⏰ 8:30am - 5:00pm, Feb 27
📍 Hyatt: Greenway B (2nd floor)

Pre-Symposium

Additional Fee.

Speakers

Mary Lou Maher
UNCC

Ran Libeskind-Hadas
Harvey Mudd College

Broadening Participation in Computing, Amplifying Efforts in Rural Communities
⏰ 8:30am - 12:00pm, Feb 27
📍 Hyatt: Greenway C (2nd floor)

Pre-Symposium
Speakers

Deborah Seehorn
CS4NC / NC ECEP

Chris Dovi
CodeVA

Rebecca Dovi
CodeVA

Sarah Dunton
Expanding Computing Education Pathways

Dave Frye
The Friday Institute for Educational Innovation, NCSU

Jayce Warner
Center for STEM Ed, University of Texas at Austin

2019 CSAB Computing Accreditation Workshop

8:30am - 5:00pm, Feb 27
Hyatt: Greenway D (2nd floor)

Speakers

Mary Jane Willshire-Fairley
CSAB

Liz Glazer
CSAB, Inc.

CS Education Infrastructure for All II: Enabling the Change

8:30am - 5:00pm, Feb 27
Hyatt: Greenway E (2nd floor)
Pre-Symposium Speakers

C Cliff Shaffer

P Peter Brusilovsky
University of Pittsburgh

K Kenneth Koedinger
Carnegie Mellon University

S Stephen Edwards
Virginia Tech

POSSE Roundup

8:30am - 5:00pm, Feb 27
Hyatt: Greenway F (2nd floor)

Pre-Symposium Speakers

G Gregory Hislop
Drexel University

G Grant Braught
Dickenson College

D Darci Burdge
Nassau Community College

H Heidi Ellis
Western New England University

S Stoney Jackson
Western New England University
Peer Teaching Summit

8:30am - 12:00pm, Feb 27

Pre-Symposium

Speakers

Cameron Macdonell
MacEwan University

Lori Postner
Nassau Community College

Computer Science Principles Providers and Teachers Forum

8:30am - 12:00pm, Feb 27

Hyatt: Greenway G (2nd floor)

Pre-Symposium

Speakers

Jeff Forbes
Duke University

Kristy Boyer
University of Florida

Ketan Mayer-Patel
The University of North Carolina at Chapel Hill

Lauren Mock
University of California, Berkeley

Michael Ball
University of California, Berkeley
Professional Development Workshop for Teaching-Track Faculty

8:30am - 5:00pm, Feb 27
Hyatt: Greenway J (2nd floor)

Pre-Symposium

Speakers

Lori Pollock
University of Delaware

Christine Alvarado
University of California San Diego

Barbara Ryder
Virginia Tech

Mark Sherriff
University of Virginia

9:00am

RESPECT/RPPforCS

9:00am - 12:00pm, Feb 27
Millenium: Grand Central (Lobby level)

Requires separate registration, visit their website for more information.

RESPECT/RPPforCS

9:00am - 12:00pm, Feb 27
Millenium: Grand North (Lobby level)
RESPECT/RPPforCS

Requires separate registration, visit their website for more information.

12:00pm

Lunch for RESPECT/RPPforCS

Requires separate registration, visit their website for more information.

1:00pm

RESPECT/RPPforCS Plenary

Requires separate registration, visit their website for more information.

1:30pm

Development and Visualization of Computing Competencies

Speakers

Alison Clear
Eastern Institute of Technology

Allen Parrish
Mississippi State University
What to Teach about Accessibility
 1:30pm - 5:00pm, Feb 27
 Hyatt: Greenway C (2nd floor)
Pre-Symposium

 Speakers

Richard Ladner
University of Washington

Andrew J. Ko
University of Washington

Teaching Cybersecurity in CSP (or Any CS Class): Introducing the Security Mindset
 1:30pm - 5:00pm, Feb 27
 Hyatt: Greenway G (2nd floor)
Pre-Symposium

 Speakers

Maritza Johnson
International Computer Science Institute

Daniel Garcia
University of California, Berkeley

Julia Bernd
International Computer Science Institute

Serge Egelman
International Computer Science Institute; University of California, Berkeley

What!? You want me to include computing ethics, too!??!! Using the ACM Code of
Ethics in technical computing topics
📅 1:30pm - 5:00pm, Feb 27
📍 Hyatt: Greenway H (2nd floor)

Pre-Symposium

minated

Speakers

D
Donald Gotterbarn
ACM Committee on Professional Ethics

M
Michael S. Kirkpatrick
James Madison University

M
Marty J. Wolf
Bemidji State University

FREE Cybersecurity Curriculum
📅 1:30pm - 5:00pm, Feb 27
📍 Hyatt: Greenway I (2nd floor)

Pre-Symposium

Speakers

M
Melissa Dark
Purdue University

B
Blair Taylor
Towson University

S
Sidd Kaza
Towson University

M
Maureen Turney
National Security Agency

2:00pm

RESPECT
2:00pm - 5:00pm, Feb 27
📍 Millenium: Grand North/Central (Lobby level)

**RESPECT/RPPforCS**

Requires separate registration, visit their website for more information.

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2:00pm - 5:00pm, Feb 27
📍 Millenium: Grand South (Lobby level)

**RESPECT/RPPforCS**

Requires separate registration, visit their website for more information.

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5:00pm

**RESPECT/RPPforCS Poster and Reception**

2:00pm - 6:30pm, Feb 27
📍 Millenium: Grand South (Lobby level)

**RESPECT/RPPforCS**

Requires separate registration, visit their website for more information.

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7:00pm

**Wednesday Workshops**

7:00pm - 10:00pm, Feb 27

10 Subsessions

- **Wednesday Workshop #101: Embracing our Future: CS Courses and Curriculum for Non-CS-majors**
  
  7:00pm - 10:00pm, Feb 27
  
  Hyatt: Greenway A (2nd floor)

- **Wednesday Workshop #102: Exploring Parallel Computing with OpenMP on the Raspberry Pi**
  
  7:00pm - 10:00pm, Feb 27
  
  Hyatt: Greenway B (2nd floor)

- **Wednesday Workshop #103: Transform Your Computer Science Course with Specifications Grading**
  
  7:00pm - 10:00pm, Feb 27
  
  Hyatt: Greenway C (2nd floor)

- **Wednesday Workshop #104: Narratives and Evaluation: How to Write Wednesday Workshops**
Competitive NSF CS Education Proposals

- **Wednesday Workshop #105:** Bringing Real-World Data and Visualizations of Student-Implemented Data Structures into Sophomore CS courses Using BRIDGES
  - Time: 7:00pm - 10:00pm, Feb 27
  - Location: Hyatt Greenway D (2nd floor)

- **Wednesday Workshop #106:** Guiding Students to Discover CS Concepts and Develop Process Skills Using POGIL
  - Time: 7:00pm - 10:00pm, Feb 27
  - Location: Hyatt Greenway E (2nd floor)

- **Wednesday Workshop #107:** Security Labs for Software Defined Networks in CloudLab
  - Time: 7:00pm - 10:00pm, Feb 27
  - Location: Hyatt Greenway I (2nd floor)

- **Wednesday Workshop #108:** Programming Smart Contracts in Ethereum Blockchain using Solidity
  - Time: 7:00pm - 10:00pm, Feb 27
  - Location: Hyatt Greenway H (2nd floor)

- **Wednesday Workshop #109:** Assessing writing in CS: A hands-on workshop
  - Time: 7:00pm - 10:00pm, Feb 27
  - Location: Hyatt Greenway G (2nd floor)

- **Wednesday Workshop #110:** Computing infrastructure and curriculum design for introductory data science
  - Time: 7:00pm - 10:00pm, Feb 27
  - Location: Hyatt Greenway F (2nd floor)

Thu, Feb 28, 2019

7:00am

**Speaker Breakfast**
- Time: 7:00am - 8:15am, Feb 28
- Location: Millenium Loring (Lower level)
  - Speakers only.

7:30am

**REGISTRATION IS OPEN FROM 7:30 AM TO 5:50 PM**
- Time: 7:30am - 5:50pm, Feb 28
Welcome to the 50th SIGCSE Technical Symposium!

8:15am - 9:45am, Feb 28

- Hyatt: Nicollet Grand Ballroom (1st floor)

**Keynote**

Opening Session

2 Subsessions

- **General information**
  - 8:15am - 8:30am, Feb 28
  - Hyatt: Nicollet Grand Ballroom (1st floor)

- **Opening Keynote**
  - 8:30am - 9:45am, Feb 28
  - Hyatt: Nicollet Grand Ballroom (1st floor)

10:00am

**Exhibits**

- 10:00am - 10:45am, Feb 28
- Hyatt: Exhibit Hall (1st floor)

**Demo Session #1**

- 10:00am - 10:45am, Feb 28
- Hyatt: Exhibit Hall (1st floor)

**Speakers**

- **Lina Battestilli**
  - North Carolina State University

- **Peter-Michael Osera**
  - Grinnell College

2 Subsessions
Demos #1A: Applying Bioinformatics to Assignment Evaluation: A New Approach for Pattern Recognition in Open-Ended CS Assignments

- 10:00am - 10:45am, Feb 28
- Hyatt: Exhibit Hall (1st floor)

Demos #1B: Integrating Computational Modeling in K-12 STEM Classrooms

- 10:00am - 10:45am, Feb 28
- Hyatt: Exhibit Hall (1st floor)

NSF Showcase #1

- 10:00am - 10:45am, Feb 28
- Hyatt: Exhibit Hall (1st floor)

10:45am

Session 1A: Data

- 10:45am - 12:00pm, Feb 28
- Hyatt: Greenway A (2nd floor)

3 Subsessions

- A Module-based Approach to Teaching Bigdata and Cloud Computing Topics at CS Undergraduate Level
  - 10:45am - 11:10am, Feb 28
  - Hyatt: Greenway A (2nd floor)

- Embracing the Liberal Arts in an Interdisciplinary Data Analytics Program
  - 11:10am - 11:35am, Feb 28
  - Hyatt: Greenway A (2nd floor)

- A Novel Course in Data Systems with Minimal Prerequisites
  - 11:35am - 12:00pm, Feb 28
  - Hyatt: Greenway A (2nd floor)

Session 1B: Collaboration & Communication

- 10:45am - 12:00pm, Feb 28
- Hyatt: Greenway J (2nd floor)

3 Subsessions

- Investigating the Impact of Group Size on Non-Programming Exercises in CS
Education Courses

- Developing soft and technical skills through multi-semester, remotely mentored, community-service projects
  - 10:45am - 11:10am, Feb 28
  - Hyatt: Greenway J (2nd floor)

- Does Social Sensitivity Impact Virtual Teams?
  - 11:10am - 11:35am, Feb 28
  - Hyatt: Greenway J (2nd floor)

Session 1C: Enrollment & Retention

- Student Performance in Computing Courses in the face of Growing Enrollments
  - 10:45am - 11:10am, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

- Understanding of Who Enrolls in Introductory Computing Courses
  - 11:10am - 11:35am, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

- Can Sending First and Second Year Computing Students to Technical Conferences Help Retention? An Analysis of National Survey Data
  - 11:35am - 12:00pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

Session 1D: Tools 1

- Stride in BlueJ -- Computing for All in an Educational IDE
  - 10:45am - 11:10am, Feb 28
  - Hyatt: Greenway D/E (2nd floor)
• uAssign: Scalable Interactive Activities for Teaching the Unix Terminal
  ⏰ 11:10am - 11:35am, Feb 28
  ✉ Hyatt: Greenway D/E (2nd floor)

• MYR: A web-based platform for teaching programming using VR
  ⏰ 11:35am - 12:00pm, Feb 28
  ✉ Hyatt: Greenway D/E (2nd floor)

Session 1E: Practice & Problems
⏰ 10:45am - 12:00pm, Feb 28
📍 Millennium: Grand North (1st floor)

