2023 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT 2023)

Atlanta, Georgia, USA
20 – 21 June 2023

IEEE

IEEE Catalog Number: CFP23B73-POD
ISBN: 979-8-3503-2833-2

Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP23B73-POD
ISBN (Print-On-Demand): 979-8-3503-2833-2
ISBN (Online): 979-8-3503-2832-5

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

2023 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT)

RESPECT 2023

Table of Contents

Welcome Message ..... **x**
Sponsors and Supporting Organizations ..... **xii**
Organizing Committee ..... **xiii**
Program Committee ..... **xiv**

Perspectives on Equity Papers

A Less Diverse Pool of Computer Science Teachers, but More Diverse Professional Learning Experiences 1
Jason Bohrer (Computer Science Teachers Association, USA), Jake Baskin (Computer Science Teachers Association, USA), Bryan Twarek (Computer Science Teachers Association, USA), Tom McKlin (The Findings Group, USA), Lijun Ni (University at Albany, USA), and Yan Tian (University at Albany, USA)

Can There be DEI Without Accessibility? 4
Brianna Blaser (University of Washington, USA) and Richard E. Ladner (University of Washington, USA)

Equity in Computing Education is Not a Political Agenda 6
Manuel A. Pérez-Quiñones (University of North Carolina at Charlotte, USA) and Debarati Basu (Embry-Riddle Aeronautical University, USA)

Exposing Oversights in the Collection, Analysis, and Reporting of Demographic Data 9
Tom McKlin (The Findings Group, USA), Clarissa Thompson (Kent State University, USA), Susan Fisk (Kent State University, USA), Audrey Rorrer (University of North Carolina, USA), and Tiffany Barnes (North Carolina State University, USA)

Growing Knowledge About Using Culturally Responsive Pedagogy and Universal Design for Learning in Computer Science Education 11
Jeanne Century (University of Chicago) and Lauren Weisberg (University of Florida)

Ancestral Knowledge Systems and the Decolonization of Computing 14
Joseph Carroll-Miranda (University of Puerto Rico), Cueponcaxochitl Moreno-Sandoval (California State University, USA), April Lindala (Northern Michigan University, USA), Michelle Chatman (University of the District of Columbia, USA), Ebony Terrell Shockley (University of Maryland, USA), Jefffery Fleming (University of the District of Columbia, USA), Denise Cadeu (Keewenaw Bay Ojigwa Community College, USA), Alyssa Lopez (University of Puerto Rico), Elizabeth Flores-Reyes (California State University, USA), and Marlen Martinez-Lopez (California State University, USA)

Equity Pedagogies in CSed: A Critical-Sociocultural and Humanizing Perspective for Latinx Youth 17
A. Jyoti Kaneria (Georgia Institute of Technology, USA), Douglas Edwards (Georgia Institute of Technology, USA), Diley Hernández (Georgia Institute of Technology, USA), Joseph Carroll Miranda (University of Puerto Rico), Rafael Arce Nazario (University of Puerto Rico), Jayma Koval (Georgia Institute of Technology, USA), Pascua Padro Collazo (The Findings Group), Taneisha Lee (The Findings Group, USA), Tom McKlin (The Findings Group, USA), Jason Freeman (Georgia Institute of Technology, USA), Isaris Quiñones Perez (University of Puerto Rico), and Lilliana Marrero Solis (University of Puerto Rico)

Full Research Papers

Comparing Student Social Networks and Academic Experiences in Computing and Biology Courses 21
Amari Lewis (University of California San Diego), Kristin Tenney (University of California San Diego), Kristen Vaccaro (University of California San Diego), Joe Politz (University of California San Diego), and Mia Minnes (University of California San Diego)

Getting My Feet Wet and Starting Small: Building Capacity for Culturally Responsive CS 29
June Mark (Education Development Center, USA), Cheri Fancsali (New York University, USA), Janice Lee (New York University, USA), Xia Li (New York University, USA), Rishika Jain (New York University, USA), and Christy Crawford (Computer Science for All, NYC Department of Education, USA)

A Longitudinal Study of the Post-Secondary Experiences of Women of Color in Computing 36
Kristina Kramarczuk (University of Maryland, USA), Charlotte Avery (University of Maryland, USA), Monica Cardenas Guzman (University of Maryland, USA), Neha Shijo (University of Maryland, USA), Kathryn Atchison (University of Maryland, USA), David Weintrop (University of Maryland, USA), Jandelyn Plane (Ripon College, USA), and Anaum Khan (University of Maryland, USA)

Computing Faculty's Definition of Equity and Their Adoption of Equitable Practices 44
Debarati Basu (Embry-Riddle Aeronautical University, USA) and Manuel A. Pérez-Quiñones (University of North Carolina at Charlotte, USA)

Adaptation and Validation of a Science Identity Survey in Spanish (SISE) for Computer Science and Mathematics Undergraduate Students 52
Jomarie Ortiz-Álvarez (University of Puerto Rico, Puerto Rico), Pascua Padró-Collazo (University of Puerto Rico, Puerto Rico), José Ortiz-Ubarri (University of Puerto Rico, Puerto Rico), and Michelle Borrero (University of Puerto Rico, Puerto Rico)

Social Impacts of a Global Pandemic in a Gender-Balanced Data Structures Course 64
Philip Buffum (Georgetown University, USA)

