WEDNESDAY 8:00 AM - 5:00 PM Pre-Symposium Events

- 8:00 AM 12:30 PM Web Development with the MEAN Stack: A Comprehensive Hands-On Tutorial for Educators (room: L5-L6)

 Adrian German
- 9:00 AM 12:00 PM Fulbright for Computer Science Education (room: L11-L12)

 Athena Fulay

 Andy Riess
- 9:00 AM 12:30 PM Facilitating POGIL Activities to Support All Students (room: L10)

 Helen H. Hu

 Pat Campbell

 Chris Mayfield

 Tricia Shepherd
- 9:00 AM 12:30 PM SIGCAS Workshop on Computing for the Social Good: Educational Practices (room: L9)

 Gregory Hislop
- 9:00 AM 5:00 PM POSSE Roundup (room: Sultana) Gregory Hislop
- 9:00 AM 5:00 PM SIGCSE Board Sponsored: New Educators Workshop (room: Mississippi)

 Andrea Danyluk

 Dave Reed
- 2:00 PM 5:00 PM Computing Principles and Computation in the First Course Exemplars from China (room: L8)

 Ming Zhang
- 2:00 PM 5:00 PM Creating Engaging and Relevant Classroom Activities and Assignments (room: L10)

 Helen H. Hu

 Beth Quinn
- 2:00 PM 5:00 PM Integrating Computing Ethics and Professionalism into the Technical Curriculum (room: L9)

 Don Gotterbarn
- 2:00 PM 5:00 PM Universal Design of Teaching in K-12 Computing (room: L11-L12) Brianna Blaser

WEDNESDAY 7:00 PM - 10:00 PM Workshops

Workshop #101: CReST-Security Knitting Kit: Ready to Use Teaching Resources to Embed Security Topics into Upper Division CS Courses (room: L1)

Ambareen Siraj, Tennessee Tech University Sheikh Ghafoor, Tennessee Tech University

Workshop #102: Making Music with Computers: Creative Programming in Python (room: L2-L3) Bill Manaris, College of Charleston

Tobias Kohn, ETH Zürich

Workshop #103: A Web-Based IDE for Teaching with Any Language (room: L5-L6)

Dan Armendariz, Harvard University David Malan, Harvard University Nikolai Onken, Cloud9

Workshop #104: High Yield in the Short Term: Planning Strategically to Get Women into your

Major (room: L8)

Lecia Barker, University of Texas at Austin Leisa Thompson, University of Virginia

Workshop #105: Guiding Students to Discover CS Concepts and Develop Process Skills using

POGIL (room: L9)

Clifton Kussmaul, Muhlenberg College

Helen Hu, Westminster College

Chris Mayfield, James Madison University

Workshop #106: Engage, Energize and Empower Your Students with Team-Based Learning

(room: L10)

Lenore Horowitz, University at Albany George Berg, University at Albany

Kimberly Van Orman, University at Albany

Workshop #107: Teaching Parallel Computing Concepts with OpenMP (room: L11-L12)

Joel Adams, Calvin College Richard Brown, St. Olaf College Elizabeth Shoop, Macalester College

Workshop #108: Using OpenDSA eTextbooks in Your Class (room: L13-L14)

Clifford Shaffer, Virginia Tech

Thomas Naps, University of Wisconsin--Oshkosh

Susan Rodger, Duke University

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- Workshop #109: Reading and Writing like Computer Scientists: How to Promote Critical Thinking and Student Engagement (room: River Bluff)

 Mark Hoffman, Quinnipiac University

 Jerod Weinman, Grinnell College
- Workshop #110: Lego-based Case Studies for Teaching Software Engineering Concepts throughout the Curriculum (room: Sultana)

 Stan Kurkovsky, Central Connecticut State University
- Workshop #111: Peer Instruction in Computing: a Focus on Student Learning (room: Mississippi)

 Daniel Zingaro, University of Toronto Mississauga

 Leo Porter, University of California, San Diego

 Quintin Cutts, University of Glasgow

 John Glick, University of San Diego

 Joe Hummel, University of Illinois at Chicago

 Cynthia Lee, Stanford University

 Jaime Spacco, Knox College
- Workshop #112: How to launch a STARS Computing Corps cohort to improve retention and broaden participation in computing (room: Cotton Row)

 Jamie Payton, University of North Carolina at Charlotte

 Tiffany Barnes, North Carolina State University

THURSDAY 8:30 AM - 10:00 AM Plenary Session - John Sweller - UNSW Australia

THURSDAY 10:00 AM - 10:45 AM Break, Exhibits & Demos

Demos (room: Exhibit Hall)

Thu 10:00 AM - 10:45 AM

OpenDSA: An Interactive eTextbook for Computer Science Courses Clifford Shaffer, Virginia Tech

OSBLE+: A next-generation learning management and analytics environment for computing education

Daniel Olivares, Washington State University Christopher Hundhausen, Washington State University

NSF Showcase (room: Exhibit Hall)

Thu 10:00 AM - 11:30 AM

CrowdGrader: Peer Grading with Incentives

Luca de Alfaro, UC Santa Cruz

Project MLExAI: An Innovative Model for Teaching Core AI Concepts

Ingrid Russell, College of Staten Island Zdravko Markov, College of Staten Island Susan Imberman, College of Staten Island

Computing in the Arts: Community Building and Curriculum Development *Jennifer Burg, Wake Forest Univ.*

C5 - Catalyzing Computing and Cybersecurity in Community Colleges

Melissa Jane Dark, Purdue

Beth Hawthorne, Purdue

Corrinne Sande, Purdue

THURSDAY 10:45 AM - 12:00 PM

Papers: Data Structures (room: L11-L12)

Thu 10:45 AM - 12:00 PM

10:45 AM

Paper vs. Computer-based Exams: A Study of Errors in Recursive Binary Tree

Algorithms

Scott Grissom, Grand Valley State University Laurie Murphy, Pacific Lutheran University Renée McCauley, College of Charleston

Sue Fitzgerald, Metropolitan State University

11:10 AM

Stay on These Roads: Potential Factors Indicating Students' Performance in a

CS2 Course

Holger Danielsiek, Westfälische Wilhelms-Universität Münster Jan Vahrenhold, Westfälische Wilhelms-Universität Münster

11:35 AM

BRIDGES: A System to Enable Creation of Engaging Data Structures Assignments

with Real-World Data and Visualizations

David Burlinson, The University of North Carolina at Charlotte Mihai Mehedint, The University of North Carolina at Charlotte Chris Grafer, The University of North Carolina at Charlotte

Kalpathi Subramanian, The University of North Carolina at Charlotte

Jamie Payton, The University of North Carolina at Charlotte

Michael Youngblood, Xerox A PARC company

Robert Kosara, Tableau Software

Paula Goolkasian, The University of North Carolina at Charlotte

Papers: Computational Thinking (room: L13-L14)

Thu 10:45 AM - 12:00 PM

10:45 AM

Investigating Differences in Wiki-based Collaborative Activities between Student

Engagement Profiles in CS1

Adam Eck, University of Nebraska-Lincoln Leen-Kiat Soh, University of Nebraska-Lincoln Duane Shell, University of Nebraska-Lincoln

11:10 AM

A Study on the Impact of Multidisciplinary Collaboration on Computational

Thinking

S. Monisha Pulimood, The College of New Jersey

Kim Pearson, The College of New Jersey Diane C. Bates, The College of New Jersey

11:35 AM

Computational Thinking as Liberal Studies

Dave Mason, Ryerson University Irfan Khan, Ryerson University

Vadim Farafontov, Ryerson University

Papers: Research on Learning (room: L5-L6)

Thu 10:45 AM - 12:00 PM

10:45 AM An Examination of Layers of Quizzing in Two Computer Systems Courses

Cindy Norris, Appalachian State University

11:10 AM Subgoals Help Students Solve Parsons Problems

Briana Morrison, Georgia Institute of Technology Lauren Margulieux, Georgia Institute of Technology Barbara Ericson, Georgia Institute of Technology Mark Guzdial, Georgia Institute of Technology

11:35 AM As CS Enrollments Grow, Are We Attracting Weaker Students?: A Statistical

Analysis of Student Performance in Introductory Programming Courses Over

Time

Mehran Sahami, Stanford University Chris Piech, Stanford University

Papers: Professional Development (room: L2-L3)

Thu 10:45 AM - 12:00 PM

10:45 AM Implementation and Outcomes of a Three-Pronged Approach to Professional

Development for CS Principles

Chrystalla Mouza, University of Delaware

Lori Pollock, University of Delaware

Kathleen Pusecker, University of Delaware

Kevin Guidry, University of Delaware Ching-Yi Yeh, University of Delaware James Atlas, University of Delaware Terry Harvey, University of Delaware

11:10 AM Deploying Exploring Computer Science Statewide

Helen Hu, Westminster College

Cecily Heiner, Southern Utah University

Jay McCarthy, University of Massachusetts Lowell

11:35 AM TEALS: Teacher Professional Development Using Industry Volunteers

Nathaniel Granor, Microsoft/TEALS

Leigh Ann DeLyser, CSNYC Kevin Wang, Microsoft/TEALS

Panel (room: Cotton Row)

Thu 10:45 AM - 12:00 PM

Engaging CS Alumni from Afar

Christine Shannon, Centre College James Kiper, Miami University Samuel Rebelsky, Grinnell College Janet Davis, Whitman College

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Panel (room: Steamboat)

Thu 10:45 AM - 12:00 PM

Rediscovering the Passion, Beauty, Joy, and Awe: Making Computing Fun Again, part 8

Daniel Garcia, UC Berkeley Josh Caldwell, code.org Pamela Fox, Khan Academy Jeremy Keeshin, CodeHS

Special Session (room: Mississippi)

Thu 10:45 AM - 12:00 PM

The Micro-Cluster Showcase: 7 Inexpensive Beowulf Clusters for Teaching PDC

Joel Adams, Calvin College Jacob Caswell, St. Olaf College

Suzanne Matthews, U.S. Military Academy

Charles Peck, Earlham College Elizabeth Shoop, Macalester College

David Toth, Centre College

James Wolfer, Indiana University, South Bend

Panel (room: L10)