Paper Session

3 Subsessions

• Exploring the Applicability of Simple Syntax Writing Practice for Learning Programming
  ⏰ 10:45am - 11:10am, Feb 28
  ✉ Millennium: Grand North (1st floor)

• Stochastic Tree-Based Generation of Program-Tracing Practice Questions
  ⏰ 11:10am - 11:35am, Feb 28
  ✉ Millennium: Grand North (1st floor)

• Exploring the Impact of Worked Examples in a Novice Programming Environment
  ⏰ 11:35am - 12:00pm, Feb 28
  ✉ Millennium: Grand North (1st floor)

Session 1F: Process & Performance
⏰ 10:45am - 12:00pm, Feb 28
📍 Millennium: Grand South (1st floor)

Paper Session

3 Subsessions

• Coding Demonstration Videos for CS1
  ⏰ 10:45am - 11:10am, Feb 28
  ✉ Millennium: Grand South (1st floor)

• Exploring the Value of Different Data Sources for Predicting Student Performance in Multiple CS Courses
  ⏰ 11:10am - 11:35am, Feb 28
  ✉ Millennium: Grand South (1st floor)
The PyramidSnapshot Challenge: Understanding student process from visual output of programs

- **11:35am - 12:00pm, Feb 28**
- **Millennium: Grand South (1st floor)**

Session 1G: Autograders

- **10:45am - 11:10am, Feb 28**
- **Millennium: Grand Central (1st floor)**

Paper Session

3 Subsessions

- **Approaches for Coordinating eTextbooks, Online Programming Practice, Automated Grading and More in One Course**
  - **10:45am - 11:10am, Feb 28**
  - **Millennium: Grand Central (1st floor)**

- **Autograding Distributed Algorithms in Networked Containers**
  - **11:10am - 11:35am, Feb 28**
  - **Millennium: Grand Central (1st floor)**

- **Comparing Jailed Sandboxes vs Containers within an Autograding System**
  - **11:35am - 12:00pm, Feb 28**
  - **Millennium: Grand Central (1st floor)**

Session 1H: Capstones & Projects

- **10:45am - 12:00pm, Feb 28**
- **Hyatt: Greenway F/G (2nd floor)**

Paper Session

3 Subsessions

- **Trial by Flyer: Building Quadcopters From Scratch in a Ten-Week Capstone Course**
  - **10:45am - 11:10am, Feb 28**
  - **Hyatt: Greenway F/G (2nd floor)**

- **Redesigning A Software Development Course as a Preparation for a Capstone: An Experience Report**
  - **11:10am - 11:35am, Feb 28**
  - **Hyatt: Greenway F/G (2nd floor)**

- **Experiential Learning of Software Project Management and Software Development via Course Collaboration**
  - **11:35am - 12:00pm, Feb 28**
Session 1I: Propagation and adoption of educational innovations
📅 10:45am - 12:00pm, Feb 28
📍 Hyatt: Greenway H/I (2nd floor)

Special Session

 Speakers

- Heather Bort
  Marquette University

- David Bunde
  Knox College

- Zack Butler
  Rochester Institute of Technology

- Christopher Hovey
  University of Colorado Boulder

- Cynthia Taylor
  Oberlin College

Session 1J: RETHINKING DEBUGGING AS PRODUCTIVE FAILURE FOR CS EDUCATION
📅 10:45am - 12:00pm, Feb 28
📍 Hyatt: Northstar A (2nd floor)

Panel

 Speakers

- Yasmin Kafai
  University of Pennsylvania

- David DeLiema
  University of California, Berkeley
Session 1K: Special Session: Process Skills in Computer Science

10:45am - 12:00pm, Feb 28
Hyatt: Northstar B (2nd floor)

Special Session

Speakers

Helen Hu
Westminster College

Chris Mayfield
James Madison University

Clifton Kussmaul
Muhlenberg College

Session 1L: Cybersecurity Program Accreditation: Benefits and Challenges

10:45am - 12:00pm, Feb 28
Hyatt: Regency (2nd floor)

Panel

Speakers

Rajendra Raj
Rochester Institute of Technology
**Session 1M: 50th #1**

- **What Have We Talked About? An Analysis of the SIGCSE-Members Listserv**
  - Date: 10:45am - 12:00pm, Feb 28
  - Location: Hyatt: Great Lakes A1 & A2 (2nd floor)

- **CS Education Then and Now: Recollections and Reflections**
  - Date: 10:45am - 12:00pm, Feb 28
  - Location: Hyatt: Great Lakes A1 & A2 (2nd floor)

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**Sister Session RESPECT**

- **Date:** 10:45am - 12:00pm, Feb 28
- **Location:** Hyatt: Lake Calhoun (4th floor)

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**Speakers**

- **Vijay Anand**
  - Southeast Missouri State University

- **David Gibson**
  - United States Air Force Academy

- **Siddharth Kaza**

- **Andrew Phillips**
  - United States Naval Academy

- **Jamie Payton**
12:00pm

Lunch (on your own)
○ 12:00pm - 1:45pm, Feb 28

First Timer’s Lunch & Keynote
○ 12:00pm - 1:45pm, Feb 28
📍 Hyatt: Nicollet Grand Ballroom (1st floor)

Keynote
2019 SIGCSE Award for Lifetime Service to the Computer Science Education Community, Professor Gloria Childress Townsend, DePauw University, USA.

1:45pm

Session 2A: Databases
○ 1:45pm - 3:00pm, Feb 28
📍 Hyatt: Greenway A (2nd floor)

Paper Session

3 Subsessions

● A Learning Platform for SQL Injection
○ 1:45pm - 2:10pm, Feb 28
📍 Hyatt: Greenway A (2nd floor)

● ;DROP TABLE textbooks;-- An Argument for SQL Injection Coverage in Database Textbooks
○ 2:10pm - 2:35pm, Feb 28
📍 Hyatt: Greenway A (2nd floor)

● What to Expect and What to Focus on in SQL Query Teaching
○ 2:35pm - 3:00pm, Feb 28
📍 Hyatt: Greenway A (2nd floor)

Session 2B: Software Engineering
○ 1:45pm - 3:00pm, Feb 28
📍 Hyatt: Greenway J (2nd floor)

Paper Session
3 Subsessions

- Perceived benefits and challenges of learning startup methodologies for software engineering students
  - 1:45pm - 2:10pm, Feb 28
  - Hyatt: Greenway J (2nd floor)

- Motivating Students Beyond Course Requirements with a Serious Game
  - 2:10pm - 2:35pm, Feb 28
  - Hyatt: Greenway J (2nd floor)

- Active Learning with LEGO for Software Requirements
  - 2:35pm - 3:00pm, Feb 28
  - Hyatt: Greenway J (2nd floor)

Session 2C: Advanced Topics
- 1:45pm - 3:00pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

  Paper Session

3 Subsessions

- Effects of a Program Visualization on Pathfinding Algorithm Development
  - 1:45pm - 2:10pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

- Teaching Android Mobile Security
  - 2:10pm - 2:35pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

- Allowing and Fully Supporting Multiple Programming Languages In A Computer Graphics Course: An experience
  - 2:35pm - 3:00pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

Session 2D: Feedback
- 1:45pm - 3:00pm, Feb 28
  - Hyatt: Greenway D/E (2nd floor)

  Paper Session

3 Subsessions

- An Approach to Generate Virtual Tutors for Game Programming Classes
  - 1:45pm - 2:10pm, Feb 28
  - Hyatt: Greenway D/E (2nd floor)
Pensieve: Feedback on coding process for novices
2:10pm - 2:35pm, Feb 28
Hyatt: Greenway D/E (2nd floor)

Experiences using heat maps to help students find their bugs: Problems and solutions
2:35pm - 3:00pm, Feb 28
Hyatt: Greenway D/E (2nd floor)

Session 2E: Active Learning
1:45pm - 3:00pm, Feb 28
Millennium: Grand North (1st floor)

3 Subsessions

- On the Effects of Active Learning Environments in Computing Education
  1:45pm - 2:10pm, Feb 28
  Millennium: Grand North (1st floor)

- Supporting Guided Inquiry with Cooperative Learning in Computer Organization
  2:10pm - 2:35pm, Feb 28
  Millennium: Grand North (1st floor)

- POGIL in Computer Science: Faculty Motivation and Challenges
  2:35pm - 3:00pm, Feb 28
  Millennium: Grand North (1st floor)

Session 2F: Gender
1:45pm - 3:00pm, Feb 28
Millennium: Grand South (1st floor)

3 Subsessions

- Computer Science Living-Learning Community for Women
  1:45pm - 2:10pm, Feb 28
  Millennium: Grand South (1st floor)

- Achieving Gender Balance through Creative Expression
  2:10pm - 2:35pm, Feb 28
  Millennium: Grand South (1st floor)

- Gender-balanced TAs from an unbalanced student body
Session 2G: Curriculum Issues 1

1:45pm - 3:00pm, Feb 28  
Millennium: Grand Central (1st floor)

Paper Session

3 Subsessions

- **PythonSneks: An Open-Source, Instructionally-Designed Introductory Curriculum with Action-Design Research**
  1:45pm - 2:10pm, Feb 28  
  Millennium: Grand Central (1st floor)

- **Defining and designing computer science education in a k-12 public school district**
  2:10pm - 2:35pm, Feb 28  
  Millennium: Grand Central (1st floor)

- **Developing Implementation Measures for K-12 Computer Science Curriculum Materials**
  2:35pm - 3:00pm, Feb 28  
  Millennium: Grand Central (1st floor)


1:45pm - 3:00pm, Feb 28  
Hyatt: Greenway F/G (2nd floor)

Panel

**Speakers**

- **Bill Siever**
  Washington University in St. Louis

- **Roger Chamberlain**
  Washington University in St. Louis

- **Elliott Forbes**
  University of Wisconsin-La Crosse
Session 2I: Where Are We Now? Results from a National Study of Computer Science Teachers and Teaching

📅 1:45pm - 3:00pm, Feb 28  
📍 Hyatt: Greenway H/I (2nd floor)

Speakers

Eric Banilower  
Horizon Research, Inc.

Evelyn Gordon  
Horizon Research, Inc.

Session 2J: The new NSF requirement for Broadening Participation in Computing (BPC) plans: Community advice and resources

📅 1:45pm - 3:00pm, Feb 28  
📍 Hyatt: Northstar A (2nd floor)

Speakers

Tracy Camp  
Colorado School of Mines

Wendy Dubow  
University of Colorado Boulder

Diane Levitt  
Cornell Tech

Linda Sax  
University of California, Los Angeles
Session 2K: Shaping Curricular Guidelines for Associate-Degree Cybersecurity Programs

1:45pm - 3:00pm, Feb 28
Hyatt: Northstar B (2nd floor)

Special Session

Speakers

Cara Tang
Portland Community College

Cindy Tucker
Bluegrass Community and Technical College

Christian Servin
El Paso Community College

Markus Geissler
Cosumnes River College

Melissa Stange
Lord Fairfax Community College

Session 2L: SIGCSE Reads 2019: Discussion and Q & A

1:45pm - 3:00pm, Feb 28
Hyatt: Regency (2nd floor)

Special Session

Speakers
50 Years of CS1 at SIGCSE: A Review of the Evolution of Introductory Programming Education Research

Speaker:
- Rebecca Bates, Minnesota State University, Mankato
- Valerie Summet, Rollins College
- Nanette Veilleux, Simmons College
- Judy Goldsmith, University of Kentucky
- Naomi Kritzer, No Affiliation

Session 2M: 50th #2
- Time: 1:45pm - 3:00pm, Feb 28
- Location: Hyatt: Great Lakes A1 & A2 (2nd floor)

1 Subsessions

- 50 Years of CS1 at SIGCSE: A Review of the Evolution of Introductory Programming Education Research
  - Time: 1:45pm - 3:00pm, Feb 28
  - Location: Hyatt: Great Lakes A1 & A2 (2nd floor)

Sister Session TOCE #1
- Time: 1:45pm - 3:00pm, Feb 28
- Location: Hyatt: Lake Calhoun (4th floor)

