

ICER 2019

Conference Schedule

Sunday 11, August

All Day	Doctoral Consortium <i>Andy Ko, Katrina Falkner</i> <i>DoubleTree, Victoria Room</i>
All Day	Workshop: Work in Progress <i>Mark Guzdial and Wil Doane</i> <i>DoubleTree, Seattle Room</i>
All Day	Workshop: SPLICE: Computing Science Education Infrastructure: From Tools to Data <i>Peter Brusilovsky, Lauri Malmi, Steve Edwards, and Thomas Price</i> <i>DoubleTree, San Francisco Room</i>
All Day	Workshop: Student Learning: Creating, Refining, and Promoting Evaluation and Research Across Computing Education <i>Adrienne Decker and Monica McGill</i> <i>DoubleTree, Shanghai Room</i>
17:00-19:00	Conference Registration <i>DoubleTree, Mandarin Foyer</i>

Monday 12 August

- 08:00-08:45 Conference registration
DoubleTree, Mandarin Foyer
- 08:45-09:15 Opening – Conference Welcome and Announcements
DoubleTree, Mandarin Ballroom

Session 1: What the students think, Chair: Brian Dorn

09:15-10:45	Accountable Disciplinary Knowledge in Computing Education: A Case-Comparative Approach <i>Sebastian Dziallas (Fulbright University Vietnam) and Sally Fincher (Univ. of Kent)</i>
	Alignment of Goals and Perceptions of Computing Predicts Students' Sense of Belonging in Computing <i>Colleen Lewis (Harvey Mudd College), Paul Bruno (University of Southern California), Jonathan Raygoza (Harvey Mudd College), and Julia Wang (Harvey Mudd College)</i>
	How do students talk about intelligence? An investigation of motivation, self-efficacy, and mindsets in computer science <i>Jamie Gorson (Northwestern University) and Eleanor O'Rourke (Northwestern University)</i>

10:45-11:15 Morning coffee/tea
Regular Posters during Morning and Afternoon coffee/tea

Session 2: Teaching Assistants, Chair: Donald Chinn

11:15-12:15 Undergraduate Teaching Assistants in Computer Science: A Systematic Literature Review
Diba Mirza (UC Santa Barbara), Phillip Conrad (UC Santa Barbara), Christian Lloyd (UC Santa Barbara), Ziad Matni (UC Santa Barbara), and Arthur Gatin (UC Santa Barbara)

What Help Do Students Seek in TA Hours?
Yanyan Ren (Brown University), Shriram Krishnamurthi (Brown University), and Kathi Fisler (Brown University)

12:15-13:45 Lunch

Session 3: Evaluating tools and interventions, Chair: Katrina Falkner

13:45-15:15 Evaluating the Effectiveness of Parsons Problems for Block-based Programming
Rui Zhi (North Carolina State University), Min Chi (North Carolina State University), Tiffany Barnes (North Carolina State University), and Thomas Price (North Carolina State University)

An Evaluation of the Impact of Automated Programming Hints on Performance and Learning
Samiha Marwan (North Carolina State University), Joseph Jay Williams (University of Toronto), and Thomas Price (North Carolina State University)

A Spaced, Interleaved Retrieval Practice Tool that is Motivating and Effective
Iman Yeckehzaare (University of Michigan), Paul Resnick (University of Michigan), and Barbara Ericson (University of Michigan)

15:15-15:45 Lightning Talks
Chair: Kate Sanders, Jacqui Whalley

15:45-16:15 Afternoon coffee/tea
Regular posters during Afternoon tea

Session 4: Theory and Cognition, Chair: Paul Denny

16:15-17:45 Spatial Encoding Strategy Theory: The Relationship between Spatial Skill and STEM Achievement
Lauren Margulieux (Georgia State University)

Toward Context-Dependent Models of Productive Knowledge in Programming Cognition
Brian Danielak (Fullstack Academy)

From Theory Bias to Theory Dialogue: Embracing Cognitive, Situated and Critical Framings of Computational Thinking for K-12 CS

Yasmin Kafai (University of Pennsylvania), Chris Proctor (Stanford University), and Debora Lui (University of Pennsylvania)

Evening Make your own arrangements for dinner.
[See the list of recommended restaurants.](#)

Tuesday 13 August

08:45-09:00 Registration

09:00-09:15 Announcements

Session 5: Concepts and comprehension, Chair: Barbara Ericson

09:15-10:45 BDSI: A Validated Concept Inventory for Basic Data Structures

Leo Porter (University of California, San Diego), Daniel Zingaro (University of Toronto Mississauga), Soohyun Nam Liao (University of California, San Diego), Cynthia Taylor (Oberlin College), Kevin C. Webb (Swarthmore College), Cynthia Lee (Stanford University), and Michael Clancy (University of California, Berkeley)

Exploring the Value of Student Self-Evaluation in Introductory Programming

Rodrigo Duran (Aalto University), Jan-Mikael Rybicki (Aalto University), Juha Sorva (Aalto University), and Arto Hellas (University of Helsinki)

Executable Examples for Programming Problem Comprehension

John Wrenn (Brown University) and Shriram Krishnamurthi (Brown University)