Thu 10:45 AM - 12:00 PM

How to Use Open Source Software in Education

Judith Bishop, Microsoft Research Carlos Jensen, Oregon State University Walt Scacchi, University of California Arfon Smith, GitHub Inc

Supporter Session: Piazza (room: River Bluff)

Thu 10:45 AM - 12:00 PM

Research vs. Teaching: What 500 Faculty Conversations Taught Me About Student Engagement Tony Luckett, Director of Partnerships

Supporter Session: Teradata (room: Sultana)

Thu 10:45 AM - 12:00 PM

Leveraging the Teradata University Network for Data Management Courses

Karen Davis, Professor, ECE, College of Engineering and Applied Sciences,

University of Cincinnati

Susan Baskin, Director, Teradata University Network, Teradata

THURSDAY 12:00 PM - 1:45 PM

LUNCH: FirstTimer's - SIGCSE Award for Lifetime Service to the Computer Science Education Community - Barbara Boucher Owens - Southwestern University

THURSDAY 1:45 PM - 5:00 PM Student Research Competition Poster Session (room: Exhibits Hall)

Applying Formal Models of Instructional Design to Measurably Improve Learning in Introductory
Computing
Austin Cory Bart, Virginia Tech

Learning to Program Using Online Forums, A Comparison of Links Posted on Reddit and Stack Overflow Caroline D. Hardin, University of Wisconsin-Madison

Open Sourcing the Classroom

Mike Izbicki, University of California, Riverside

A Wavelet Transform Module for a Speech Recognition Virtual Machine Euisung Kim, Minnesota State University, Mankato

Monitoring - An Intervention to Improve Team Results in Software Engineering Education Maira Marques, Universidad de Chile

Pair Programming for Teaching Mobile Development Mohammed Seyam, Virginia Tech

Community and Collaboration in an All-female Immersive Computer Science Program Jeff Stern, University of Michigan

Implementing K-Means Clustering and Collaborative Filtering to Enhance Sustainability of Project Repositories

Matthew Steuerer, The College of New Jersey

Web-based Visual Programming for Media Computation using Blockly Jake Trower, University of Alabama

An Evaluation of Cluster 3.0 as a General Tool for Principal Component Analysis

Alex Bender, Eastern Mennonite University

Detecting Insider Attacks with Video Websites using Distributed Image Steganalysis

Christopher Francis-Christie, Kennesaw State University

Programming by Voice to Support Hour of Code for Children with Motor Disabilities Caitlin Hanley, University of Alabama The Role of Chronology in Analyzing Introductory Programming Assignments

Kayla Holcomb, Abilene Christian University

Nevan Simone, Abilene Christian University

A Simple Line Game With Real-Time Visualization of the Internal Data Structure *John Huff, Ohio University*

3D-Printed Animatronic Hand with Wireless Mirroring Glove and Precision Control *Cyrus Xiyuan Liu, Wake Forest University*

Robotic Navigation Through Gesture Based Control Nickolas McCarley, University of Alabama

Advances in Phylogenetic-based Stemma Construction

Andrew Miller, The College of New Jersey

Nathan Gould, The College of New Jersey

Syntactic hint generation for Introductory Programming Problems

Aayush Mudgal, Indian Institute of Technology, Kanpur

Novel Logical Reasoning Tutor

Matthew Pfister, Clemson University

Loop Invariants: Learning to Help Teach

Caleb Priester, Clemson University

Mobile Security via Reverse Tether

Donna Young, Kennesaw State University

THURSDAY 1:45 PM - 3:00 PM

Papers: Pair Programming (room: L11-L12)

Thu 1:45 PM - 3:00 PM

1:45 PM Teaching Mobile Development with Pair Programming

Mohammed Seyam, Virginia Tech D. Scott McCrickard, Virginia Tech

2:10 PM Observations of Pair Programming: Variations in Collaboration Across

Demographic Groups

Omar Ruvalcaba, California State University, Northridge Linda Werner, University of California, Santa Cruz Jill Denner, Education, Training, and Research

2:35 PM Three Years of Student Pair Programming – Action Research Insights And

Outcomes

Ian McChesney, Ulster University

Papers: Engagement and Diversity (room: L13-L14)

Thu 1:45 PM - 3:00 PM

1:45 PM Enhancing Engagement by Blending Rigor and Relevance

Sarnath Ramnath, St Cloud state U John Hoover, St Cloud state U

2:10 PM Understanding How Research Experiences for Undergraduate Students May

Foster Diversity In The Professorate

Burcin Tamer, Computing Research Association Jane Stout, Computing Research Association

2:35 PM Applying the Communal Goal Congruity Perspective to Enhance Diversity and

Inclusion in Undergraduate Computing Degrees

Bo Brinkman, Miami University Amanda Diekman, Miami University

Papers: CS Ed Research 1 (room: L5-L6)

Thu 1:45 PM - 3:00 PM

1:45 PM An Effective Approach to Enhancing Compiler Error Messages

Brett A. Becker, University College Dublin

2:10 PM Automatic Inference of Programming Performance and Experience from Typing

Patterns

Juho Leinonen, University of Helsinki Krista Longi, University of Helsinki Arto Klami, University of Helsinki Arto Vihavainen, University of Helsinki Preliminary Program

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2:35 PM A (Updated) Review of Empiricism at the SIGCSE Technical Symposium

Ahmed Al-Zubidy, University of Alabama Jeffrey Carver, University of Alabama

Sarah Heckman, North Carolina State University

Mark Sheriff, University of Virginia

Papers: CS0 (room: L2-L3)

Thu 1:45 PM - 3:00 PM

1:45 PM CS0 for Computer Science Majors at Ohio University

Cindy Marling, Ohio University David Juedes, Ohio University

2:10 PM Security Injections 2.0: Increasing Ability to Apply Secure Coding Knowledge

using Segmented and Interactive Modules in CS0

Sagar Raina, Towson University Siddharth Kaza, Towson University Blair Taylor, Towson University

2:35 PM Combining "Big Data" and "Thick Data" Analyses for Understanding Youth

Learning Trajectories in a Summer Coding Camp

Deborah Fields, Utah State University Lisa Quirke, University of Toronto Janell Amely, Utah State University Jason Maughan, Utah State University

Special Session (room: Cotton Row)

Thu 1:45 PM - 3:00 PM

Training Teachers to Integrate Computational Thinking into K-12 Teaching

Rania Hodhod, Columbus State University Shamim Khan, Columbus State University Yesem Kurt-Peker, Columbus State University Lydia Ray, Columbus State University

Special Session (room: Steamboat)

Thu 1:45 PM - 3:00 PM

Demystifying Computing with Magic, part III

Daniel Garcia, UC Berkeley David Ginat, Tel-Aviv University

Panel (room: Mississippi)

Thu 1:45 PM - 3:00 PM

Panel: Engage in Reasoning with Tools

Greg Kulczycki, Virginia Tech

Murali Sitaraman, Clemson University

Nigamanth Sridhar, Cleveland State University

Bruce Weide, The Ohio State University

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Supporter Session: Google (room: Sultana)

Thu 1:45 PM - 3:00 PM

Up Close and Personal with Google CS Programs

Chris Stephenson, Head of Computer Science Education Programs, Google

THURSDAY 3:00 PM - 3:45 PM Break, Exhibits & Demos

Demos (room: Exhibit Hall)

Thu 3:00 PM - 3:45 PM

The Speech Recognition Virtual Kitchen Toolkit

Rebecca Bates, Minnesota State University, Mankato Sung Kim, Minnesota State University, Mankato

The Sensorian Shield: Transforming the Raspberry Pi into an IoT Platform

Qusay Mahmoud, UOIT Dhimiter Qendri, UOIT Michael Lescisin, UOIT

NSF Showcase (room: Exhibit Hall)

Thu 3:00 PM - 4:30 PM

Bringing Real-World Data And Visualizations Into Data Structures Courses Using BRIDGES

Kalpathi Subramanian, UNC Charlotte

Jamie Payton, UNC Charlotte David Burlinson, UNC Charlotte Mihai Mehedint, UNC Charlotte

Software Tutors for Introductory Programming: Epplets, Codelets and Problets

Amruth N. Kumar, Ramapo College of New Jersey

Customizable Visualizations for Introducing Database Concepts to Many Majors
Suzanne W. Dietrich, Arizona State Univ.
Don Goelman, Villanova Univ.

Transforming Computer Science Education Research Through Use of Appropriate Empirical

Research Methods: Mentoring and Tutorials

Jeffrey Carver, Univ. of Alabama Sarah Heckman, NC State Univ. Mark Sherriff, Univ. of Virginia

THURSD	AY 3:45 PM	- 5:00 PM
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Papers: Big Data (room: L11-L12)

Thu 3:45 PM - 5:00 PM

3:45 PM VisMap: Explo

VisMap: Exploratory Visualization Support for Introductory Data Science and

Visualization

Dugald Hutchings, Elon University Megan Squire, Elon University

4:10 PM A Practical and Sustainable Model for Learning and Teaching Data Science

Bina Ramamurthy, University at Buffalo

4:35 PM Teaching Big Data with a Virtual Cluster

Joshua Eckroth, Stetson University

Papers: Teaching with Teams (room: L13-L14)

Thu 3:45 PM - 5:00 PM

3:45 PM Teaching Global Software Engineering by Simulating a Global Project in the

Classroom

Yang Li, Technische Universitaet Muenchen

Stephan Krusche, Technische Universitaet Muenchen Christian Lescher, Technische Universitaet Muenchen Bernd Bruegge, Technische Universitaet Muenchen

4:10 PM Evaluating Student Teams: Do Educators Know What Students Think?