Speaker:
- Chris Hundhausen
3 Subsessions

- **RecurTutor: An Interactive Tutorial for Learning Recursion**
  - Time: 1:45pm - 2:10pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **Digital and Physical Fabrication as Multimodal Learning: Understanding Youth Computational Thinking When Making Integrated Systems Through Bidirectionally Responsive Design**
  - Time: 2:10pm - 2:35pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **Learning IS Child’s Play: Game-Based Learning in Computer Science Education**
  - Time: 2:35pm - 3:00pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

ACM Student Research Competition

- Time: 1:45pm - 5:00pm, Feb 28
- Location: Hyatt: Exhibit Hall (1st floor)

Speakers

- Jessica Schmidt
- Stephen Hughes

19 Subsessions

- **SRC #01: Subgoals, Problem Solving Phases, and Sources of Knowledge**
  - Time: 1:45pm - 5:00pm, Feb 28
  - Location: Hyatt: Exhibit Hall (1st floor)

- **SRC #02: Young Aspirants Developer Contest**
  - Time: 1:45pm - 5:00pm, Feb 28
  - Location: Hyatt: Exhibit Hall (1st floor)

- **SRC #03: Problem Decomposition in Introductory Computer Science and Spatial Reasoning**
  - Time: 1:45pm - 5:00pm, Feb 28
  - Location: Hyatt: Exhibit Hall (1st floor)
SRC #04: Accessible American Sign Language Recognition with the Leap Motion Controller
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #05: Visualizing Classic Synchronization Problems
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #06: Understanding the Usage and Familiarity of Home Network Terminology Using Open Card Sorting Analysis
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #07: A Qualitative Analysis of Students' Understanding of Conditional Control Structures
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #08: The Adventures of ScriptKitty: Teaching Middle School Students Cyber Awareness with Comics on the Raspberry Pi
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #09: A Qualitative Study of Wisconsin Computer Science in K-12
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #10: Measuring the Effects of Student Self Efficacy When Using Erroneous Examples in CS1
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #11: A Corpus-assisted Discourse Analysis of Chiptune-related Practices within Chipmusic.org
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #12: Learning Analytics in Cybersecurity Capture the Flag Games
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #13: Applying Alignment to Improve the Effectiveness of CS Education
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)

SRC #14: Reinforcement Learning: Improve Feedback Mechanism with Indicator based Reward, VirtualTA toward Growth Mindset
📅 1:45pm - 5:00pm, Feb 28
📍 Hyatt: Exhibit Hall (1st floor)
SRC #15: Engaging African American Elementary School Children in Code Understanding  
🕒 1:45pm - 5:00pm, Feb 28  
📍 Hyatt: Exhibit Hall (1st floor)

SRC #16: Empirical Assessment of Software Documentation Strategies: A Randomized Controlled Trial  
🕒 1:45pm - 5:00pm, Feb 28  
📍 Hyatt: Exhibit Hall (1st floor)

SRC #17: Online Mob Programming: Effective Collaborative Project-Based Learning  
🕒 1:45pm - 5:00pm, Feb 28  
📍 Hyatt: Exhibit Hall (1st floor)

SRC #18: Deconstructing Successful and Unsuccessful Computer Science Undergraduate Interns  
🕒 1:45pm - 5:00pm, Feb 28  
📍 Hyatt: Exhibit Hall (1st floor)

SRC #19: CodeBox64, A Tactile Input Approach to Scratch for Students with Visual Impairments  
🕒 1:45pm - 5:00pm, Feb 28  
📍 Hyatt: Exhibit Hall (1st floor)

3:00pm

Break, Exhibits and Demos  
🕒 3:00pm - 3:45pm, Feb 28  
📍 Hyatt: Exhibit Hall (1st floor)

Demo Session #2  
🕒 3:00pm - 3:45pm, Feb 28  
📍 Hyatt: Exhibit Hall (1st floor)

👩‍💻 Speakers

Lina Battestilli  
North Carolina State University

Peter-Michael Osera  
Grinnell College
2 Subsessions

- **Demos #2A: Building Simple Games with BRIDGES**
  - **3:00pm - 3:45pm, Feb 28**
  - Hyatt: Exhibit Hall (1st floor)

- **Demos #2B: Engaging in Logical Code Reasoning with an Activity-Based Online Tool**
  - **3:00pm - 3:45pm, Feb 28**
  - Hyatt: Exhibit Hall (1st floor)

**NSF Showcase #2**

- **3:00pm - 3:45pm, Feb 28**
- Hyatt: Exhibit Hall (1st floor)

3:45pm

**Session 3A: Camps**

- **3:45pm - 5:00pm, Feb 28**
- Hyatt: Greenway A (2nd floor)

3 Subsessions

- **Camp or College? Student Perspectives from Colleges & Coding Boot Camps on Skills Learned**
  - **3:45pm - 4:10pm, Feb 28**
  - Hyatt: Greenway A (2nd floor)

- **A Middle-School Code Camp Emphasizing Digital Humanities**
  - **4:10pm - 4:35pm, Feb 28**
  - Hyatt: Greenway A (2nd floor)

- **Exploring the Effects of a Summer Middle-School Camp Emphasizing Data Science for Social Good**
  - **4:35pm - 5:00pm, Feb 28**
  - Hyatt: Greenway A (2nd floor)

**Session 3B: Story & Video**

- **3:45pm - 5:00pm, Feb 28**
- Hyatt: Greenway J (2nd floor)

Paper Session
3 Subsessions

- **Podcast Highlights: Targeted educational videos from repurposed lecture-capture footage**
  - 3:45pm - 4:10pm, Feb 28
  - Hyatt: Greenway J (2nd floor)

- **Student-Generated Videos for Promoting Better Attitudes towards Cryptography**
  - 4:10pm - 4:35pm, Feb 28
  - Hyatt: Greenway J (2nd floor)

- **Story Programming: Explaining Computer Science Before Coding**
  - 4:35pm - 5:00pm, Feb 28
  - Hyatt: Greenway J (2nd floor)

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### Session 3C: Games & Gamification

- **OneUp: Engaging Students in a Gamified Data Structures Course**
  - 3:45pm - 4:10pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

- **<Game Name>: A Card Game for Learning Programming Fundamentals**
  - 4:10pm - 4:35pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

- **Analyzing Gamification Impact on a Mastery Learning Introductory Programming Course**
  - 4:35pm - 5:00pm, Feb 28
  - Hyatt: Greenway B/C (2nd floor)

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### Session 3D: Testing 1

- **Assessing Incremental Testing Practices and Their Impact on Project**
Outcomes

- Pragmatic Software Testing Education
  - 4:10pm - 4:35pm, Feb 28
  - Hyatt: Greenway D/E (2nd floor)

- Software testing in introductory programming courses: A systematic mapping study
  - 4:35pm - 5:00pm, Feb 28
  - Hyatt: Greenway D/E (2nd floor)

Session 3E: Computation Thinking 1

- Zones of Proximal Flow Tutorials: Designing Computational Thinking Cliffhangers
  - 3:45pm - 4:10pm, Feb 28
  - Millennium: Grand North (1st floor)

- Infusing Computational Thinking Across Disciplines: Reflections and Lessons Learned
  - 4:10pm - 4:35pm, Feb 28
  - Millennium: Grand North (1st floor)

- Building Computational Creativity in an Online Course for Non-Majors
  - 4:35pm - 5:00pm, Feb 28
  - Millennium: Grand North (1st floor)

Session 3F: Assessment 1

- Facilitating course assessment with a competitive programming platform
  - 3:45pm - 4:10pm, Feb 28
  - Millennium: Grand South (1st floor)
Development of a Lean Computational Thinking Abilities Assessment for Middle Grades Students
- 4:10pm - 4:35pm, Feb 28
- Millennium: Grand South (1st floor)

On the Fairness of Multiple-Variant Multiple-Choice Examinations
- 4:35pm - 5:00pm, Feb 28
- Millennium: Grand South (1st floor)

Session 3G: Teaching Practice 1
- 3:45pm - 5:00pm, Feb 28
- Millennium: Grand Central (1st floor)
- Paper Session

3 Subsessions

Teaching Explicit Programming Strategies to Adolescents
- 3:45pm - 4:10pm, Feb 28
- Millennium: Grand Central (1st floor)

Teachers’ experiences of using PRIMM to teach programming in school
- 4:10pm - 4:35pm, Feb 28
- Millennium: Grand Central (1st floor)

Survey Results on Why CS Faculty Adopt New Teaching Practices
- 4:35pm - 5:00pm, Feb 28
- Millennium: Grand Central (1st floor)

Session 3H: Broadening Participation in Computing: Putting Our Work in Context
- 3:45pm - 5:00pm, Feb 28
- Hyatt: Greenway F/G (2nd floor)
- Panel

Speakers

Jennifer Blaney
Utah State University

Linda Sax
University of California, Los Angeles
Session 3I: Special Session: AI for K-12 Guidelines Initiative
🕒 3:45pm - 5:00pm, Feb 28
📍 Hyatt: Greenway H/I (2nd floor)

**Speakers**

- David Touretzky  
  Carnegie Mellon University
- Fred Martin  
  University of Massachusetts Lowell
- Deborah Seehorn  
  CS4NC / NC ECEP
- Cynthia Breazeal  
  Massachusetts Institute of Technology
- Tess Posner  
  AI4ALL

Session 3J: Creating Spaces to Promote Inclusive and Equitable Learning in Computing Education
🕒 3:45pm - 5:00pm, Feb 28
📍 Hyatt: Northstar A (2nd floor)

**Speakers**
Session 3K: ACM Task Force on Data Science: Draft Report and Opportunity for Feedback
3:45pm - 5:00pm, Feb 28
Hyatt: Northstar B (2nd floor)

Speakers

Andrea Danyluk
Williams College

Paul Leidig
Grand Valley State University

Lillian Cassel
Villanova University

Christian Servin
El Paso Community College

Session 3L: CS Principles Higher Education Pathways
3:45pm - 5:00pm, Feb 28
Hyatt: Regency (2nd floor)

Speakers
Session 3M: 50th #3
🕒 3:45pm - 5:00pm, Feb 28
📍 Hyatt: Great Lakes A1 & A2 (2nd floor)

1 Subsessions

- Negotiating Varied Research Goals in Computing Education Research
  🕒 3:45pm - 5:00pm, Feb 28
  📍 Hyatt: Great Lakes A1 & A2 (2nd floor)

Lightning Talks #1
🕒 3:45pm - 5:00pm, Feb 28
📍 Hyatt: Lake Calhoun (4th)

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- Lina Battestilli
  North Carolina State University

- Peter-Michael Osera
  Grinnell College
12 Subsessions

- **LT #101: Building a Community of Undergraduate Women: Ambassadors for Computing Outreach**
  - Time: 3:45pm - 3:50pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #102: Introduction to ipsative assessment**
  - Time: 3:50pm - 3:55pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #103: Every Marathon Starts with the First Mile: Early Successes in Broadening Participation in K-12 CS**
  - Time: 3:55pm - 4:00pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #104: Thinking about Computational Thinking: Lessons from Education Research**
  - Time: 4:00pm - 4:05pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #105: Sports analytics as a context for computational thinking**
  - Time: 4:05pm - 4:10pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #106: Adapting Mob Programming for Collaborative Project-Based Learning in the Classroom**
  - Time: 4:10pm - 4:15pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #107: Open CS1: Helping CS1 instructors adopt free textbooks**
  - Time: 4:15pm - 4:20pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #108: Programming Politics: Using Processing to Create Interactive Art Connected to Current Events**
  - Time: 4:20pm - 4:25pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #109: Assessing the Impact of Sustainability-Themed Programming Assignments**
  - Time: 4:25pm - 4:30pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)

- **LT #110: More than a bootcamp, less than a degree: A one-year program to retrain industry employees as developers**
  - Time: 4:30pm - 4:35pm, Feb 28
  - Location: Hyatt: Lake Calhoun (4th floor)
LT #111: Experiences using Discord as Platform for Online Tutoring and Building a CS Community