10:45-11:30 Morning coffee/tea

DC Posters (group 1) during Morning coffee/tea

Special Session, Chair: Robert McCartney

11:30-12:15 The Best Papers from the First Five ICERs

Sally Fincher (University of Kent), Mark Guzdial (University of Michigan), and Kate Sanders (Rhode Island College)

12:15-13:45 Lunch

Senior PC meeting (*Tokyo Room*)

Session 6: Primary and Secondary Education, Chair: Leigh Ann DeLyser

13:45-15:15 Identifying Teachers' Technological Pedagogical Content Knowledge for Computer Science in the primary years

Rebecca Vivian (University of Adelaide) and Katrina Falkner (University of Adelaide)

Accounting for Pedagogical Content Knowledge in a Theory of Change Analysis

Tom McKlin (The Findings Group), Taneisha Lee (The Findings Group), Dana Wanzer (The

Findings Group), Brian Magerko (Georgia Institute of Technology), Doug Edwards (Georgia Institute of Technology), Sabrina Grossman (Georgia Institute of Technology), Emily Bryans (The Findings Group), and Jason Freeman (Georgia Institute of Technology)

Designing for integrated K-5 computing and literacy through storymaking activities
Robert Whyte (University of Nottingham), Shaaron Ainsworth (University of Nottingham), and Jane Medwell (University of Nottingham)

15:15-16:00 Afternoon coffee/tea
DC posters (group 2) during Afternoon coffee/tea

Session 7: Reflecting on the literature, Chair: Briana Morrison

16:00-17:30 Using Inferential Statistics in Computing Education Research: a Methodological Review
Kate Sanders (Rhode Island College), Brett Becker (University College Dublin), Anna Eckerdal (Uppsala University), Sally Hamouda (Rhode Island College), Judy Sheard (Monash University), and Simon (University of Newcastle)

Computing Education Theories: What Are They and How Are They Used?
Lauri Malmi (Aalto University), Judy Sheard (Monash University), Päivi Kinnunen (Aalto University), Simon (University of Newcastle), and Jane Sinclair (The University of Warwick)

Defining What Empirically Works Best: Dynamically Generating Meta-Analysis for Computer Science Education
Monica McGill (Knox College), Tom McKlin (The Findings Group), and Errol Kaylor (Knox College)

19:00-21:00 Conference Dinner at Chestnut (89 Chestnut Street). Dinner served at 7:00, doors open at 6:30.

Wednesday 14 August

08:50-09:00 Announcements

Session 8: Looking at students in particular classes, Chair: Adon Moskal

09:00-10:30 Using the SOLO Taxonomy to Understand Subgoal Labels Effect in CS1
Adrienne Decker (University at Buffalo), Lauren E. Margulieux (Georgia State University), and Briana B. Morrison (University of Nebraska at Omaha)

Trials and Tribulations of Novices Working with the Arduino
Kayla Desportes (New York University) and Betsy DiSalvo (Georgia Institute of Technology)

A Student's View of Concurrency - A Study of Common Mistakes in Introductory Courses on Concurrency

Filip Strömbäck (Linköping University), Mikael Asplund (Linköping University), Mariam Kamkar

(Linköping University), and Linda Mannila (Linköping University)

10:30-11:00 Morning coffee/tea

Session 9: Quantitative analyses, Chair: Kathi Fisler

- 11:00-12:30 A Randomized Controlled Trial on the Wild Wild West of Scientific Computing with Student Learners
Tim Rafalski (UNLV), Merlin Uesbeck (UNLV), Cristina Panks (UNLV), Patrick Daleiden (UNLV), William Allee (UNLV), Amelia Mcnamara (University of St Thomas), and Andreas Stefik (University of Nevada, Las Vegas)
- Novice Compiler Error Behavior In Non-English Contexts
Kyle Reestman (University of Nebraska at Omaha) and Brian Dorn (University of Nebraska at Omaha)
- Research This! Questions that Computing Educators Most Want Computing Education Researchers to Answer
Paul Denny (The University of Auckland); Brett Becker (University College Dublin); Michelle Craig (University of Toronto); Greg Wilson (RStudio); Piotr Banaszekiewicz (Segmars Piotr Banaszekiewicz)

12:30-13:45 Lunch

Session 10: Looking at students in unusual environments, Chair: Quentin Cutts

- 13:45-14:45 Evaluating a Scalable Program for Undergraduate CS Research
Christine Alvarado (University of California San Diego); Sergio Villazon (University of California San Diego); Burcin Tamer (CERP)
- Admitting Students through an Open Online Course in Programming: A Multi-year Analysis of Study Success
Juho Leinonen (University of Helsinki), Petri Ihantola (University of Helsinki), Antti Leinonen (University of Helsinki), Henrik Nygren (University of Helsinki), Jaakko Kurhila (University of Helsinki), Matti Luukkainen (University of Helsinki), and Arto Hellas (University of Helsinki)

Closing Session, Chair: Robert McCartney/Andrew Petersen

- 14:45-15:30 Paper awards, attendee feedback, announcements
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