Anya Tafliovich, University of Toronto Scarborough Andrew Petersen, University of Toronto Mississauga

Jennifer Campbell, University of Toronto

4:35 PM Exploring Lightweight Teams in a Distributed Learning Environment

Stephen MacNeil, University of North Carolina at Charlotte Celine Latulipe, University of North Carolina at Charlotte Bruce Long, University of North Carolina at Charlotte

Aman Yadav, Michigan State University

Papers: Program Design (room: L5-L6)

Thu 3:45 PM - 5:00 PM

3:45 PM Modernizing Plan-Composition Studies

Kathi Fisler, WPI

Shriram Krishnamurthi, Brown University

Janet Siegmund, Universität Passau

4:10 PM On the Interplay Between Bottom-Up and Datatype-Driven Program Design

Francisco Enrique Vicente Castro, Worcester Polytechnic Institute

Kathi Fisler, Worcester Polytechnic Institute

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4:35 PM

Can Students Design Software? The Answer Is More Complex Than You Think Chenglie Hu, Carroll University

Papers: Scratch (room: L2-L3)

Thu 3:45 PM - 5:00 PM

3:45 PM

ITCH: Individual Testing Of Computer Homework For Scratch Assignments

David Johnson, University of Utah

4:10 PM

Multi-Track Programming Competitions with Scratch

Jason Arnold, Marquette University Heather Bort, Marquette University Ryan Naugle, Marquette University Casey O'Hare, Marquette University Dennis Brylow, Marquette University

4:35 PM

Initialization in Scratch: Seeking Knowledge Transfer

Diana Franklin, University of Chicago

Charlotte Hill, University of California, Santa Barbara Hilary Dwyer, University of California, Santa Barbara Alexandria Hansen, University of California, Santa Barbara Ashley Iveland, University of California, Santa Barbara Danielle Harlow, University of California, Santa Barbara

Special Session (room: Cotton Row)

Thu 3:45 PM - 5:00 PM

Special Session: ACM Joint Task Force on Cybersecurity Education

Diana Burley, George Washington University Matt Bishop, University of California, Davis Elizabeth Hawthorne, Union County College

Siddharth Kaza, Towson University

Lynn Futcher, Nelson Mandela Metropolitan University

Scott Buck, Intel

Panel (room: Steamboat)

Thu 3:45 PM - 5:00 PM

Technology We Can't Live Without!, revisited

Daniel Garcia, UC Berkeley

Leslie Aaronson, Forshay Learning Center

Shawn Kenner, Sharon High School Colleen Lewis, Harvey Mudd College

Susan Rodger, Duke University

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Panel (room: Mississippi)

Thu 3:45 PM - 5:00 PM

igniteCS: Addressing Undergraduate CS Retention

Erin Cannon, Google

Priya Chawla, University of Cincinnati

Katherine Lo, University of California, Irvine

Haley Adams, Rhodes College

Special Session (room: L10)

Thu 3:45 PM - 5:00 PM

Instructional Design is to Teaching as Software Engineering is to Programming

Austin Cory Bart, Virginia Tech Clifford Shaffer, Virginia Tech

Supporter Session: Zybooks (room: River Bluff)

Thu 3:45 PM - 5:00 PM

Improving CS Teaching: Automated Homework/Labs, Shared Quizzes/Assignments, Student

Activity Insights and More

Smita Bakshi, zyBooks co-founder/CEO

Frank Vahid, zyBooks co-founder/CTO and Professor, University of California-

Riverside

Roman Lysecky, Professor, University of Arizona

Supporter Session: Oracle (room: Sultana)

Thu 3:45 PM - 5:00 PM

Solve it with SQL - Use SQL to Solve a Mystery

Bruce Regittko, Oracle Academy Principal Instructor

THURSDAY 5:30 PM - 7:30 PM

Birds of a Feather Flock 1

Thu 5:30 PM - 6:20 PM

Universal Access to Computing Education (room: Heritage 1, Sheraton)

Richard Ladner, University of Washington Brianna Blaser, University of Washington Andreas Stefik, University of Nevada Las Vegas Daniela Marghitu, Auburn University

Updates to the ABET Computing Accreditation Criteria (room: Heritage 2, Sheraton)

Allen Parrish, The University of Alabama Stan Thomas, Wake Forest University

Fostering Computational Creativity through Computing in the Arts: A Community of Educators

(room: Heritage 3, Sheraton)
Susan Reiser, UNC Asheville
Rebecca Bruce, UNC Asheville
Lonnifor Pung, Walta Forest Un

Jennifer Burg, Wake Forest University Bill Manaris, College of Charleston

Birds of Feather: Teaching with Alice (room: Heritage 4, Sheraton)

Donald Slater, Carnegie Mellon University Wanda Dann, Carnegie Mellon University Stephen Cooper, Stanford University

Small Department Initiative (room: St. Louis, Sheraton)

Cathy Bareiss, Olivet Nazarene University

Researching Programming Education with Blackbox (room: Natchez, Sheraton)

Neil Brown, University of Kent Amjad Altadmri, University of Kent

Mentoring Student Teaching Assistants for Computer Science (room: Beale, Sheraton)

Charles Garrod, Carnegie Mellon University Jeffrey Forbes, Duke University

Colleen Lewis, Harvey Mudd College Peter-Michael Osera, Grinnell College Practical Methods for Broadening Participation Through Student Engagement in CS1/CS2 Courses

(room: Memphis, Sheraton)

Beth Quinn, University of Colorado at Boulder

Alvaro Monge, California State University, Long Beach

Lecia Barker, University of Texas at Austin

Leo Porter, University of California, San Diego

Daniel Zingaro, University of Toronto, Mississauga

A Town Meeting: SIGCSE Committee on Expanding the Women-in-Computing Community (room:

Knoxville, Sheraton)

Gloria Townsend, DePauw University

SIGCSE Reads: Time for Book Discussion (room: Chattanooga, Sheraton)

Rebecca Bates, Minnesota State University, Mankato

Valerie Summet, Emory University

Teaching Track Faculty in CS (room: Jackson, Sheraton)

Mark Sherriff, University of Virginia

Dan Garcia, University of California, Berkeley

POGIL in Computer Science for Beginners and Experts (room: Oxford, Sheraton)

Chris Mayfield, James Madison University

Clif Kussmaul, Muhlenberg College

Saturnino Garcia, University of San Diego

Helen Hu, Westminster College

Tammy Pirmann, School District of Springfield Township

Preparing to Teach Humanitarian Open Source (room: Gatlinburg, Sheraton)

Heidi Ellis, Western New England University

Stoney Jackson, Western New England University

Gregory Hislop, Drexel University

S. Monisha Pulimood, The College of New Jersey

Gina Likins, Red Hat - University Outreach

CS Ed PhD Students Unite! (room: Azelea, Sheraton)

Briana Morrison, Georgia Institute of Technology

Jennifer Tsan, North Carolina State University

Rachel Harsley, University of Illinois at Chicago

Francisco Enrique Vicente Castro, Worcester Polytechnic Institute

Defining Concepts, Practices, and Standards for K-12 CS (room: L11-12, Convention Center)

Pat Yongpradit, Code.org

Industry Strength Tools for Software Engineering: What Works, What is OverKill? (room: L13-14,

Convention Center)

Bonnie MacKellar, St John's University

Karen Jin, University of New Hampshire at Manchester

Birds of a Feather Flock 2

6:30 PM - 7:20 PM

How Do You Teach Debugging? Resources and Strategies for Better Student Debugging (room:

Heritage 1, Sheraton)

Colleen Lewis, Harvey Mudd College

Chris Gregg, Tufts University

Teaching CS to Students of Color (room: Heritage 2, Sheraton)

Jakita Thomas, Spelman College

Shaundra Daily, University of Florida

Mikala Streeter, Mikala Streeter Preparatory School

Current Initiatives and Future Directions of the Computer Science Teachers Association (CSTA)

(room: Heritage 3, Sheraton)

David Reed, Creighton University/CSTA

Mark Nelson, Computer Science Teachers Association (CSTA)

Web Programming (room: Heritage 4, Sheraton)

Marty Stepp, Stanford University

Allison Obourn, University of Washington

Jessica Wolk, Microsoft Research

Victoria Kirst, Google

Mathematical Reasoning in Computing Education: Connecting Math We Teach with Writing

Correct Programs Birds-of-a-Feather (room: St. Louis, Sheraton)

John Dougherty, Haverford College

Joseph Hollingsworth, Indiana University Southeast

Joan Krone, Denison University

Murali Sitaraman, Clemson University

Exploring Learning Analytics for Computing Education (room: Natchez, Sheraton)

Chris Hundhausen, Washington State University

Adam Carter, Washington State University

Handling Very Large Lecture Courses: Keeping the Wheels on the Bus II (room: Beale, Sheraton)

Josh Hug, UC Berkeley

Daniel D. Garcia, UC Berkeley

Setting Quantifiable Goals for Broadening Participation in Computing (room: Memphis, Sheraton)

Kate Lockwood, University of St. Thomas

Maureen Doyle, Northern Kentucky University

Computer Science Summer Camps: Making Summer Programs Fun and Sustainable (room: Knoxville, Sheraton)

David Johnson, University of Utah, School of Computing

Leveraging CS Teachable Moments in the Maker Movement (room: Chattanooga, Sheraton)

Jennifer (Ginger) Alford, Trinity Valley School/Fort Worth Museum of Science and History

Erik Brunvand, University of Utah

Brainstorming Data Science as a Fluency Course for Non-Majors and as a New Specialization

(room: Jackson, Sheraton)

Lillian Cassel, Villanova University

Don Goelman, Villanova University

Darina Dicheva, Winston Salem State University

Heikki Topi, Bentley University

Competency Based Education in Lower-Division Computer Science Taught at Community Colleges

(room: Oxford, Sheraton)

Amardeep Kahlon, Austin Community College Linda Smarzik, Austin Community College Mary Kohls, Austin Community College

Assessment of Security Knowledge, Skills and Abilities using Hands-On Exercises in 2016 (room:

Gatlinburg, Sheraton)