- Time: 4:35pm - 4:40pm, Feb 28
- Location: Hyatt: Lake Calhoun (4th floor)

LT #112: A Research-Oriented EPIC Course – Applying Mobile Technologies to Biomedical Research Questions

- Time: 4:40pm - 4:45pm, Feb 28
- Location: Hyatt: Lake Calhoun (4th floor)

5:30pm

Birds of a Feather Flock A

- Time: 5:30pm - 6:20pm, Feb 28

14 Subsessions

- BOF #1A: Towards a More Inclusive Tech Culture: Promoting Professionalism in CS Classrooms and Labs
  - Time: 5:30pm - 6:20pm, Feb 28
  - Location: Hyatt: Greenway A (2nd floor)

- BOF #2A: AI for K-12: Making Room for AI in the K-12 CS Curriculum
  - Time: 5:30pm - 6:20pm, Feb 28
  - Location: Hyatt: Greenway J (2nd floor)

- BOF #3A: Toward an Anti-Racist Theory of Computational Curricula
  - Time: 5:30pm - 6:20pm, Feb 28
  - Location: Hyatt: Greenway B/C (2nd floor)

- BOF #4A: What to Make of Makerspaces
  - Time: 5:30pm - 6:20pm, Feb 28
  - Location: Hyatt: Greenway D/E (2nd floor)

- BOF #5A: Can Game Elements Make Computer Science Courses More Attractive?
  - Time: 5:30pm - 6:20pm, Feb 28
  - Location: Hyatt: Greenway F/G (2nd floor)

- BOF #6A: Integrating Hands-on Cybersecurity Exercises into the Curriculum in 2019
  - Time: 5:30pm - 6:20pm, Feb 28
  - Location: Hyatt: Greenway H/I (2nd floor)

- BOF #7A: Teaching Track Faculty in CS
BOF #8A: Computing Competencies and the CC2020 Project  
5:30pm - 6:20pm, Feb 28  
Hyatt: Northstar A (2nd floor)

BOF #9A: A Town Meeting: SIGCSE Committee on Expanding the Women-in-Computing Community  
5:30pm - 6:20pm, Feb 28  
Hyatt: Regency (2nd floor)

BOF #10A: The Problem of Packaging Curricular Materials  
5:30pm - 6:20pm, Feb 28  
Hyatt: Great Lakes A1 & A2 (4th floor)

BOF #11A: Modernizing the Mathematics Taught in Computer Science  
5:30pm - 6:20pm, Feb 28  
Hyatt: Lake Calhoun (4th floor)

BOF #12A: Teaching Human-Centered Design in CS programs  
5:30pm - 6:20pm, Feb 28  
Hyatt: Lake Minnetonka (4th floor)

BOF #13A: Incorporating Computing for Social Good in Computing Education  
5:30pm - 6:20pm, Feb 28  
Millenium: Grand North (Lobby level)

BOF #14A: How can we make office hours better?  
5:30pm - 6:20pm, Feb 28  
Millenium: Grand South (Lobby level)

BOF #15A: Supporting CS Students Living with Mental Illness  
5:30pm - 6:20pm, Feb 28  
Millenium: Grand Central (Lobby level)

Speakers

Christian Murphy  
University of Pennsylvania

Linda Duhadway  
Weber State University
6:30pm

**Birds of a Feather Flock B**

- **BOF #1B: Academic Cybersecurity Disciplinary Foundations and Accreditation**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Greenway A (2nd floor)

- **BOF #2B: Sponsoring Girls Who Code Clubs**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Greenway J (2nd floor)

- **BOF #3B: Developing a Contemporary and Innovative Operating Systems Course**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Greenway B/C (2nd floor)

- **BOF #4B: Co-Curricular Activities in Computer Science Departments**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Greenway D/E (2nd floor)

- **BOF #5B: Access to Computing Education for Students with Disabilities**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Greenway F/G (2nd floor)

- **BOF #6B: Building bridges for Data Science education**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Greenway H/I (2nd floor)

- **BOF #7B: Birds of a Feather Who'd Like to Share Software Together: Teaching Tools that Improve Efficiency and Outcomes**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Northstar A (2nd floor)

- **BOF #8B: Bringing Reflection into Computer Science Education**
  - Time: 6:30pm - 7:20pm, Feb 28
  - Location: Hyatt: Northstar B (2nd floor)

- **BOF #9B: Undergraduate TA and Mentor Programs in Computer Science**
BOF #10B: Auto-graded Programming Labs: Dos and Don’ts for Less-Stressed Higher-Performing Students, Reduced Grading Time, and Happier Teachers
6:30pm - 7:20pm, Feb 28
Hyatt: Regency (2nd floor)

BOF #11B: POGIL in Computer Science for Beginners and Experts
6:30pm - 7:20pm, Feb 28
Hyatt: Great Lakes A1 & A2 (4th floor)

BOF #12B: Broadening Participation in Computing: A Call to Action for Universities and Community Colleges
6:30pm - 7:20pm, Feb 28
Hyatt: Lake Calhoun (4th floor)

BOF #13B: Enriching Courses on Computers and Society and Computer Ethics
6:30pm - 7:20pm, Feb 28
Hyatt: Lake Superior A (5th floor)

BOF #14B: Exploring Programming Instruction in Multidisciplinary Contexts
6:30pm - 7:20pm, Feb 28
Hyatt: Lake Superior B (5th floor)

BOF #15B: How can we engage in inclusive, culturally responsive computer science?
6:30pm - 7:20pm, Feb 28
Millenium: Grand Central (Lobby level)

Speakers

Eileen Kraemer
Clemson University

S. Megan Che
Department of Teaching and Learning, College of Education, Clemson University

Murali Sitaraman
Clemson University
Fri, Mar 01, 2019

7:00am

Speaker Breakfast
🕒 7:00am - 8:15am, Mar 1
📍 Millenium: Loring (Lower level)

Speakers only.

8:15am

Welcome to Day 2
🕒 8:15am - 9:45pm, Mar 1
📍 Hyatt: Nicollet Grand Ballroom (1st floor)

Keynote: 2019 SIGCSE Award for Outstanding Contribution to Computer Science Education
🕒 8:30am - 9:45am, Mar 1
📍 Hyatt: Nicollet Grand Ballroom (1st floor)

10:00am

Break, Exhibits and Demos
🕒 10:00am - 10:45am, Mar 1
📍 Hyatt: Exhibit Hall (1st floor)

Demo Session #3
🕒 10:00am - 10:45am, Mar 1
📍 Hyatt: Exhibit Hall (1st floor)
 Speakers

Lina Battestilli
North Carolina State University

Peter-Michael Osera
Grinnell College

2 Subsessions

- **Demos #3A: Hands-on Cybersecurity Exercises that are Easy to Access**
  - 10:00am - 10:45am, Mar 1
  - Hyatt: Exhibit Hall (1st floor)

- **Demos #3B: Gamifying Computer Science Courses with OneUp**
  - 10:00am - 10:45am, Mar 1
  - Hyatt: Exhibit Hall (1st floor)

 NSF Showcase #3

- 10:00am - 10:45am, Mar 1
- Hyatt: Exhibit Hall (1st floor)

 Poster Session #1

- 10:00am - 12:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

 Speakers

Laurence D. Merkle

S. Monisha Pulimood
The College of New Jersey

30 Subsessions

- **Poster #101: Coding Pedagogy for the Liberal Arts: An Online Publication**
  - 10:00am - 12:00pm, Mar 1
Poster #102: Online or In Person? Student Motivations in the Choice of a CS1 Experience
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #103: ViCyber: An Intelligent Curriculum Design Tool for Cybersecurity Education
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #104: Establishing Computational Thinking as Just Another Tool in the Problem Solving Tool Box
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #105: Questioning the Board in Computer Science Education Board Games
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #107: Encouraging Reflection in Support of Learning Data Structures
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #108: The Development and Validation of Survey Items on Upper Elementary Students’ Perspectives and Attitudes on CS
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #109: Fostering State-level Change in CS Education—the Expanding Computing Education Pathways Alliance
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #110: Teaching and assessing debugging, testing, and coding style with Recursive Pedagogy using Spinoza
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #111: Learning Analytics within Cybersecurity Capture the Flag Games
10:00am - 12:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)
Poster #112: Boxes, Bumps & Breakfast: Object lessons for teaching undergraduates the importance of human-centered research & analysis  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #113: Everyday Operating Systems: Situated Learning in Systems Coursework  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #114: Messy Learning: When Problem-based Learning Just Isn’t Enough  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #115: Evaluating the Effect of Follow-up Questions in an Online Exercise  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #116: What Can the Reid List of First Programming Languages Teach Us About Teaching CS1?  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #117: Game Engines Construction to Motivate Computing Concepts: Build from Scratch or Leverage Existing Systems  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #118: An Analysis of Upper Elementary and Middle Grade Teachers’ Perceptions, Concerns and Goals for Integrating CS into Classrooms  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #119: Integrating Computational Thinking in Informal and Formal Science and Math Activities for Preschool Learners  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #120: Undergraduate computer science student perceptions of their own field: The Draw-a Computer-Scientist-Test  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)

Poster #121: Overcoming doubt: Workshop aimed at giving students tools to build their authentic self-esteem within their computing major  
⏰ 10:00am - 12:00pm, Mar 1  
📍 Hyatt: Exhibit Hall (1st floor)
Poster #122: Debriefing Lab Content Using Active Learning  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #123: Graduate Curriculum Initiative -- COSMIC: Change Opportunity - Start Masters in Computing  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #124: An Investigation of Learning Outcomes Between Two Teaching Modalities to Improve Student Learning in Online Courses  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #125: University-Industry Collaboration in Curriculum Design: A Case Study of Curriculum Design for Early Undergraduate Computer Science Coursework with an Eye on Equity  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #126: A Peer based Tutoring and Mentoring Model for First Year Computer Science Courses Based on Strategies Used by Songbirds for Learning  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #127: Changing Teaching Assistant's behavior based on learning support strategies for programming exercise  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #128: Using Bloom's Taxonomy to write effective programming questions for Autograding Tools  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #129: Utilizing Participatory Design to Develop a Culturally Relevant Computer Science Curriculum  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

Poster #130: Why are Linked List Operations Daunting to some College Students? - Exploring the Mental Models of Undergraduate Programmers  
**Date:** 10:00am - 12:00pm, Mar 1  
**Location:** Hyatt: Exhibit Hall (1st floor)

10:45am
Session 4A: Online
🕒 10:45am - 12:00pm, Mar 1
📍 Hyatt: Greenway A (2nd floor)

Paper Session

3 Subsessions

- Understanding Learning Curves and Trajectories in CSS Layout
  ⏰ 10:45am - 11:10am, Mar 1
  📍 Hyatt: Greenway A (2nd floor)

- Captioning Online Course Videos: An Investigation into Knowledge Retention and Student Perception
  ⏰ 11:10am - 11:35am, Mar 1
  📍 Hyatt: Greenway A (2nd floor)

- Facing Backwards While Stumbling Forwards: The Future of Teaching Web Development
  ⏰ 11:35am - 12:00pm, Mar 1
  📍 Hyatt: Greenway A (2nd floor)

Session 4B: Mistakes and Errors
🕒 10:45am - 12:00pm, Mar 1
📍 Hyatt: Greenway J (2nd floor)

Paper Session

3 Subsessions

- The Error Behind The Message: Finding the Cause of Error Messages in Python
  ⏰ 10:45am - 11:10am, Mar 1
  📍 Hyatt: Greenway J (2nd floor)

- The Novice Programmer’s First Mistake - Misinterpreting the Problem
  ⏰ 11:10am - 11:35am, Mar 1
  📍 Hyatt: Greenway J (2nd floor)

- The Error Landscape: Characterizing the Mistakes of Novice Programmers
  ⏰ 11:35am - 12:00pm, Mar 1
  📍 Hyatt: Greenway J (2nd floor)