Richard Weiss, The Evergreen State College

Jens Mache, Lewis & Clark College

Michael Locasto, University of Calgary

Blair Taylor, Towson University

Siddharth Kaza, Towson University

Ambareen Siraj, Tennessee Tech University

Elizabeth Hawthorne, Union County College

Student ICTD Research and Service Learning Abroad (room: Azelea, Sheraton)

Joseph Mertz, Carnegie Mellon University

Increasing Programming Contest Participation for Fun and Profit (room: L11-12, Convention

Center)

Aaron Bloomfield, Univeristy of Virginia

Borja Sotomayor, University of Chicago

Preliminary Program

Providing Impactful Professional Development Teachers Can Implement (room: L13-14, Convention Center)

Kathy Menchaca Isbister, Stanford University

THURSDAY 7:30 PM - 9:30 PM Reception (room: Ballroom A)

FRIDAY 8:30 AM - 10:00 AM

Plenary Session - SIGCSE Award for Outstanding Contribution to Computer Science Education - Jan Cuny - National Science Foundation

FRIDAY 10:00 AM - 10:45 AM Break, Exhibits & Demos

Demos (room: Exhibit Hall)

Fri 10:00 AM - 10:45 AM

Creating and Grading IPython/Jupyter Notebook Assignments with NbGrader Jessica Hamrick, University of California, Berkeley

CodeSnaps: Block-Based Robotic Programming for the Low-Budget Classroom

Jennifer Sabourin, SAS Institute, Inc Lucy Kosturko, SAS Institute, Inc Scott McQuiggan, SAS Institute, Inc

NSF Showcase (room: Exhibit Hall)

Fri 10:00 AM - 11:30 AM

Integrating Mobile Computing and Security into a Computer Science Curriculum

Xiaohong Yuan, NC A&T Univ. Kenneth Williams, NC A&T Univ. Jinsheng Xu, NC A&T Univ. Kelvin Bryant, NC A&T Univ.

CS1: Creative Computation in the Context of Art and Visual Media

Dianna Xu, Bryn Mawr College Ira Greenberg, Southern Methodist Univ. Deepak Kumar, Bryn Mawr College Aaron Cadle, Fort Worth Country Day School Ursula Wolz, RiverSound Solutions

Collaborative Education: Building a Skilled Software Verification and Validation User Community

Sushil Acharya, Robert Morris Univ.

Priyadarshan Manohar, Robert Morris Univ.

Peter Wu, Robert Morris Univ.

Supporting Student Learning in Humanitarian Free and Open Source Software (HFOSS) Projects

Heidi J. C. Ellis, Western New England Univ.

Darci Burdge, Nassau Community College

Gregory W. Hislop, Drexel Univ.

Posters (room: Exhibit Hall)

Fri 10:00 AM - 12:00 PM

Integrating Sustainability Concepts into Introductory Programming Courses

Ieffrey Stone, Penn State University

The Development of Internationalized Computational Thinking Curriculum in Hong Kong Primary Education

Gary K. W. Wong, The Hong Kong Institute of Education Kening Zhu, City University of Hong Kong Xiaojuan Ma, The Hong Kong University of Science and Technology

John Huen, Koding Kingdom

A Holistic Sequence of Programming Assignments for CS2

Joanna Klukowska, Courant Institute of Mathematical Sciences, New York University

Stewart Weiss, Hunter College of the City University of New York

Combating Perceptions of Computer Scientists: A Short-term Intervention

Shaundra Daily, University of Florida Alison Leonard, Clemson University Sophie Jörg, Clemson University Sabarish Babu, Clemson University Nikeetha Dsouza, Clemson University Dhaval Parmar, Clemson University Kara Gundersen, University of Florida Joseph Isaac, Clemson University

Coding, Designing, and Logistics; How Modes Affect Equity In Computer Science Education

Declan McClintock, Michigan State University

Niral Shah, Michigan State University

Lights, Camera, but no Action: Exploring Affective Audio-Visual Features of Educational Videos

Abhay Doke, Tata Research Development and Design Centre

Niranjan Pedanekar, Tata Research Development and Design Centre

Increasing security awareness in undergraduate courses with labware

Michael Weeks, Department of Computer Science, Georgia State University Yi Pan, Department of Computer Science, Georgia State University Yanging Zhang, Department of Computer Science, Georgia State University Visualizing Algorithm Analysis Topics

Mohammed Farghally, Virginia Tech Eric Fouh, Lehigh University Sally Hamouda, Virginia Tech Kyu Han Koh, Virginia Tech Clifford Shaffer, Virginia Tech

The Impact on Student Learning and Satisfaction When a CS2 Course Became Interactive Steven Huss-Lederman, Beloit College

A Certification-Guided Course for Cloud Computing

Dahai Guo, Florida Gulf Coast University Anna Koufakou, Florida Gulf Coast University

Automated Analysis of Student Programmer Coding Behavior Patterns
Clinton Staley, California Polytechnic State University, SLO
Corey Ford, California Polytechnic State University, SLO

SPOCK – A System for Encouraging Interaction in Small Private Online Courses
Ryan Hardt, University of Wisconsin-Eau Claire
Grant Wuerker, University of Wisconsin-Eau Claire

Broadening the Path to Cybersecurity Profession in Predominantly Undergraduate and Liberal Arts Institutions

Xenia Mountrouidou, Wofford College

Xiangyang Li, Johns Hopkins University

Leveraging Context to Create Opportunistic Co-Located Learning Environments

Stephen MacNeil, University of North Carolina at Charlotte

Celine Latulipe, University of North Carolina at Charlotte

Student Perceptions of Success in Computer Science Senior Capstone Projects Rick Parker, University of Colorado at Boulder

Using Small Whiteboards to Engage Students in Active Learning

Victor Norman, Calvin College

Serita Nelesen, Calvin College

Design and Evaluation of a Course Module on Android Cipher Programming

Jinsheng Xu, North Carolina A&T State University

Xiaohong Yuan, North Carolina A&T State University

Ashrith Velma, North Carolina A&T State University

Building Pre-Service Teacher Interest in Computer Science Education through Mentoring

Experiences

Kim Huett, University of West Georgia

Mary Alice Varga, University of West Georgia

Computing with a Community Focus: An App Inventor Summer Camp for Middle School Students

Lijun Ni, University of Massachusetts Lowell

Mark Sherman, University of Massachusetts Lowell

Diane Schilder, Evaluation Analysis Solutions

Fred Martin, University of Massachusetts Lowell

Exploring gamification to teach computer science to non-computer science related major

Lorena Martinez-Elizalde, ITESM

Monica Duarte-Dominguez, ITESM

Using Learning Analytics to Trace Academic Trajectories of CS and IT Students to Better

Understanding Successful Pathways to Graduation

Huzefa Rangwala, George Mason University

Omaima Almatrafi, George Mason University

Aditya Johri, George Mason University

Jaime Lester, George Mason University

Promote Self-efficacy in Learning of Mobile App and Security with Real-World Relevant

Laboratory

Kai Qian, Kennesaw State University

Dan Lo, Kennesaw State university

Data Science for All: An Introductory Course for Non-Majors, in Flipped Format

Lillian Cassel, Villanova University

Darina Dicheva, Winston Salem State University

Christo Dichev, Winston Salem State University

Don Goelman, Villanova University

Michael Posner, Villanova University

Clashroom: A Game to Enhance the Classroom Experience

Shannon Duvall, Elon University

Dan Eagle, Credit Karma

Riese Narcisse, Credit Suisse

Thomas Price, NC State University

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We Have Questions: Pedagogical, Technical, and Procedural Assistance Requests in a Large Computational Thinking Curriculum Research Project

Hilarie Nickerson, University of Colorado - Boulder

Jeffrey Bush, University of Colorado - Boulder

Yasko Endo, University of Colorado - Boulder

Autograding and Feedback for Snap!, a visual programming language
Michael Ball, UC Berkeley
Daniel Garcia, UC Berkeley

FRIDAY 10:45 AM - 12:00 PM

Papers: Peer Techniques (room: L11-L12)

Fri 10:45 AM - 12:00 PM

10:45 AM

Differences in the Learning Principles Dominating Student-Student vs. Student-

Instructor Interactions while Working on Programming Tasks

Alessio Gaspar, University of South Florida Joni Torsella, University of Cincinnati Nora Honken, University of Cincinnati Sohum Sohoni, Arizona State University Colin Arnold, University of South Florida

11:10 AM

The Effects of Peer- and Self-assessment on the Assessors

Joonsuk Park, Cornell University

Kimberley Williams, Cornell University

11:35 AM

The Sweep: Essential Examples for In-Flow Peer Review

Joe Gibbs Politz, Brown University Joseph Collard, UMass Amherst Arjun Guha, UMass Amherst

Kathi Fisler, Worcester Polytechnic Institute Shriram Krishnamurthi, Brown University

Papers: Artistic Approaches (room: L13-L14)

Fri 10:45 AM - 12:00 PM

10:45 AM

The MoveLab: Developing Congruence Between Students' Self-Concepts and

Computing

Kayla DesPortes, Georgia Institute of Technology Monet Spells, Georgia Institute of Technology Betsy DiSalvo, Georgia Institute of Technology

11:10 AM

Creative Computation in High School

Dianna Xu, Bryn Mawr College

Aaron Cadle, Fort Worth Country Day School Darby Thompson, Sidwell Friends School

Ursula Wolz, RiverSound Solutions

Ira Greenberg, Southern Methodist University

Deepak Kumar, Bryn Mawr College

11:35 AM

Computational Art - Introducing High School Students to Computing via Art

Zoe Wood, California Polytechnic State University

Paul Muhl, Santa Barbara High School

Katelyn Hicks, California Polytechnic State University

Papers: Tests and Outcomes (room: L5-L6)

Fri 10:45 AM - 12:00 PM

10:45 AM Introd

Introducing and Evaluating Exam Wrappers in CS2

Michelle Craig, University of Toronto Diane Horton, University of Toronto

Daniel Zingaro, University of Toronto Mississauga

Danny Heap, University of Toronto

11:10 AM

Measuring Effects of Modality on Perceived Test Anxiety for Computer

Programming Exams

Robert Deloatch, University of Illinois Urbana Champaign Brian Bailey, University of Illinois Urbana Champaign Alex Kirlik, University of Illinois Urbana Champaign

11:35 AM

Impact of Student Achievement Goals on CS1 Outcomes

Daniel Zingaro, University of Toronto Mississauga Leo Porter, University of California, San Diego

Papers: High School Diversity (room: L2-L3)

Fri 10:45 AM - 12:00 PM

10:45 AM

Towards More Gender Diversity in CS through an Artificial Intelligence Summer

Program for High School Girls

Marie Vachovsky, Stanford University

Grace Wu, Stanford University

Sorathan Chaturapruek, Stanford University

Olga Russakovsky, Stanford University Richard Sommer, Stanford University

Li Fei-Fei, Stanford University

11:10 AM

Investigating the Role of Being a Mentor as a Way of Increasing Interest in

Computer Science

Jody Clarke-Midura, Utah State University

Vicki Allan, Utah State University Kevin Close, Utah State University

11:35 AM

Sisters Rise Up 4 CS: Helping Female Students Pass the Advanced Placement

Computer Science A Exam

Barbara Ericson, Georgia Institute of Technology Miranda Parker, Georgia Institute of Technology Shelly Engelman, SageFox Consulting Group Preliminary Program

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Panel (room: Cotton Row)

Fri 10:45 AM - 12:00 PM

Future Directions of Block-based Programming

Neil Brown, University of Kent

Jens Mönig, SAP Labs

Anthony Bau, Phillips Exeter Academy
David Weintrop, Northwestern University

Panel (room: Steamboat)

Fri 10:45 AM - 12:00 PM

Why Don't Some CSO Students Succeed? How Important Are Background, Experience, Culture,

Aptitude, Habits and Attitude?

Daniel Garcia, University of California, Berkeley

Stuart Reges, University of Washington Colleen Lewis, Harvey Mudd College Nathan Ensmenger, Indiana University

Panel (room: Mississippi)

Fri 10:45 AM - 12:00 PM

Scrum and Agile Methods in Software Engineering Courses

Jennifer Campbell, University of Toronto

Stan Kurkovsky, Central Connecticut State University

Chun Wai Liew, Lafayette College

Anya Tafliovich, University of Toronto Scarborough

Supporter Session: Vocareum (room: River Bluff)

Fri 10:45 AM - 12:00 PM

Assessment at Scale: The Next Frontier for Universal Computing Literacy Sanjay Srivastava, CEO, Vocareum

Supporter Session: Ibm (room: Sultana)

Fri 10:45 AM - 12:00 PM

IBM Supporter Session

FRIDAY 12:00 PM - 1:45 PM LUNCH: on your own

FRIDAY 12:00 PM - 1:45 PM

Alice 3 to Java - Celebration with the Ghost Train Crew (lunch event, room: Ballroom B)

FRIDAY 12:00 PM - 1:45 PM

New AP Computer Science Principles Course (lunch event, room: L10)

FRIDAY 1:45 PM - 3:00 PM

Papers: Problem Solving (room: L11-L12)

Fri 1:45 PM - 3:00 PM

1:45 PM Online CS1: Who Enrols, Why, and How Do They Do?

Diane Horton, University of Toronto Jennifer Campbell, University of Toronto

Michelle Craig, University of Toronto

2:10 PM The Influence of Problem Solving Abilities on Students' Performance on Different

Assessment Tasks in CS1.

Alex Lishinski, Michigan State University Aman Yadav, Michigan State University Richard Enbody, Michigan State University Jonathon Good, Michigan State University

2:35 PM A Course on Programming and Problem Solving

> Swapneel Sheth, University of Pennsylvania Christian Murphy, University of Pennsylvania

Kenneth Ross, Columbia University Dennis Shasha, New York University

Papers: Novel Learning Approaches (room: L13-L14)		Fri 1:45 PM - 3:00 PM
1:45 PM	The Video Collaboratory as a Learning Environment	

Vikash Singh, University of North Carolina at Charlotte Sarah Abdellahi, University of North Carolina at Charlotte Mary Lou Maher, University of North Carolina at Charlotte Celine Latulipe, University of North Carolina at Charlotte

2:10 PM Just-In-Time Learning for the Just Google It Era

Elizabeth Boese Boese, University of Colorado - Boulder

2:35 PM Hackathons as an Informal Learning Platform

Arnab Nandi, The Ohio State University

Meris Mandernach, The Ohio State University

Papers: CS Ed Research 2 (room: L5-L6)

Fri 1:45 PM - 3:00 PM

1:45 PM A Multi-institutional Study of Peer Instruction in Introductory Computing

Leo Porter, University of California, San Diego

Dennis Bouvier, Southern Illinois Univ.~Edwardsville

Quentin Cutts, University of Glasgow

Scott Grissom, Grand Valley State University

Cynthia Lee, Stanford University

Robert McCartney, University of Connecticut Daniel Zingaro, University of Toronto, Mississauga Beth Simon, University of California, San Diego

2:10 PM Development of a Concept Inventory for Computer Science Introductory

Programming

Ricardo Caceffo, UNICAMP

Steven Wolfman, University of British Columbia Kellogg Booth, University of British Columbia

Rodolfo Azevedo, UNICAMP

2:35 PM A data-driven analysis of informatively hard concepts in introductory

programming

Rudolf Wiegand, University of Central Florida

Anthony Bucci, Independent Contractor

Amruth Kumar, Ramapo College of New Jersey

Jennifer Albert, The Citidel

Alessio Gaspar, University of South Florida

Papers: K-8 Diversity (room: L2-L3)

Fri 1:45 PM - 3:00 PM

1:45 PM How Early Does the CS Gender Gap Emerge? A Study of Collaborative Problem

Solving in 5th Grade Computer Science

Jennifer Tsan, North Carolina State University

Kristy Boyer, University of Florida

Collin Lynch, North Carolina State University

2:10 PM Differentiating for Diversity: Using Universal Design for Learning in Computer

Science Education

Alexandria Hansen, University of California, Santa Barbara Eric Hansen, Hope Elementary School, Santa Barbara Hilary Dwyer, University of California, Santa Barbara Danielle Harlow, University of California, Santa Barbara

Diana Franklin, University of Chicago

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2:35 PM Empowering All Students: Closing the CS Confidence Gap with an In-School

Intervention for Middle School Students
Philip Buffum, North Carolina State University
Megan Frankosky, North Carolina State University

Kristy Boyer, University of Florida

Eric Wiebe, North Carolina State University Bradford Mott, North Carolina State University James Lester, North Carolina State University

Special Session (room: Cotton Row)

Fri 1:45 PM - 3:00 PM

AP Computer Science and Service Learning with We.org

Lien Diaz, College Board

Sandy Czajka, Riverside Brookfield High School

Crystal Furman, College Board

Special Session (room: Mississippi)

Fri 1:45 PM - 3:00 PM

Updating Curricular Guidelines for Associate-Degree Computer Science Programs

Cara Tang, Portland Community College

Cindy Tucker, Bluegrass Community and Technical College

Elizabeth Hawthorne, Union County College

Panel (room: Steamboat)

Fri 1:45 PM - 3:00 PM

CS10K Teachers by 2017? Try CS1K+ students NOW! Coping with the Largest CS1 Courses in

History

Daniel Garcia, UC Berkeley

Jennifer Campbell, University of Toronto

John DeNero, UC Berkeley

Mary Lou Dorf, University of Michigan Stuart Reges, University of Washington

Supporter Session: Google (room: Sultana)

Fri 1:45 PM - 3:00 PM

Surfacing Solutions to the Capacity Crunch

Maggie Johnson, Director of Education and University Relations at Google

Ieff Offut, George Mason University

Heather Pon-Barry, Mount Holyoke College

Kristy Boyer, North Carolina State University/University of Florida

Andrew Tang, Rutgers University

John DeNero, UC Berkeley

FRIDAY 3:00 PM - 3:45 PM Break, Exhibits & Demos

Demos (room: Exhibit Hall)

Fri 3:00 PM - 3:45 PM

OnRamp to Parallel and Distributed Computing: Web-portal for teaching parallel and distributed computing

Samantha Foley, University of Wisconsin-La Crosse Joshua Hursey, University of Wisconsin-La Crosse

Education Modules for Networking, Cloud Computing and Security in Systems Courses

Jay Aikat, UNC - Chapel Hill Michael Reiter, UNC - Chapel Hill Kevin Jeffay, UNC - Chapel Hill

NSF Showcase (room: Exhibit Hall)

Fri 3:00 PM - 4:30 PM

Increasing Retention in Engineering and Computer Science with a Focus on At-Risk First Year and Sophomore Students

Tammy VanDeGrift, Univ. of Portland

Bolstering Security Education in Browser Security

Wenliang Du, Syracuse Univ. Li Yang, UT Chattanooga Xiaohong Yuan, NC A&T Univ.