Session 4C: Instruments 1
🕒 10:45am - 12:00pm, Mar 1
📍 Hyatt: Greenway B/C (2nd floor)

Paper Session
3 Subsessions

- **Which abilities do we measure in Computational Thinking? A study on Bebras Challenge**
  - 10:45am - 11:10am, Mar 1
  - Hyatt: Greenway B/C (2nd floor)

- **(Re)Validating Cognitive Introductory Computing Instruments**
  - 11:10am - 11:35am, Mar 1
  - Hyatt: Greenway B/C (2nd floor)

- **A Topical Review of Evaluation Instruments for Computing Education**
  - 11:35am - 12:00pm, Mar 1
  - Hyatt: Greenway B/C (2nd floor)

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Session 4D: Testing 2

- **Automating Systems Course Unit and Integration Testing: An Experience Report**
  - 10:45am - 11:10am, Mar 1
  - Hyatt: Greenway D/E (2nd floor)

- **Gamifying a Software Testing Course with Code Defenders**
  - 11:10am - 11:35am, Mar 1
  - Hyatt: Greenway D/E (2nd floor)

- **Measuring Unit Test Accuracy**
  - 11:35am - 12:00pm, Mar 1
  - Hyatt: Greenway D/E (2nd floor)

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Session 4E: Teaching Practice 2

- **An Analysis of Using Many Small Programs in CS1**
  - 10:45am - 11:10am, Mar 1
Reducing Instructor Workload in an Introductory Robotics Course via Computational Design
11:10am - 11:35am, Mar 1
Millennium: Grand North (1st floor)

Frequency of Instructor- and Student-Centered Teaching Practices in Introductory CS Courses
11:35am - 12:00pm, Mar 1
Millennium: Grand North (1st floor)

Session 4F: Assessment 2
10:45am - 12:00pm, Mar 1
Millennium: Grand South (1st floor)

3 Subsessions

Harnessing the Wisdom of the Classes: Classsourcing and Machine Learning for Assessment Instrument Generation
10:45am - 11:10am, Mar 1
Millennium: Grand South (1st floor)

An Assessment of Oral Exams in Introductory CS
11:10am - 11:35am, Mar 1
Millennium: Grand South (1st floor)

On the Effect of Question Ordering on Performance and Confidence in Computer Science Examinations
11:35am - 12:00pm, Mar 1
Millennium: Grand South (1st floor)

Session 4G: CS1 1
10:45am - 12:00pm, Mar 1
Millennium: Grand Central (1st floor)

3 Subsessions

Beauty and Joy of Computing: 2016-17 Findings from an AP CS Principles course
10:45am - 11:10am, Mar 1
Millennium: Grand Central (1st floor)
• Implementing EarSketch: Connecting Classroom Implementation to Student Outcomes
  ⌘ 11:10am - 11:35am, Mar 1
  ✉ Millennium: Grand Central (1st floor)

• Food for Thought: Supporting African American Women’s Computational Algorithmic Thinking in an Intro CS Course
  ⌘ 11:35am - 12:00pm, Mar 1
  ✉ Millennium: Grand Central (1st floor)

Session 4H: This is What Diversity Looks Like: Making ECS Culturally Relevant for Spanish-speaking Puerto Ricans
  ⌘ 10:45am - 12:00pm, Mar 1
  ✉ Hyatt: Greenway F/G (2nd floor)

Panel

 Speakers

Joseph Carroll-Miranda
University of Puerto Rico Rio Piedras Campus

Patricia Ordonez
University of Puerto Rico Rio Piedras

Edusmildo Orozco
University of Puerto Rico Rio Piedras Campus

Milagros Bravo
University of Puerto Rico Rio Piedras Campus

Michelle Borrero
University of Puerto Rico Rio Piedras Campus

Luis Lopez
University of Puerto Rico Rio Piedras Campus

Geriann Houser
University of Puerto Rico Rio Piedras Campus
Session 4I: Civic Engagement Across the Computing Curriculum

10:45am - 12:00pm, Mar 1
Hyatt: Greenway H/I (2nd floor)

Panel

Speakers

Eliud Gerena-Lopez
University of Puerto Rico Rio Piedras Campus

Dale Reed
University of Illinois Chicago

Brenda Santiago
University of Puerto Rico Rio Piedras Campus

Agustin Corchado
University of Puerto Rico Rio Piedras Campus

Andreshka Santana
University of Puerto Rico Rio Piedras Campus

Mark Goadrich
Hendrix College

Michael Goldweber
Xavier University

Matthew Jadud
Bates College

S. Monisha Pulimood
The College of New Jersey

Samuel Rebelsky
Grinnell College
Session 4J: Exploring our Privilege: Activities and Discussions

📅 10:45am - 12:00pm, Mar 1
📍 Hyatt: Northstar A (2nd floor)

**Special Session**

**Speakers**

- **Miranda Parker**
  Georgia Institute of Technology

- **Jason Black**
  Florida A&M University / School of Business and Industry

- **Helen Hu**
  Westminster College

- **Colleen M. Lewis**
  Harvey Mudd College

Session 4K: Computing Curricula 2020: Introduction and Community Engagement

📅 10:45am - 12:00pm, Mar 1
📍 Hyatt: Northstar B (2nd floor)

**Special Session**

**Speakers**

- **Alison Clear**
  Eastern Institute of Technology

- **Allen Parrish**
  Mississippi State University

- **John Impagliazzo**
  Hofstra University

- **Ming Zhang**
  Peking University
Session 4L: Women and Girls of Color in Computing
⏰ 10:45am - 12:00pm, Mar 1
📍 Hyatt: Regency (2nd floor)

Panel

Speakers

- **Frieda McAlear**
  Kapor Center for Social Impact

- **Kimberly Scott**
  Center for Gender Equity in Science and Technology, Arizona State University

- **Jamika Burge**
  Thurgood Marshall College Fund

- **Sonia Koshy**
  Kapor Center for Social Impact

Session 4M: 50th #4
⏰ 10:45am - 12:00pm, Mar 1
📍 Hyatt: Great Lakes A1 & A2 (2nd floor)

1 Subsessions

- **Going Beyond the Platitudes of Equity: Developing a Shared Vision for Equity in Computer Science Education**
  🕒 10:45am - 12:00pm, Mar 1
  📍 Hyatt: Great Lakes A1 & A2 (2nd floor)

Sister Session SIGGRAPH
⏰ 10:45am - 12:00pm, Mar 1
📍 Hyatt: Lake Calhoun (4th floor)

SIGGRAPH Education Approaches
3 Subsessions

- **Real-Time Motion Capture for Performing Arts and Stage**
  - **Time:** 10:45am - 11:10am, Mar 1
  - **Location:** Hyatt: Lake Calhoun (4th floor)

- **Creating Compelling Virtual Reality and Interactive Content for Higher Education**
  - **Time:** 11:10am - 11:35am, Mar 1
  - **Location:** Hyatt: Lake Calhoun (4th floor)

- **Groovy Graphics Assignments**
  - **Time:** 11:35am - 12:00pm, Mar 1
  - **Location:** Hyatt: Lake Calhoun (4th floor)

12:00pm

**Lunch (on your own)**
- **Time:** 12:00pm - 1:45pm, Mar 1

1:00pm

**SIGCSE Volunteer/Conference Info**
- **Time:** 1:00pm - 1:45pm, Mar 1

1:45pm

**Session 5A: Professional Tools & Practice**
- **Time:** 1:45pm - 3:00pm, Mar 1
- **Location:** Hyatt: Greenway A (2nd floor)

3 Subsessions

- **Interactive Peer-Led Code Reviews In CS2 Curricula**
  - **Time:** 1:45pm - 2:10pm, Mar 1
  - **Location:** Hyatt: Greenway A (2nd floor)

- **Static Analyses in Python Programming Courses**
Session 5B: Student Success

2:10pm - 2:35pm, Mar 1
Hyatt: Greenway A (2nd floor)

- Using GitHub in the classroom predicts student learning outcomes and classroom experiences: Findings from a survey of students and teachers
  2:35pm - 3:00pm, Mar 1
  Hyatt: Greenway A (2nd floor)

Session 5C: Instruments 2

2:10pm - 2:35pm, Mar 1
Hyatt: Greenway B/C (2nd floor)

- An Item Response Theory Evaluation of a Language-Independent CS1 Knowledge Assessment
  2:10pm - 2:35pm, Mar 1
  Hyatt: Greenway B/C (2nd floor)

- A Gap Analysis of Noncognitive Constructs in Evaluation Instruments Designed for Computing Education
  2:10pm - 2:35pm, Mar 1
  Hyatt: Greenway B/C (2nd floor)
Session 5D: Security 1

- Evaluation of Peer Instruction for Cybersecurity Education
  - Time: 1:45pm - 2:10pm, Mar 1
  - Location: Hyatt: Greenway D/E (2nd floor)

- From Midshipmen to Cyber Pros: Training Minority Naval Reserve Officer Training Corp Students for Cybersecurity
  - Time: 2:10pm - 2:35pm, Mar 1
  - Location: Hyatt: Greenway D/E (2nd floor)

- Topological Scoring of Concept Maps for Cybersecurity Education
  - Time: 2:35pm - 3:00pm, Mar 1
  - Location: Hyatt: Greenway D/E (2nd floor)

Session 5E: Misconceptions

- Automated critique of early programming antipatterns
  - Time: 1:45pm - 2:10pm, Mar 1
  - Location: Millennium: Grand North (1st floor)

- A K-8 Debugging Learning Trajectory Derived from Research Literature
  - Time: 2:10pm - 2:35pm, Mar 1
  - Location: Millennium: Grand North (1st floor)

- Learning to use functions: the relationship between misconceptions and self-efficacy
  - Time: 2:35pm - 3:00pm, Mar 1
  - Location: Millennium: Grand North (1st floor)
Session 5F: Accessibility
🕒 1:45pm - 3:00pm, Mar 1
📍 Millennium: Grand South (1st floor)

3 Subsessions
- **Educational Experiences of Blind Programmers**
 🕒 1:45pm - 2:10pm, Mar 1
 📍 Millennium: Grand South (1st floor)

- **Computer Science Principles for Teachers of Blind and Visually Impaired Students**
 🕒 2:10pm - 2:35pm, Mar 1
 📍 Millennium: Grand South (1st floor)

- **Accessible AST-Based Editing for Visually-Impaired Programmers**
 🕒 2:35pm - 3:00pm, Mar 1
 📍 Millennium: Grand South (1st floor)

Session 5G: Curriculum Issues 2
🕒 1:45pm - 3:00pm, Mar 1
📍 Millennium: Grand Central (1st floor)

3 Subsessions
- **From Clusters to Content: Using Code Clustering for Course Improvement**
 🕒 1:45pm - 2:10pm, Mar 1
 📍 Millennium: Grand Central (1st floor)

- **Applying Machine Learning to Improve Curriculum Design**
 🕒 2:10pm - 2:35pm, Mar 1
 📍 Millennium: Grand Central (1st floor)

- **The Relationship between Prerequisite Proficiency and Student Performance in an Upper-Division Computing Course**
 🕒 2:35pm - 3:00pm, Mar 1
 📍 Millennium: Grand Central (1st floor)

Session 5H: ACM Code of Ethics: Looking back and forging ahead
🕒 1:45pm - 3:00pm, Mar 1
📍 Hyatt: Greenway F/G (2nd floor)
Panel

**Speakers**

- **Marty J. Wolf**
  Bemidji State University

- **Don Gotterbarn**
  East Tennessee State University

- **Michael S. Kirkpatrick**
  James Madison University

Session 5I: Four Models for Including Community Colleges in Broadening Participation: A Call to Action

- **Amardeep Kahlon**
  Austin Community College

- **Wendy Dubow**
  University of Colorado Boulder

- **Melanie Williamson**
  Bluegrass Community and Technical College

- **Louise Ann Lyon**
  ETR

- **Deborah Boisvert**
  BATEC, UMass Boston

Date: Mar 1
Time: 1:45pm - 3:00pm
Location: Hyatt: Greenway H/I (2nd floor)
Session 5J: Leading Conversations about Microaggressions, Bias, and Other Nonsense