On Beyond Sudoku: Pencil Puzzles as an Engaging Problem Domain for Intro CS

Zack Butler, Rochester Institute of Technology Ivona Bezakova, Rochester Institute of Technology

Computational Creativity to Improve CS Education

Leen-Kiat Soh, University of Nebraska Duane Shell, University of Nebraska

Poster Session (room: Exhibit Hall)

Fri 3:00 PM - 5:00 PM

Combining Flipped Learning with Gamification to Improve Student Performance in a Data Structures Course

Darina Dicheva, Winston Salem State University

Preliminary Program

Preliminary Program

Assessing the Effectiveness of Experential-Learning-Based Teaching Tools in Cybersecurity Courses

Xiaohong Yuan, North Carolina A&T State University Jinsheng Xu, North Carolina A&T State University Huiming Yu, North Carolina A&T State University Junghee Kim, North Carolina A&T State University Taehee Kim, North Carolina A&T State University

Teaching and Learning in an Introductory Undergraduate Programming Class: A Reflective Autoethnography

S. Zahra Atiq, Purdue University, West Lafayette

18 hours of code with 5th grade students

Katie Davis, California Polytechnic State University – San Luis Obispo John Wilcox, Peabody Charter School Zoë Wood, California Polytechnic State University – San Luis Obispo

Multifaceted Efforts to Create an Inclusive Environment and Increase Diversity

Perry Fizzano, Western Washington University

David Hartenstine, Western Washington University

Deepening Learning in High School Computer Science through Practices from the NGSS Marie Bienkowski, SRI International

Replicating a Validated CS1 Assessment

Miranda Parker, Georgia Institute of Technology Mark Guzdial, Georgia Institute of Technology

Assessing the Development of Computer Science Pedagogical Content Knowledge in the TEALS

Program Yvonne Kao, WestEd Leigh Ann DeLyser, CSNYC Aleata Hubbard, WestEd

A Curiosity-Driven System for Developing Coding Literacy

Neeraj Chatlani, Rollins College Daniel Myers, Rollins College

Teaching Software Engineering Skills in CS1.5: Incorporating Real-world Practices and Tools

Sarah Heckman, NC State University

Jason King, NC State University

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Designing and Refining of Questions to Assess Students' Ability to Mentally Simulate Programs and Predict Program Behavior

Ashish Aggarwal, University of Florida

Christina McCune, University of Florida

Megas and Gigas Educate (MaGE): A Curricular Peer Mentoring Program

Heather Pon-Barry, Mount Holyoke College

Audrey St. John, Mount Holyoke College

Becky Packard, Mount Holyoke College

Barbara Rotundo, Mount Holyoke College

David Touretzky, Carnegie Mellon University

Pixels, Post-It's® and CS Principles

Jeffrey Popyack, Drexel University

уејјгеу Роруиск, Бгехег отversity William Mongan, Drexel University

Adventures in K-5 STEM Outreach Using the NAO Robot

Steven Hadfield, United States Air Force Academy Christopher Coulston, Pennsylvania State University - Erie Marissa Hadfield, Academy School District 20 Lillian Warner, United States Air Force Academy

Engaging School Counselors, Creating Computing Allies
Sarah Hug, University of Colorado, Boulder
Jane Krauss, NCWIT

OnRamp to Parallel and Distributed Computing

Samantha Foley, University of Wisconsin-La Crosse Joshua Hursey, University of Wisconsin-La Crosse

Teaching Computational Thinking Through Bio-Design Johanna Okerlund, UNC at Charlotte Orit Shaer, Wellesley College Celine Latulipe, UNC at Charlotte

Preliminary Program

User Experience/Feedback - Rensselaer Polytechnic Institute Homework Submission Server

Andrea Wong, Rensselaer Polytechnic Institute

Eric Tran, Rensselaer Polytechnic Institute

Joe Jung, Rensselaer Polytechnic Institute

Marina Espinoza, Rensselaer Polytechnic Institute

Ben Shaw, Rensselaer Polytechnic Institute

Beverly Sihsobhon, Rensselaer Polytechnic Institute

Melissa Lindquist, Rensselaer Polytechnic Institute

Samuel Breese, Rensselaer Polytechnic Institute

Matthew Peveler, Rensselaer Polytechnic Institute

Barbara Cutler, Rensselaer Polytechnic Institute

Guiding Career Development Prior to Capstone Experiences

Preliminary Program

Deborah Knox, The College of New Jersey

Bigger Isn't Better When It Comes to Online Computer Science Teacher Communities

Mackenzie Leake, Stanford University

Colleen Lewis, Harvey Mudd College

The Sol y Agua Project: Enhancing Middle School Education through Computing with an Emphasis

on Simulation and Data Science

Ann Gates, University of Texas at El Paso

Mary Roy, University of Texas at El Paso

Monika Akbar, University of Texas at El Paso

Florencia Larsen, Cyber-ShARE Center, University of Texas at El Paso

Ivonne Lopez, Cyber-ShARE Center, University of Texas at El Paso

Christian Murga, Cyber-ShARE Center, University of Texas at El Paso

Angel Ortega, Cyber-ShARE Center, University of Texas at El Paso

Jesus Tellez, Cyber-ShARE Center, University of Texas at El Paso

Rebecca Urbina, Cyber-ShARE Center, University of Texas at El Paso

An Expert System for the Prediction of Student Performance in an Initial Computer Science Course

Michael Kuehn, University of North Dakota

Jarred Estad, University of North Dakota

Jeremy Straub, University of North Dakota

Tom Stokke, University of North Dakota

A web-based environment for developing and utilizing teaching languages for novice computer

science students

Benjamin Kruger, Northeastern State University

Richard Matzen, Northeastern State University

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FunWithSound: A Music Composition and Synthesis Library for Processing David Hovemeyer, York College of Pennsylvania

Exploring Computer Science in the Liberal Arts

Gary Skuse, Rochester Institute of Technology

Daniel Walzer, University of Massachusetts at Lowell

FRIDAY 3:45 PM - 5:00 PM

Papers: Databases (room: L11-L12)

Fri 3:45 PM - 5:00 PM

3:45 PM

Students' syntactic mistakes in writing seven different types of SQL queries and its application to predicting students' success

Alireza Ahadi, University of Technology Sydney

Vahid Behbood, University of Technology Sydney

Julia Prior, University of Technology Sydney

Arto Vihavainen, University of Helsinki

Raymond Lister, University of Technology Sydney

4:10 PM

chidb: Building a Simple Relational Database System from Scratch Borja Sotomayor, University of Chicago - Department of Computer Science Adam Shaw, University of Chicago - Department of Computer Science

4:35 PM

SQL: From Traditional Databases to Big Data

Yasin Silva, Arizona State University Isadora Almeida, Arizona State University Michell Queiroz, Arizona State University

Papers: International Perspectives (room: L13-L14)

Fri 3:45 PM - 5:00 PM

3:45 PM

The Performance of Female Computer Science Students across Three Caribbean

Islands

Daniel Fokum, The University of the West Indies, Mona Daniel Coore, The University of the West Indies, Mona

Yewande Lewis-Fokum, The University of the West Indies, Mona

4:10 PM

Piloting Computer Science Education Week in Mexico

Nora Escherle, Ph FHNW

Silvia I. Ramirez-Ramirez, Department of Computer Science, Tecnológico de

Monterrey

Ashok Basawapatna, Dept. Mathematics, Computer & Information Science, SUNY,

Old Westbury

Dorit Assaf, School of Education, FHNW

Alexander Repenning, School of Education, FHNW

Carmine Maiello, School of Education, FHNW Yasko Endo, University of Colorado, Boulder

Juan Nolazco-Flores, Department of Computer Science, Tecnológico de Monterrey

4:35 PM

Alice in the Middle East: An experience report from the formative phase

Saquib Razak, Carnegie Mellon Univeristy Huda Gedawy, Carnegie Mellon University Wanda Dann, Carnegie Mellon University Donald Slater, Carnegie Mellon University

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Papers: Softwar	e Testing (room: L5-L6)	Fri 3:45 PM - 5:00 PM
3:45 PM	Testing Strategies for the Automated Grading of Student Chris Wilcox, Colorado State University	Programs
4:10 PM	A strategy to combine test-driven development and test learning of programming skills Bruno Henrique Pachulski Camara, Faculdade Integrado, Technology - Paraná Marco Aurélio Graciotto Silva, Federal University of Techn	Federal University of
4:35 PM	Tool Design and Student Testing Behavior in an Introduc Grant Braught, Dickinson College James Midkiff, Dickinson College	ctory Java Course

Papers: CS Pr	inciples (room: L2-L3)	Fri 3:45 PM - 5:00 PM
3:45 PM	An Experience Report Assessing A Professional Development MOOC For CS	
	Principles	
	Jeff Gray, The University of Alabama	
	Jonathan Corley, The University of Alabama	
	Brian Eddy, University of West Florida	
4:10 PM	Two Teachers, Two Perspectives on CS Principles	
	Jean Griffin, Temple University	
	Tammy Pirmann, Gwynedd Mercy University	
	Brent Gray, Carver Engineering and Science High School	
4:35 PM	Lessons Learned from "BJC" CS Principles Professional D	evelopment

4:35 PM	Lessons Learned from "BJC" CS Principles Professional Development
	Thomas W. Price, NC State University
	Veronica Catete, NC State University
	Jennifer Albert, The Citadel
	Tiffany Barnes, NC State University
	Daniel D. Garcia, UC Berkeley

Papers: Beale St. Sampler (room: Cotton Row)		Fri 3:45 PM - 5:00 PM
3:45 PM	A Survey of Ethical Agreements in Information Security Benedict Chukuka, University of Calgary Michael Locasto, University of Calgary	Courses
4:10 PM	Assessing the Tier-1 Core Learning Outcomes of CS2013 James McGuffee, Northern Kentucky University E, Palmer, MacMurray College Indira Guzman, Trident University International	

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4:35 PM

Seeing Is Believing: Helping Students Visualize Multithreaded Behavior

Joel Adams, Calvin College Patrick Crain, Calvin College Christopher Dilley, Calvin College Serita Nelesen, Calvin College Javin Unger, Calvin College Mark Vander Stel, Calvin College

Panel (room: Steamboat)

Fri 3:45 PM - 5:00 PM

Booming Enrollments - Survey Data

Tracy Camp, Colorado School of Mines Stu Zweben, The Ohio State University Duncan Buell, University of South Carolina Jane Stout, Computing Research Association

Panel (room: Mississippi)

Fri 3:45 PM - 5:00 PM

Uncommon Teaching Languages

Mark Lewis, Trinity University Douglas Blank, Bryn Mawr College Kim Bruce, Pomona College Peter-Michael Osera, Grinnell College

Supporter Session: Turing'S Craft (room: River Bluff)

Fri 3:45 PM - 5:00 PM

Creating Exercises and Engaging With Students

David Arnow, President of Turing's Craft

Supporter Session: Microsoft (room: Sultana)

Fri 3:45 PM - 5:00 PM

The BBC micro:bit powered by Microsoft Touch Develop

Tom Ball, Research Manager, Microsoft Research

Lightning Talk (room: L10)

Fri 3:45 PM - 5:00 PM

Study Support Eliminates the Negative Impact of Gender Stereotypes on Women's Self-Concept Jane Stout, Computing Research Association

Burcin Tamer, Computing Research Association

Computational Making: What Does this Theory Mean for SIGCSE?

Jennifer Rode, Drexel University Andrea Marshall, Drexel University Houda El Mimouni, Drexel University Jennifer Booker, Drexel University

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Complexity Tutor: developing an interactive tutoring system for computational complexity Mark McCartin-Lim, University of Massachusetts Amherst

A Body of Knowledge for Usable Security and Privacy Education Yousra Javed, UNC Charlotte Heather Richter Lipford, UNC Charlotte

U.S Army's Cyber Leader Development Program James Finocchiaro, Army Cyber Institute at West Point, NY

Using Instant Chat for Fun and for Profit to Run a Large Class Michael Ball, UC Berkeley

Crossing the Streams: Exploring the Interplay between Students' Online Social Activity and **Programming Behavior** Adam Carter, Washington State University Christopher Hundhausen, Washington State University

Social Network Analysis as a Tool for Understanding Student Interaction in Project-based Courses Bonnie MacKellar, St John's University

Enhancing teaching of Big Data by using real world datasets Anurag Nagar, University of Texas at Dallas

A "Grand Tour" of Computer Science: Re-Designing CS1 for Breadth and Retention Natalie Linnell, Santa Clara University Nicholas Tran, Santa Clara University

Raising the Awareness of Accessibility Needs in Block Languages Amber Wagner, Kennesaw State University Jeff Gray, University of Alabama Daniela Marghitu, Auburn University Andreas Stefik, University of Nevada, Las Vegas

You wouldn't know it from SIGCSE proceedings, but we don't only teach CS1 Colleen Lewis, Harvey Mudd College

FRIDAY 5:10 PM - 6:00 PM SIGCSE Business Meeting (room: Cotton Row)

FRIDAY 6:00 PM - 7:00 PM NCWIT Reception (room: Heritage Ballroom, Sheraton)

FRIDAY 6:10 PM - 7:00 PM CCSC Business Meeting (room: Cotton Row)

FRIDAY 6:30 PM - 8:00 PM Community College Reception Sponsored by Intel (room: Nashville, Sheraton)

FRIDAY 7:00 PM - 10:00 PM Workshops

Workshop #301: A Hands-On Introduction to the Internet of Things (room: L1)

Bill Siever, Western Illinois University

Michael Rogers, Northwest Missouri State University

Workshop #302: Introducing Secure Coding in CS0, CS1, and CS2 (room: L2-L3)

Blair Taylor, Towson University Siddharth Kaza, Towson University

Workshop #303: Building on Blocks: Getting Started With Frames in Greenfoot 3 (room: L5-L6)

Amjad Altadmri, University of Kent Neil Brown, University of Kent

Workshop #304: Rubricking Like a Boss: Writing and Using Rubrics for Faster, Fairer Grading of

Student Programs (room: L8)

Don Blaheta, Longwood University

Adrienne Decker, Rochester Institute of Technology

Workshop #305: Permeating Data Visualization in CS Courses (room: L9)

Aaron Cadle, Fort Worth Country Day School Ira Greenberg, Southern Methodist University

Deepak Kumar, Bryn Mawr College Dianna Xu, Bryn Mawr College Ursula Wolz, RiverSound Solutions

Workshop #306: Learn CS1/2 by Playing and Building Commercial Grade Casual Games: No

Background Required (room: L10)

Kelvin Sung, University of Washington Bothell Rob Nash, University of Washington Bothell Jason Pace, University of Washington Bothell

Workshop #307: CSinParallel: Using WebMapReduce to teach parallel computing concepts, hands-

on (room: L11-L12)

Richard Brown Brown, St. Olaf College Elizabeth Shoop, Macalester College

Joel Adams, Calvin College

Workshop #308: MUzECS: Block-based Arduino Programming for Exploring Computer Science

(room: L13-L14)

Dennis Brylow, Marquette University

- Workshop #309: How to Plan and Run Summer Computing Camps Logistics (room: River Bluff)

 Barbara Ericson, Georgia Institute of Technology

 Kristine Nagel, Georgia Gwinnett College

 Nannette Napier, Georgia Gwinnett College
- Workshop #310: K-12 Teacher Support for Computer Science Principles: An Introduction to the UTeach Course, Thriving in Our Digital World: AP (room: Sultana)

 Jeff Mickel, The UTeach Institute, The University of Texas at Austin

 Alicia Beth, The UTeach Institute, The University of Texas at Austin
- Workshop #311: Conducting educational research in the computer science classroom: Choosing the appropriate research design to address your research questions. (room: Mississippi)

 Aman Yadav, Michigan State University
- Workshop #312: AP CS Principles and The Beauty and Joy of Computing Curriculum (room: Cotton Row)

Daniel Garcia, UC Berkeley
Tiffany Barnes, NC State
Michael Ball, UC Berkeley
Emil Biga, Millard North High School
Josh Paley, Gunn High School
Marnie Hill, J. H. Rose High School
Nathan Mattix, Piedmont High School
Parisa Safa, Urban School of San Francisco
Sean Morris, Albany High School
Shawn Kenner, Sharon High School

Krishnendu Roy, Valdosta State University

SATURDAY 8:45 AM - 10:00 AM

Papers: Computer Engineering (room: L11-L12)

Sat 8:45 AM - 10:00 AM

8:45 AM Effects of a Program Integrating

Effects of a Program Integrating Course for Students of Computer Science and

Engineering

Viggo Kann, KTH Royal Institute of Technology

Anna-Karin Högfeldt, KTH Royal Institute of Technology

9:10 AM Undergraduate Assembly Language Instruction Sweetened with the Raspberry

Pi

Jalal Kawash, University of Calgary Andrew Kuipers, University of Calgary Leonard Manzara, University of Calgary

Robert Collier, Carleton University

9:35 AM Droning On: Reflections on Integrating UAV Technology into a Computer

Engineering Design Laboratory

Meriel Huggard, Trinity College Dublin Ciarán Mc Goldrick, Trinity College Dublin

Papers: Out-of-school Activities (room: L13-L14)

Sat 8:45 AM - 10:00 AM

8:45 AM Meeting Graduate Employability Needs Through Open-source Collaboration with

Industry

Matthew Forshaw, Newcastle University Ellis Solaiman, Newcastle University Oonagh McGee, Newcastle University Hugo Firth, Newcastle University Paul Robinson, Red Hat, Inc. Ryan Emerson, Red Hat, Inc.

9:10 AM Computer History on the Move

Graham Farr, Monash University

Barbara Ainsworth, Monash University

Chris Avram, Monash University Judy Sheard, Monash University

9:35 AM Agile Software Development: Study Away

Maureen Doyle, Northern Kentucky University Candace Gibson, Northern Kentucky University Michelle Melish, Northern Kentucky University Rees Storm, Northern Kentucky University

Papers: Classroom Techniques (room: L5-L6)

Sat 8:45 AM - 10:00 AM

8:45 AM Animated Examples as Practice Content in Java Programming Course

Roya Hosseini, University of Pittsburgh

Teemu Sirkiä, Aalto University

Julio Guerra, University of Pittsburgh Peter Brusilovsky, University of Pittsburgh

Lauri Malmi, Aalto University

9:10 AM Improving Engagement in Introductory Courses with Homework Resubmission

Amanda Holland-Minkley, Washington & Jefferson College

Thomas Lombardi, Washington & Jefferson College

9:35 AM Memory Diagrams: A Consistant Approach Across Concepts and Languages

Toby Dragon, Ithaca College Paul Dickson, Ithaca College

Papers: Computing in Middle School (room: L2-L3)

Sat 8:45 AM - 10:00 AM

8:45 AM MyCS at 5: Assessing a Middle-years CS Curriculum

Brenda Castro, Harvey Mudd College Terrence Diaz, Harvey Mudd College Marissa Gee, Harvey Mudd College Rebekah Justice, Harvey Mudd College David Kwan, Harvey Mudd College Preethi Seshadri, Harvey Mudd College Zachary Dodds, Harvey Mudd College

9:10 AM Factors Influencing Computer Science Learning in Middle School

Shuchi Grover, Stanford University/SRI International

Roy Pea, Stanford University

Stephen Cooper, Stanford University

9:35 AM "What Is A Computer?" What do Secondary School Students Think?