© 1:45pm - 3:00pm, Mar 1
📍 Hyatt: Northstar A (2nd floor)

Special Session

Speaker:
- Colleen M. Lewis
  Harvey Mudd College
- Catherine Ashcraft
  National Center for Women and Information Technology
- Kyla McMullen
  University of Florida

Session 5K: Wrestling with Retention in the CS Major: Report from the ACM Retention Committee

© 1:45pm - 3:00pm, Mar 1
📍 Hyatt: Northstar B (2nd floor)

Panel

Speaker:
- Alison Derbenwick Miller
  Oracle
- Christine Alvarado
  University of California San Diego
- Mehran Sahami
  Stanford University
- Elsa Villa
  University of Texas, El Paso
- Stuart Zweben
  The Ohio State University
Session 5L: Why and How to Spend a Sabbatical in Industry
🕒 1:45pm - 3:00pm, Mar 1
📍 Hyatt: Regency (2nd floor)

Panel

 Speakers

Ryan McFall
Hope College

Zachary Kurmas
Grand Valley State University

Phillip T. Conrad
University of California Santa Barbara

Dennis Frailey
Raytheon Company (Retired)

Session 5M: 50th #5
🕒 1:45pm - 3:00pm, Mar 1
📍 Hyatt: Great Lakes A1 & A2 (2nd floor)

50th

1 Subsessions

Punch Cards to Python: A Case Study of a CS0 Core Course
🕒 1:45pm - 3:00pm, Mar 1
📍 Hyatt: Great Lakes A1 & A2 (2nd floor)

Sister Session #4
🕒 1:45pm - 3:00pm, Mar 1
📍 Hyatt: Lake Calhoun (4th floor)
3:00pm

Breaks, Exhibits and Demos
- 3:00pm - 3:45pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Demo Session #4
- 3:00pm - 3:45pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Speakers
- Lina Battestili
  North Carolina State University
- Peter-Michael Osera
  Grinnell College

2 Subsessions
- Demos #4A: Code Defenders: A Mutation Testing Game
  - 3:00pm - 3:45pm, Mar 1
  - Hyatt: Exhibit Hall (1st floor)
- Demos #4B: An Interactive, Graphical Simulator for Teaching Operating Systems
  - 3:00pm - 3:45pm, Mar 1
  - Hyatt: Exhibit Hall (1st floor)

NSF Showcase #4
- 3:00pm - 3:45pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster Session #2
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)
30 Subsessions

- **Poster #201: Enhancing Essential Data Skills for College-wide Students**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #202: Authentic Data Protection with SMSD Labware**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #203: Applying Project-Based Learning for an Online Object-Oriented Systems Course**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #204: Use Bots to Improve GitHub Pull-Request Feedback**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #205: Student Debugging Practices and Their Relationships With Project Outcomes**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #206: Using Interactive Visualization and Programmed Instruction to teach Formal Languages**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #207: Benefits of Physical Interaction with Array Elements on Student Comprehension of Sorting Algorithms**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #208: An Investigation of Conflicts Between Upper-Elementary Pair Programmers**
  - Time: 3:00pm - 5:00pm, Mar 1
  - Location: Hyatt: Exhibit Hall (1st floor)
Poster #209: Job Placement Experience of Alumni from a 3-year CS Program

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #210: Creating Co-curricular Programs to Improve CS Student Identity and Sense of belonging

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #211: Engaging Alumni Mentors in Software Engineering Project Courses

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #212: Lessons Learned in 10 years of Distributed Systems Capstones

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #213: Improving programming skills through classroom presentation of assignments

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #214: Mobile App Development: Android or iOS? An Experience Report from Teaching Both Platforms

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #215: Building Trust in Computer Science Research-Practice Partnerships: A Theme Study

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #216: Understand the Emerging Demands of Computing Education for Non-CS Major Students

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #217: Infusing CS Graduate Transition Curriculum with Professional, Technical and Data Science Competencies

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #218: Towards Encapsulated Cyber Security Labs – A Container Based Approach

- Time: 3:00 pm - 5:00 pm, Mar 1
- Location: Hyatt Exhibit Hall (1st floor)

Poster #219: The Institute of Coding: A University-Industry Collaboration to Address the UK Digital Skills Crisis
Poster #220: Computer Science Problem Solving Course: Practical Technical and Thinking Skills for CS Majors
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #221: Design of a Gateway for Open Source Software Development In a Traditional CS Curriculum
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #222: Inclusive Experiences Using HFOSS in a Senior Computer Science Elective
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #223: A Neural Network Model for a Tutoring Companion Supporting Students in an Introduction to Programming with Java Course
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #224: Assessing Middle School Students' Computational Thinking Through Programming Trajectory Analysis
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #225: Evaluating student engagement towards integrating parallel and distributed computing (PDC) topics in undergraduate level computer science curriculum
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #226: Dynamic Recitation: A Student-Focused, Goal-Oriented, Recitation Management Platform
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #227: Sentiment Analysis across the Courses of a MOOC Specialization
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #228: Using an art museum field trip to spark classroom discussions about mobile app design
- 3:00pm - 5:00pm, Mar 1
- Hyatt: Exhibit Hall (1st floor)

Poster #229: Lichen: Customizable, Open Source Plagiarism Detection
3:00pm - 5:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

Poster #230: Facilitating Discussion-Based Grading and Private Channels via an Integrated Forum
3:00pm - 5:00pm, Mar 1
Hyatt: Exhibit Hall (1st floor)

3:45pm

Session 6A: Physical Computing
3:45pm - 5:00pm, Mar 1
Hyatt: Greenway A (2nd floor)

3 Subsessions

- Designing Middle School Science Curriculum that Integrates Computational Thinking and Sensor Technology
  3:45pm - 4:10pm, Mar 1
  Hyatt: Greenway A (2nd floor)

- One size fits all: Designing for socialization in physical computing
  4:10pm - 4:35pm, Mar 1
  Hyatt: Greenway A (2nd floor)

- CS0: Introducing Computing with Raspberry Pis
  4:35pm - 5:00pm, Mar 1
  Hyatt: Greenway A (2nd floor)

Session 6B: Professional Skills
3:45pm - 5:00pm, Mar 1
Hyatt: Greenway J (2nd floor)

3 Subsessions

- Student usage of hints on coding-based summative assessments
  3:45pm - 4:10pm, Mar 1
  Hyatt: Greenway J (2nd floor)

- A Collaborative Practicum Targeting Communication Skills for Computer Science Researchers
  4:10pm - 4:35pm, Mar 1
  Hyatt: Greenway J (2nd floor)
Understanding CS Undergraduate Students' Professional Development through the Lens of Internship Experiences
4:35pm - 5:00pm, Mar 1
Hyatt: Greenway J (2nd floor)

Session 6C: Attitudinal
3:45pm - 5:00pm, Mar 1
Hyatt: Greenway B/C (2nd floor)

Paper Session

3 Subsessions

• Assessing the Attitudes Towards Computing Scale of the EarSketch Student Survey
  3:45pm - 4:10pm, Mar 1
  Hyatt: Greenway B/C (2nd floor)

• Are You Game? Assessing Students' Perception of Learning, Instructors' Perspective, and Learning Attitudes
  4:10pm - 4:35pm, Mar 1
  Hyatt: Greenway B/C (2nd floor)

• Factors That Influence Students' Motivation and Perception of Studying Computer Science
  4:35pm - 5:00pm, Mar 1
  Hyatt: Greenway B/C (2nd floor)

Session 6D: Security 2
3:45pm - 5:00pm, Mar 1
Hyatt: Greenway D/E (2nd floor)

Paper Session

3 Subsessions

• Introducing Practical SHA-1 Collisions to the Classroom
  3:45pm - 4:10pm, Mar 1
  Hyatt: Greenway D/E (2nd floor)

• Teaching Cybersecurity with Networked Robots
  4:10pm - 4:35pm, Mar 1
  Hyatt: Greenway D/E (2nd floor)

• Fakesbook - A social networking platform for teaching security and privacy concepts to secondary school students
  4:35pm - 5:00pm, Mar 1
Session 6E: Computational Thinking 2
🕒 3:45pm - 5:00pm, Mar 1
📍 Millennium: Grand North (1st floor)

3 Subsessions
- **Primary School Teachers’ Conceptions of Computational Thinking**
  🕒 3:45pm - 4:10pm, Mar 1
  📍 Millennium: Grand North (1st floor)

- **PRADA: A Practical Model for Integrating Computational Thinking in K12 Education**
  🕒 4:10pm - 4:35pm, Mar 1
  📍 Millennium: Grand North (1st floor)

- **Computational Thinking in the Danish High School**
  🕒 4:35pm - 5:00pm, Mar 1
  📍 Millennium: Grand North (1st floor)

Session 6F: Systems
🕒 3:45pm - 5:00pm, Mar 1
📍 Millennium: Grand South (1st floor)

3 Subsessions
- **WatDFS: A Project for Understanding Distributed Systems in the Undergraduate Curriculum**
  🕒 3:45pm - 4:10pm, Mar 1
  📍 Millennium: Grand South (1st floor)

- **Computer Organization and Design Course with FPGA Cloud**
  🕒 4:10pm - 4:35pm, Mar 1
  📍 Millennium: Grand South (1st floor)

- **Visualizing Classic Synchronization Problems**
  🕒 4:35pm - 5:00pm, Mar 1
  📍 Millennium: Grand South (1st floor)

Session 6G: CS1 2
3 Subsessions

- **Up or Down? An insight into programmer's acquisition of iteration skills**
  - Time: 3:45pm - 4:10pm, Mar 1
  - Location: Millennium: Grand Central (1st floor)

- **Teaching Machine Learning to Non-Majors: An Exploration of Pedagogical Content Knowledge**
  - Time: 4:10pm - 4:35pm, Mar 1
  - Location: Millennium: Grand Central (1st floor)

- **Self-paced Mastery Learning CS1**
  - Time: 4:35pm - 5:00pm, Mar 1
  - Location: Millennium: Grand Central (1st floor)

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**Session 6H: ACM Student Research Competition**

- Time: 3:45pm - 5:00pm, Mar 1
- Location: Hyatt: Greenway F/G (2nd floor)

**Speakers**

- Stephen Hughes
- Jessica Schmidt

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**Session 6I: ACM Student Research Competition**

- Time: 3:45pm - 5:00pm, Mar 1
- Location: Hyatt: Greenway H/I (2nd floor)

**Speakers**

- Stephen Hughes
Session 6J: Microteaching: Recursion, Coding Style, Creative Coding, Inheritance and Polymorphism, Loops, and the Internet

🕒 3:45pm - 5:00pm, Mar 1
📍 Hyatt: Northstar A (2nd floor)

Speaker:

Colleen M. Lewis
Harvey Mudd College

Daniel Garcia
University of California, Berkeley

Helen Hu
Westminster College

Saber Khan
The Browning School

Nigamanth Sridhar
Cleveland State University

Bryan Twarek
San Francisco Unified School District

Chinma Uche
Academy of Aerospace and Engineering

Session 6K: Community College Transfer Pathways

🕒 3:45pm - 5:00pm, Mar 1
📍 Hyatt: Northstar B (2nd floor)
Speakers

Session 6L: Curious about Student Participation in Humanitarian Open Source Software?
3:45pm - 5:00pm, Mar 1
Hyatt: Regency (2nd floor)

Speakers

- Jeff Forbes
  Duke University

- Jumee Song
  Siegel Family Endowment

- Louise Ann Lyon
  ETR

- Cindy Tucker
  Bluegrass Community and Technical College

- Leslie Maxwell
  California State University Monterey Bay

- Darci Burdge
  Nassau Community College

- Gregory Hislop
  Drexel University

- Grant Braught
  Dickenson College

- Josh Dehlinger
  Towson University
"You don't have to be a white male that was learning how to program since he was 5.", Revisiting Unlocking the Clubhouse 20 Years Later