Shuchi Grover, SRI International Daisy Rutstein, SRI International Eric Snow, SRI Interntaional

Papers: Games (room: Cotton Row)

Sat 8:45 AM - 10:00 AM

8:45 AM A Multidisciplinary, Multifaceted Approach to Improve the Computer Science

based Game Design Education: Methodology and Assessment

Chang Yun, University of Houston Hesam Panahi, University of Houston Zhigang Deng, University of Houston

SIGCSE 2016 Symposium

Preliminary Program

9:10 AM

Design Insights into the Creation and Evaluation of a Computer Science

Educational Game

Britton Horn, Northeastern University Christopher Clark, Northeastern University Oskar Strom, Northeastern University

Hilery Chao, Brown University Amy Stahl, Northeastern University

Casper Harteveld, Northeastern University Gillian Smith, Northeastern University

9:35 AM

Experiences from an Experiential Learning Course on Games Development

Stephan Krusche, Technische Universität München Barbara Reichart, Technische Universität München Paul Tolstoi, Technische Universität München Bernd Bruegge, Technische Universität München

Student Research Competition

Sat 8:45 AM - 10:00 AM

Undergraduate Semi-finalist Presentations (room: L8)

Graduate Semi-finalist Presentations (room: L9)

Special Session (room: Steamboat)

Sat 8:45 AM - 10:00 AM

Nifty Assignments

Nick Parlante, Stanford University Julie Zelenski, Stanford University Kevin Wayne, Princeton University

John DeNero, University of California, Berkeley

Baker Franke, Code.org

Arvind Bhusnurmath, University of Pennsylvania

Karen Her, University of Pennsylvania Kristen Gee, University of Pennsylvania

Eric Manley, Drake University Timothy Urness, Drake University

Marvin Zhang, University of California, Berkeley

Supporter Session: Gradescope (room: River Bluff)

Sat 8:45 AM - 10:00 AM

Build an Autograder in 45 Minutes

Arjun Singh, Gradescope CEO & Co-founder

Supporter Session: Github (room: Sultana)

Sat 8:45 AM - 10:00 AM

Classroom for GitHub: A Tool Designed for Educators

Patrick McKenna, GitHub Trainer

SATURDAY 10:00 AM - 10:45 AM Break, Exhibits & Demos

Demos (room: Exhibit Hall)

Sat 10:00 AM - 10:45 AM

Bringing Real-World Data And Visualizations Into Data Structures Courses Using BRIDGES

Kalpathi Subramanian, The University of North Carolina at Charlotte Jamie Payton, The University of North Carolina at Charlotte David Burlinson, The University of North Carolina at Charlotte Mihai Mehedint, The University of North Carolina at Charlotte

ParseIT: A Tool for Teaching Parsing Techniques

Amey Karkare, IIT Kanpur Nimisha Agarwal, IIT Kanpur

NSF Showcase (room: Exhibit Hall)

Sat 10:00 AM - 11:30 AM

Bringing a Rigorous CS Principles Course to the Largest School System in the U.S.

Dan Garcia, UC Berkeley Brian Harvey, UC Berkeley Tiffany Barnes, NC State June Mark, EDC E. Paul Goldenberg, EDC

Patternlets and TSGL: CSinParallel Tools for Visualizing Parallel Behavior

Joel C. Adams, Calvin College Richard Brown, St. Olaf College Elizabeth Shoop, Mcalester College

Computing in the Arts: Multidisciplinary I

Susan Reiser, UNC Asheville Rebecca Bruce, UNC Asheville

Collaborative Project: Building Virtual Research, Interactive, Service, and Experiential Learning

Modules for Cyber Security Education

Feng Li, Purdue

SATURDAY 10:45 AM - 12:00 PM

Papers: Security (room: L11-L12)

Sat 10:45 AM - 12:00 PM

10:45 AM

Facilitating a Battle Between Hackers: Computer Security Outside of the

Classroom

Nathan Backman, Buena Vista University

11:10 AM

A Reflective Approach to Assessing Student Performance in Cybersecurity

Exercises

Richard Weiss, The Evergreen State College Michael Locasto, University of Calgary Jens Mache, Lewis and Clark College

11:35 AM

The Teaching Privacy Curriculum

Serge Egelman, International Computer Science Institute Julia Bernd, International Computer Science Institute Gerald Friedland, International Computer Science Institute

Daniel Garcia, University of California, Berkeley

Papers: Alternative Learning Experiences (room: L13-L14)

Sat 10:45 AM - 12:00 PM

10:45 AM

A Programming Contest Strategy Guide Aaron Bloomfield, University of Virginia Borja Sotomayor, University of Chicago

11:10 AM

Teaching "Lawfulness" With Kodu

David Touretzky, Carnegie Mellon University Christina Gardner-McCune, University of Florida

Ashish Aggarwal, University of Florida

11:35 AM

Datathons: An Experience Report of Data Hackathons for Data Science Education

Craig Anslow, Middlesex University John Brosz, University of Calgary Frank Maurer, University of Calgary Mike Boyes, University of Calgary

Papers: CS Ed Research 3 (room: L5-L6)

Sat 10:45 AM - 12:00 PM

10:45 AM

Retention of Flow: Evaluating a Computer Science Education Week Activity

Alexander Repenning, School of Education FHNW

Ashok Basawapatna, SUNY Old Westbury Dorit Assaf, School of Education FHNW Carmine Maiello, School of Education FHNW Nora Escherle, School of Education FHNW

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11:10 AM

Students' Initial Course Motivation and Their Achievement and Retention in

College CS1 Courses

Duane F. Shell, University of Nebraska-Lincoln Leen-Kiat Soh, University of Nebraska-Lincoln Abraham Flanigan, University of Nebraska-Lincoln Markeya Peteranetz, University of Nebraska-Lincoln

11:35 AM

Towards a Common Framework for Evaluating Computing Outreach Activities

Adrienne Decker, Rochester Institute of Technology

Monica M. McGill, Bradley University Amber Settle, DePaul University

Papers: K-12 Teaching (room: L2-L3)

Sat 10:45 AM - 12:00 PM

10:45 AM

CS Teacher Experiences with Educational Technology, Problem-Based Learning,

and a CS Principles Curriculum

George Veletsianos, Royal Roads University Bradley Beth, The University of Texas at Austin Calvin Lin, The University of Texas at Austin

11:10 AM

Contextualized Teaching in the Lower Secondary Education * Long-term

Evaluation of a CS Course from Grade 6 to 10

Arno Pasternak, TU Dortmund

11:35 AM

Landscape of K-12 Computer Science Education in the U.S.: Perceptions, Access,

and Barriers

Jennifer Wang, Google, Inc. Hai Hong, Google, Inc. Jason Ravitz, Google, Inc. Sepehr Moghadam, Google, Inc.

Papers: Tools (room: Cotton Row)

Sat 10:45 AM - 12:00 PM

10:45 AM

Supporting Active Learning by Introducing an Interactive Teaching Tool in a

Data Structures and Algorithms Course Tommy Färnqvist, Linköping University Fredrik Heintz, Linköping University Patrick Lambrix, Linköping University Linda Mannila, Åbo Akademi University Chunyan Wang, Linköping University

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11:10 AM

Incorporating Analogies and Worked Out Examples as Pedagogical Strategies in

a Computer Science Tutoring System

Rachel Harsley, University of Illinois at Chicago Nick Green, University of Illinois at Chicago

Mehrdad Alizedah, University of Illinois at Chicago Sabita Acharya, University of Illinois at Chicago Davide Fossati, Carnegie Mellon University in Qatar Barbara Di Eugenio, University of Illinois at Chicago Omar AlZoubi, Carnegie Mellon University in Qatar

11:35 AM

SEURAT_Edu: A Tool to Assist and Assess Student Decision-Making in Design

John Malloy, Miami University Janet Burge, Wesleyan University

Special Session (room: Steamboat)

Sat 10:45 AM - 12:00 PM

Advanced Placement Computer Science Principles (APCSP): A Report from Teachers

Owen Astrachan, Duke University

R. Brook Osborne, Code.org

Special Session (room: Mississippi)

Sat 10:45 AM - 12:00 PM

Special Session: Helping Students to Develop Communication, Teamwork, and Other Process Skills with POGIL

Clifton Kussmaul, Muhlenberg College

Helen Hu, Westminster College

Tammy Pirmann, School District of Springfield Township

SATURDAY 12:00 PM - 2:00 PM Luncheon - Karen Lee Ashcraft - University of Colorado Boulder

SATURDAY 3:00 PM - 6:00 PM Affiliated Event (room: L8)

Community College Curriculum Development Workshop: Computer Science and Cybersecurity Elizabeth Hawthorne

SATURDAY 3:00 PM - 6:00 PM Workshops

Workshop #401: JavaScript Applications for CSO/CS1: Getting Hands-on with Code.org's App Lab

(room: L1)

Baker Franke, Code.org Sarah Filman, Code.org Brook Osborne, Code.org

Workshop #402: Programming Web Services on the Cloud with Node.js (room: L2-L3)

Ariel Ortiz, Tecnologico de Monterrey, Campus Estado de Mexico

Workshop #403: Teaching Robotics Using ROS (room: L5-L6)

Nathan Sprague, James Madison University Ralph Grove, James Madison University

Workshop #405: Advanced Placement Computer Science Principles Performance Task: Create –

Applications from Ideas, Approaches to Programming Collaboratively. It's a

Hackathon Workshop! (room: L9)

Lien Diaz, College Board

Richard Kick, Newbury Park High School Andrew Kuemmel, Madison West High School

Workshop #406: Scaling up for CS10K: Teaching and Supporting New Computer Science High

School Teachers (room: L10)

Tiffany Barnes, North Carolina State University

Jamie Payton, University of North Carolina at Charlotte Daniel Garcia, University of California and Berkeley

Workshop #407: App Development for All! (room: L11-L12)

David Hayes, Lane Tech College Prep High School (Chicago Public Schools)

Dale Reed, University of Illinois at Chicago

Workshop #408: Mixing Code and 3D Printers with Madeup (room: L13-L14)

Chris Johnson, University of Wisconsin, Eau Claire

Heather Amthauer, University of Wisconsin, Eau Claire

Ryan Hardt, University of Wisconsin, Eau Claire

Peter Bui, University of Notre Dame

Workshop #409: Infusing Cooperative Learning into Early Computer Science Courses to Support Improved Engagement (room: River Bluff)

Fran Trees, Rutgers University Jeff Gray, University of Alabama Owen Astrachan, Duke University

- Workshop #410: Solving the Cloud Computing Impasse with MBaaS (room: Sultana)

 Michael Rogers, Northwest Missouri State University

 Bill Siever, Western Illinois University
- Workshop #411: Reviewing NSF Proposals: Learn about Effective Proposal Writing via the Review Process (room: Mississippi)

 Paul Tymann, The National Science Foundation

 Michael Erlinger, The National Science Foundation
- Workshop #412: Transition to Java Using Alice 3 (room: Cotton Row)

 Donald Slater, Alice Project, Carnegie Mellon University

 Wanda Dann, Alice Project, Carnegie Mellon University