Sister Session: TOCE

Chris Hundhausen
3 Subsessions

- Students' Experience of Participation in a Discipline – A Longitudinal Study of Computer Science and IT Engineering Students
  - 3:45pm - 4:10pm, Mar 1
  - Hyatt: Lake Calhoun (4th floor)

- Classroom-based research projects for Computing teachers: facilitating professional learning
  - 4:10pm - 4:35pm, Mar 1
  - Hyatt: Lake Calhoun (4th floor)

- Taking a Studio Course in Distributed Software Engineering from a Large Local Cohort to a Small Global Cohort
  - 4:35pm - 5:00pm, Mar 1
  - Hyatt: Lake Calhoun (4th floor)

5:10pm

SIGCSE Business Meeting
- 5:10pm - 6:00pm, Mar 1
- Hyatt: Greenway D/E (2nd floor)

6:00pm

CCSC Business Meeting
- 6:00pm - 7:00pm, Mar 1
- Hyatt: Greenway B/C (2nd floor)

NCWIT Reception
- 6:00pm - 7:00pm, Mar 1
- Hyatt: Northstar A&B (2nd floor)

7:00pm

Community College Reception
- 7:00pm - 8:00pm, Mar 1
- Hyatt: Regency (2nd floor)

Friday Workshops
- 7:00pm - 10:00pm, Mar 1
Workshops

10 Subsessions

- **Friday Workshop #301**: Adopting, Integrating, and Evaluating Computational Creativity Exercises to Improve Student Learning  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Lakeshore B (1st floor)

- **Friday Workshop #302**: Using Raspberry Pi as a Platform for Teaching Cybersecurity Concepts  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Lakeshore C (1st floor)

- **Friday Workshop #303**: Using Subgoal Labeling in Teaching CS1  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Greenway A (2nd floor)

- **Friday Workshop #304**: Micro:bit Magic: Engaging K-12, CS1/2, and non-majors with IoT & Embedded  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Greenway B/C (2nd floor)

- **Friday Workshop #305**: Integrating Agent-based Modeling in STEM Classes—From Blocks to Text and Back?  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Greenway D/E (2nd floor)

- **Friday Workshop #306**: SciGirls Code: Creative Robotics for Tween Girls in Out of School Time  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Greenway J (2nd floor)

- **Friday Workshop #307**: Competency-Based Education: The Future of Learning  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Greenway F/G (2nd floor)

- **Friday Workshop #308**: Playing with and Creating Practice Spaces for Equitable Teaching  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Greenway H/I (2nd floor)

- **Friday Workshop #309**: Code Crafters Curriculum: A Textile Crafts Approach To Computer Science  
  - 7:00pm - 10:00pm, Mar 1  
  - Hyatt: Great Lakes A1 & A2 (2nd floor)

- **Friday Workshop #310**: Make and Take an Ethics Module: Ethics Across the
Sat, Mar 02, 2019

7:00am

Speaker Breakfast
7:00am - 8:15am, Mar 2
Millenium: Loring (Lower level)
Speakers only.

8:15am

Welcome to Day 3
8:15am - 9:30am, Mar 2
Hyatt: Nicollet Grand Ballroom (1st floor)

Keynote

2 Subsessions

General Information
8:15am - 8:30am, Mar 2
Hyatt: Nicollet Grand Ballroom (1st floor)

Invited Keynote
8:30am - 9:30am, Mar 2
Hyatt: Nicollet Grand Ballroom (1st floor)

9:45am

Session 7A: Professional Development 1
9:45am - 10:35am, Mar 2
Hyatt: Greenway A (2nd floor)

Paper Session

2 Subsessions

Assessing In-service Teachers’ Developments of Computational Thinking Practices in Teacher Development Courses
9:45am - 10:10am, Mar 2
Hyatt: Greenway A (2nd floor)
Teaching Accessibility: A Design Exploration of Faculty Professional Development at Scale

10:10am - 10:35am, Mar 2
Hyatt: Greenway A (2nd floor)

Session 7B: REU

9:45am - 10:35am, Mar 2
Hyatt: Greenway J (2nd floor)

Paper Session

2 Subsessions

Utilizing the Affinity Research Group Model in a Summer Research Experience for Undergraduates Program

9:45am - 10:10am, Mar 2
Hyatt: Greenway J (2nd floor)

Hello Research! Developing an Intensive Research Experience for Undergraduate Women

10:10am - 10:35am, Mar 2
Hyatt: Greenway J (2nd floor)

Session 7C: Expectations

9:45am - 10:35am, Mar 2
Hyatt: Greenway B/C (2nd floor)

Paper Session

2 Subsessions

Collaboration versus Cheating: Reducing Code Plagiarism in an Online MS Computer Science Program

9:45am - 10:10am, Mar 2
Hyatt: Greenway B/C (2nd floor)

What Do Syllabi Reveal About Our Expectations of Introductory Programming Students?

10:10am - 10:35am, Mar 2
Hyatt: Greenway B/C (2nd floor)

Session 7D: Outreach

9:45am - 10:35am, Mar 2
Hyatt: Greenway D/E (2nd floor)
2 Subsessions

- **Computational Thinking Bins: Outreach and More**
  - Time: 9:45am - 10:10am, Mar 2
  - Location: Hyatt: Greenway D/E (2nd floor)

- **A Self-Determination Theory Approach to Computer Science Outreach**
  - Time: 10:10am - 10:35am, Mar 2
  - Location: Hyatt: Greenway D/E (2nd floor)

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**Session 7E: Theory & Math**

2 Subsessions

- **A Survey-based Exploration of Computer Science Student Perspectives on Mathematics**
  - Time: 9:45am - 10:10am, Mar 2
  - Location: Millennium: Grand North (1st floor)

- **Impact of Steps, Instruction, and Motivation on Learning Symbolic Reasoning Using an Online Tool**
  - Time: 10:10am - 10:35am, Mar 2
  - Location: Millennium: Grand North (1st floor)

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**Session 7F: Pair Programming**

2 Subsessions

- **Hybrid Pair Programming - A Promising Alternative to Standard Pair Programming**
  - Time: 9:45am - 10:10am, Mar 2
  - Location: Millennium: Grand South (1st floor)

- **In Their Own Words: Gender Differences in Student Perceptions of Pair Programming**
  - Time: 10:10am - 10:35am, Mar 2
**Session 7G: CSP**

- **Date & Time:** 9:45am - 10:35am, Mar 2
- **Location:** Millennium: Grand South (1st floor)

2 Subsessions

- **AP Computer Science Principles’ Impact on the Landscape of High School Computer Science using Maryland as a Model**
  - **Date & Time:** 9:45am - 10:10am, Mar 2
  - **Location:** Millennium: Grand Central (1st floor)

- **An Examination of the Correlation of Exploring Computer Science Course Performance and the Development of Programming Expertise**
  - **Date & Time:** 10:10am - 10:35am, Mar 2
  - **Location:** Millennium: Grand Central (1st floor)

**Session 7M: 50th #7**

- **Date & Time:** 9:45am - 10:35am, Mar 2
- **Location:** Hyatt: Great Lakes A1 & A2 (2nd floor)

1 Subsession

- **The History of the SIGCSE Submission and Review Software**
  - **Date & Time:** 9:45am - 10:10am, Mar 2
  - **Location:** Hyatt: Great Lakes A1 & A2 (2nd floor)

**Lightning Talks #1**

- **Date & Time:** 9:45am - 10:35am, Mar 2
- **Location:** Hyatt: Lake Calhoun (4th floor)

**Speakers**

- **Lina Battestilli**
  - North Carolina State University
10 Subsessions

- **LT #201: Micro-volunteering and Virtual-volunteering as Pedagogical Tools in Computer Science**
  - 9:45am - 9:50am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #202: 5 Lessons on Supporting CSforAll in K12 School Districts**
  - 9:50am - 9:55am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #203: Promoting Mastery Learning in an Introductory Programming Course**
  - 9:55am - 10:00am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #204: Teaching RSA: What happens when one of your primes isn’t?**
  - 10:00am - 10:05am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #205: Recognizing and Questioning the CT Education Paradigm**
  - 10:05am - 10:10am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #206: Consistency when Teaching Multiple Sections: Live Lecture Recordings Reviewed and Discussed with Students**
  - 10:10am - 10:15am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #207: Improving Access to Internships with an On-Campus Software Development Center**
  - 10:15am - 10:20am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #208: Increase K-12 Cyber Competency To Prevent Cyberbullying**
  - 10:20am - 10:25am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #209: Plus ca change: A Historical Look at High School Computer Science Curriculum**
  - 10:25am - 10:30am, Mar 2
  - Hyatt: Lake Calhoun (4th floor)

- **LT #210: Improving Retention through Team-Based Learning Finch labs and Peer-Educators in Intro to Programming**
  - 10:30am - 10:35am, Mar 2
Demo Session #5

9:45am - 10:35am, Mar 2

Demos #5A: NetsBlox and Wireless Robots Make Cybersecurity Fun
9:45am - 10:35am, Mar 2
Greenway F/G

Demos #5B: Blocks4All: Making Block-Based Programming Languages Accessible for Children with Visual Impairments
9:45am - 10:35am, Mar 2
Greenway H/I

Demos #5C: CodeBuddy (Collaborative Software Development Environment): In- and Out-class Practice for Remote Pair-Programming with Monitoring Coding Students' Progress
9:45am - 10:35am, Mar 2
Northstar A

10:35am

Break, Exhibits and Demos
10:35am - 11:15am, Mar 2
Hyatt: Exhibit Hall (1st floor)

NSF Showcase #5
10:35am - 11:15am, Mar 2
Hyatt: Exhibit Hall (1st floor)
Poster Session #3

10:35am - 12:30pm, Mar 2
Hyatt: Exhibit Hall (1st floor)

Speakers

Laurence D. Merkle
S. Monisha Pulimood
The College of New Jersey

30 Subsessions

- Poster #301: Introducing Theoretical Computer Concepts in Secondary Education
  10:35am - 12:30pm, Mar 2
  Hyatt: Exhibit Hall (1st floor)

- Poster #302: Girls in Engineering Draw a Computer Scientist
  10:35am - 12:30pm, Mar 2
  Hyatt: Exhibit Hall (1st floor)

- Poster #303: What does it takes to teach K12 Computer Science? Exploring teacher’s attitudes towards teaching CS K12 in Georgia
  10:35am - 12:30pm, Mar 2
  Hyatt: Exhibit Hall (1st floor)

- Poster #304: Implementing CS0 with Computer Science Principles Curricula
  10:35am - 12:30pm, Mar 2
  Hyatt: Exhibit Hall (1st floor)

- Poster #305: Linear Data Structures: A Comparison of Novice and Expert Teacher Pedagogical Content Knowledge
  10:35am - 12:30pm, Mar 2
  Hyatt: Exhibit Hall (1st floor)

- Poster #306: SciGirls Code: Computational Participation for Middle School Girls
  10:35am - 12:30pm, Mar 2
  Hyatt: Exhibit Hall (1st floor)
Poster #307: Every Little Bit Counts: Experiences and Lessons Learned Building a Community Outreach Program from the Ground Up
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #308: Machine Learning: An Introductory Unit of Study for Secondary Education
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #309: Comparing the effects of using a tangible object or a simulation in learning elementary CS concepts: a case study with block-based programming
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #310: Collaborative Coding and Composing of JazzHands: Integrating the Learning of Advanced Computational Concepts with Electronic Textiles to Make Music Wearables
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #311: Collaboration: Developing and Piloting a Cybersecurity Curriculum for Middle School
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #312: Building Computer Science K-12 PLCs in Rural Communities
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #313: Computational Thinking in the Making: Lessons for Second Graders in a STEM Computer Science Immersion School
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #314: CodeNC: Integrating Computational Thinking into K-12 Instructional Activities using Animated Videos
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #315: An Interactive Teaching Tool for Introducing Novices to Machine Translation
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)

Poster #316: Teacher beliefs as a mediating factor in a novel understanding of enactment of CT curriculum
- 10:35am - 12:30pm, Mar 2
- Hyatt: Exhibit Hall (1st floor)
Poster #317: Exploring the definition of Computational Thinking in Research and the Classroom
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #318: Curated Pathways to Innovation: Personalized CS Education to Promote Diversity
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #319: Using Music to Foster Engagement in Introductory Computing Courses
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #320: Sorting Out Algorithms: What Makes One Better than Another?
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #321: Four Misconceptions of Scope Held By Computer Science Students
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #322: Snap! A Look at 5 Years, 250,000 Users and 2 Million Projects
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #323: ECS4Alabama: A State-Wide Effort to Provide Access to Authentic Computer Science Education in Predominantly Rural and High Minority Schools
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #324: Don't Forget About Us: Understanding Rural and Small Town Principals’ Values Toward Computer Science
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #325: Integrated STEM+C for children in formal and informal settings as a precursor to K-2 computer science education practices
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #326: Using an Intelligent Tutoring System to Teach Red Black Trees
⏰ 10:35am - 12:30pm, Mar 2
📍 Hyatt: Exhibit Hall (1st floor)

Poster #327: Code For Her: Exploring Female and Gender-Diverse Computing
Workshops for Faculty, Staff, and Students

- **Poster #328: Rubric to Evaluate Programming Learning of Elementary School Students**
  - Time: 10:35am - 12:30pm, Mar 2
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #329: Giving Students Canned Code through Typing Exercises**
  - Time: 10:35am - 12:30pm, Mar 2
  - Location: Hyatt: Exhibit Hall (1st floor)

- **Poster #330: Using an art show in CS1 to spark interest in Computer Science**
  - Time: 10:35am - 12:30pm, Mar 2
  - Location: Hyatt: Exhibit Hall (1st floor)

11:15am

**Session 8A: Professional Development 2**

- **Paper Session**
  - Time: 11:15am - 12:30pm, Mar 2
  - Location: Hyatt: Greenway A (2nd floor)

  3 Subsessions
  - **"I Impressed Myself With How Confident I Felt": Reflections on a Computer Science Assessment for K-8 Teachers**
    - Time: 11:15am - 11:40am, Mar 2
    - Location: Hyatt: Greenway A (2nd floor)
  
  - **Reflective Diary as a Tool for Professional Development of Computer Science Teachers**
    - Time: 11:40am - 12:05pm, Mar 2
    - Location: Hyatt: Greenway A (2nd floor)
  
  - **Helping K--12 Teachers Get Unstuck with Scratch: The Design of an Online Creative Professional Learning Experience**
    - Time: 12:05pm - 12:30pm, Mar 2
    - Location: Hyatt: Greenway A (2nd floor)

**Session 8B: Mentorship**

- **Paper Session**
  - Time: 11:15am - 12:30pm, Mar 2
  - Location: Hyatt: Greenway J (2nd floor)
3 Subsessions

- **Perfect Match: Facilitating Study Partner Matching**
  - Time: 11:15am - 11:40am, Mar 2
  - Location: Hyatt: Greenway J (2nd floor)

- **A Structured Mentorship Model for Computer Science University Students in Kenya**
  - Time: 11:40am - 12:05pm, Mar 2
  - Location: Hyatt: Greenway J (2nd floor)

- **A Flexible Curriculum for Promoting Inclusion through Peer Mentorship**
  - Time: 12:05pm - 12:30pm, Mar 2
  - Location: Hyatt: Greenway J (2nd floor)

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**Session 8C: Engagement**

- Time: 11:15am - 12:30pm, Mar 2
- Location: Hyatt: Greenway B/C (2nd floor)

- **Paper Session**

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3 Subsessions

- **Student Engagement is Key to Broadening Participation in CS**
  - Time: 11:15am - 11:40am, Mar 2
  - Location: Hyatt: Greenway B/C (2nd floor)

- **Evaluating the Impact of Combination of Engagement Strategies in SEP-CyLE on Improve Student Learning of Programming Concepts**
  - Time: 11:40am - 12:05pm, Mar 2
  - Location: Hyatt: Greenway B/C (2nd floor)

- **Non-Programming Activities for Engagement with Foundational Concepts in Introductory Programming**
  - Time: 12:05pm - 12:30pm, Mar 2
  - Location: Hyatt: Greenway B/C (2nd floor)

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**Session 8D: Access**

- Time: 11:15am - 12:30pm, Mar 2
- Location: Hyatt: Greenway D/E (2nd floor)

- **Paper Session**

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3 Subsessions

- **A Teacher Workshop for Introducing Computational Thinking in Rural and Vulnerable Environments**
An Analysis through an Equity Lens of the Implementation of Computer Science in K-8 Classrooms in a Large, Urban School District

Increasing Access to Computer Science Education in Rural Areas through a Large-Scale Collective Impact Model

The Role of Translanguaging in Computational Literacies: Documenting Middle School Bilinguals' Practices in Computer Science Integrated Units

A Cultural Computing Curriculum

Stitching the Loop with Electronic Textiles * Promoting Equity in High School Students’ Competencies and Perceptions of Computer Science

Session 8E: Culture & Language

The Role of Translanguaging in Computational Literacies: Documenting Middle School Bilinguals' Practices in Computer Science Integrated Units

A Cultural Computing Curriculum

Stitching the Loop with Electronic Textiles * Promoting Equity in High School Students’ Competencies and Perceptions of Computer Science

Session 8F: Inclusion

How Faculty Negotiate "Inclusive Educational Practice" in Computer Science
**Infusing Cooperative Learning into AP Computer Science Principles Courses to Promote Engagement and Diversity**

- **Time:** 11:40am - 12:05pm, Mar 2
- **Location:** Millennium: Grand South (1st floor)

**Computer Science Educators Stack Exchange: Perceptions of equity and gender diversity in Computer Science**

- **Time:** 12:05pm - 12:30pm, Mar 2
- **Location:** Millennium: Grand South (1st floor)

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**Session 8G: Blocks**

- **Time:** 11:15am - 12:30pm, Mar 2
- **Location:** Millennium: Grand Central (1st floor)

**3 Subsessions**

- **Defining Tinkering Behavior in Open-ended Block-based Programming Assignments**
  - **Time:** 11:15am - 11:40am, Mar 2
  - **Location:** Millennium: Grand Central (1st floor)

- **Using rubrics integrating design and coding to assess middle school students' open-ended block-based programming projects**
  - **Time:** 11:40am - 12:05pm, Mar 2
  - **Location:** Millennium: Grand Central (1st floor)

- **Block-based comprehension: Exploring and explaining student outcomes from a read-only block-based exam**
  - **Time:** 12:05pm - 12:30pm, Mar 2
  - **Location:** Millennium: Grand Central (1st floor)

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**Session 8H: Special Session: A discussion of Research Practice Partnerships in CS Education**

- **Time:** 11:15am - 12:30pm, Mar 2
- **Location:** Hyatt: Greenway F/G (2nd floor)

**Speakers**

Leigh Ann Delyser
CSforALL
Session 8I: Demystifying Language about Students’ Varied Identities

11:15am - 12:30pm, Mar 2
Hyatt: Greenway H/I (2nd floor)

Speakers

Joshua Elder
CSforALL

Alan Peterfreund
SageFox Consulting Group

Stacey Sexton
SageFox Consulting Group

Jason Black
Florida A&M University / School of Business and Industry

Kamau Bobb
Constellations Center for Equity in Computing, Georgia Tech

April Browne
Butte College

Phillip T. Conrad
University of California Santa Barbara

Colleen M. Lewis
Harvey Mudd College

Cheryl A. Swanier
Claflin University

Sheila Tejada
University of Southern California
Session 8J: Nifty Assignments
🕒 11:15am - 12:03pm, Mar 2
📍 Hyatt: Northstar A (2nd floor)

Nifty #1: Post-It Pandemonium
🕒 11:15am - 11:27am, Mar 2
📍 Hyatt: Northstar A (2nd floor)

Nifty #2: Hawaiian Word Phonetic Generator
🕒 11:27am - 11:39am, Mar 2
📍 Hyatt: Northstar A (2nd floor)

Nifty #3: Motion Parallax
🕒 11:39am - 11:51am, Mar 2
📍 Hyatt: Northstar A (2nd floor)

Nifty #4: CS1/2 Assignment: Computing Gerrymandering
🕒 11:51am - 12:03pm, Mar 2
📍 Hyatt: Northstar A (2nd floor)

Nifty #5: Code Crusher
🕒 12:03pm - 12:15pm, Mar 2
📍 Hyatt: Northstar A (2nd floor)

Nifty #6: Blocky
🕒 12:15pm - 12:27pm, Mar 2
📍 Hyatt: Northstar A (2nd floor)

Session 8K: SIGCSE Reviewing Information Session
🕒 11:15am - 12:30pm, Mar 2
📍 Hyatt: Northstar B (2nd floor)
Session 8L: Panel: Making K-12 CS Education Accessibility a Norm, not an Exception

11:15am - 12:30pm, Mar 2
Hyatt: Regency (2nd floor)

Panel

Speakers

Ruthe Farmer  
CSforALL.org

Todd Lash  
University of Illinois at Urbana-Champaign

Sister Session SIGCAS

11:15am - 12:30pm, Mar 2
Hyatt: Lake Calhoun (4th floor)

SIGCAS: Values in Internet Security

Speakers

Alyssa Moore

Bradley Fidler

3 Subsessions

- Rethinking Values in the Design of Security Technologies
  11:15am - 11:40am, Mar 2
  Hyatt: Lake Calhoun (4th floor)
Computer and Network Security: Understanding Communities of Ethical Research Practice
🕒 11:40am - 12:05pm, Mar 2
📍 Hyatt: Lake Calhoun (4th floor)

The Politics Behind Internet Routing Security and Insecurity
🕒 12:05pm - 12:30pm, Mar 2
📍 Hyatt: Lake Calhoun (4th floor)

12:30pm

Lunch, Closing Ceremonies
🕒 12:30pm - 2:00pm, Mar 2
📍 Hyatt: Nicollet Grand Ballroom (1st floor)

10 Subsessions

- Saturday Workshop #401: Using and Customizing Open-Source Runestone Ebooks for Computer Science Classes
 🕒 3:00pm - 6:00pm, Mar 2
 📍 Hyatt: Lakeshore A (1st floor)

- Saturday Workshop #402: To Dissemination... And Beyond!: Building Better Propagation Plans for Computer Science Education Innovations
 🕒 3:00pm - 6:00pm, Mar 2
 📍 Hyatt: Lakeshore B (1st floor)

- Saturday Workshop #403: Architecting Serverless Microservices on the Cloud with AWS
Saturday Workshop #404: NSF Interactive Discussion: Computer Science Undergraduate Education in 2026 and Beyond
3:00pm - 6:00pm, Mar 2
Hyatt: Lakeshore C (1st floor)

Saturday Workshop #405: CyberPaths: cyber security labs for liberal arts institutions using the NSF Global Environment for Network Innovations (GENI)
3:00pm - 6:00pm, Mar 2
Hyatt: Greenway B/C (2nd floor)

Saturday Workshop #406: Modernizing Early CS Courses with Parallel and Distributed Computing
3:00pm - 6:00pm, Mar 2
Hyatt: Greenway D/E (2nd floor)

Saturday Workshop #407: An Afternoon with an AP Computer Science A Exam Reader
3:00pm - 6:00pm, Mar 2
Hyatt: Greenway J (2nd floor)

Saturday Workshop #408: Interactive Programming Environments for Teachers and Students
3:00pm - 6:00pm, Mar 2
Hyatt: Greenway H/I (2nd floor)

Saturday Workshop #409: Big Data Analytics with Spark
3:00pm - 6:00pm, Mar 2
Hyatt: Greenway F/G (2nd floor)

Saturday Workshop #410: Booting into AI: Startup Instructions for Teaching Artificial Intelligence
3:00pm - 6:00pm, Mar 2
Hyatt: Northstar A (2nd floor)