Short Research Papers

"I am Coming from the Same Situation:" Connections Between Teacher Identities and Social Justice Within Secondary Computing Education 72
Gayithri Jayathirtha (University of Oregon, USA), Joanna Goode (University of Oregon, USA), and Max Skorodinsky (University of Oregon, USA)

Experiences Teaching Data Structures at HBCUs (and the Case for Cultural Pedagogy) 77
Simone A. Smarr (University of Florida, USA) and Juan E. Gilbert (University of Florida, USA)

Being Able to See Yourself and Know You Can Get There: Creating Computing Opportunities for Students of Color 82
Rebecca Alexander (DePauw University, USA), Gloria Childress Townsend (DePauw University, USA), Khadija Stewart (DePauw University, USA), and Allana Johnson (DePauw University, USA)

A Qualitative Approach to Understanding Computing Self-Efficacy Development Among Girls of Color 87
Patricia Garcia (University of Michigan, USA), Melissa Perez (University of Michigan, USA), and Tori Culler (North Carolina State University, USA)

Computational Literacy, Language, and Culture 91
Sharin Jacob (University of California, Irvine, USA), Clare Baek (University of California, Irvine, USA), and Mark Warschauer (University of California, Irvine, USA)

Ramping Up To CS For All: Broadening Participation Through Equity-Focused Leadership 96
Kathryn Hill (New York University), Edgar Rivera-Cash (New York University), and Marlee Tavlin (New York University)

Full Experience Reports

Critiquing Computing Artifacts Through Programming Satirical Python Scripts 101
Aadarsh Padiyath (University of Michigan, USA), Tamara Nelson-Fromm (University of Michigan, USA), and Barbara Ericson (University of Michigan, USA)

The Role of Black Feminist Thought in Informal CS Education 110
Yolanda Rankin (Emory University, USA) and Raymond Malaspina (Florida State University, USA)

High School Girls' Experiences in a Project-Based Learning Computer Science Course 117
Isabella Gransbury (North Carolina State University), Janet Brock (North Carolina State University), Veronica Cateté (North Carolina State University), Tiffany Barnes (North Carolina State University), Shuchi Grover (Looking Glass Ventures), and Ákos Lédeczi (Vanderbuilt University)

Malama Aina through Micro:bits in Kane'ohe: A Place-Based Approach to Teaching CS in a Kaiapuni (Hawaiian Immersion) Bilingual School Setting 124
Amanda Nelson (Pu'ohala School), Amy Guo (Northwestern University), Marcelo Worsley (Northwestern University), Derek Esibill (Pacific American Foundation), and Josiah Hester (Georgia Institute of Technology)

Four Corners: Connecting CS to Culture and Language Through Collaboration 133
Angela Marquez (University of Arizona, USA), Janice Mak (University of Arizona, USA), Yolanda Lozano (CS Alliance, USA), and Melissa DeLaurentis (NM PED, USA)

Short Experience Reports

Pre-College Computing Experiences: Lessons Learned from Expansive and Inclusive Options in Surveys 137
Rebecca Zarch (SageFox Consulting Group), Amanda Menier (SageFox Consulting Group), Megean Garvin (Maryland Center For Computing Education at the University Systems of Maryland), Jayce Warner (University of Texas), Bailey Brown (Spelman College), and Phebe Palmer (SageFox Consulting Group)

Lessons Learned from Implementing an Equity-Focused Peer Mentoring Program for CS Teachers 142
Bryan Twarek (Computer Science Teachers Association), Jennifer Tsan (WestEd), Aleata Hubbard Cheuoua (WestEd), Amy Fetherston (CSTA Wisconsin Dairyland), and Linnea Logan (CSTA Wisconsin Dairyland)

We Make this Road by Walking:experiences from a LatinX Research Practice Partnership 147
Joseph Carroll-Miranda (University of Puerto Rico), Michelle Borrero (University of Puerto Rico), Patricia Ordoñez (University of Maryland, USA), Milagros Bravo (University of Puerto Rico), Edusmildo Orozco (University of Puerto Rico), Luis López (University of Puerto Rico), Agustin Corchado (University of Puerto Rico), and Brenda Santiago (University of Puerto Rico)

Micro-Internships for Women and non-Binary Computing Undergrads to Level the Playing Field for Landing Tech Internships 152
Debbie Marcus (Break Through Tech), Sally L Bond (The Program Evaluation Group-LLC), and Corrine Doron (Break Through Tech)

Culturally Revitalizing Approaches to Computer Science Education in Southern AZ 156
Janice Mak (Arizona State University, USA), Angela Marquez (University of Arizona, USA), Joseph Watkins (University of Arizona, USA), Michelle Higgins (University of Arizona, USA), and Margaret Wilch (University of Arizona, USA)

Exploring Identity Through Computing Integration in a Spanish Language & Literature Class 158
F. Megumi Kivuva (University of Washington, USA), Keith O'Hara (Bard College, USA), and Amy J. Ko (University of Washington, USA)

Implementing an Informal and Culturally Relevant Computer Science Curriculum in a Predominantly Hispanic-Spanish Speaking Community 163
Pascua Padró-Collazo (The Findings Group), Isaris R. Quiñones-Pérez (University of Puerto Rico), Rafael A. Arce-Nazario (University of Puerto Rico), Joseph Carroll-Miranda (University of Puerto Rico), and Lilliana Marrero-Solis (University of Puerto Rico)

Imagine a Future Rooted in Culture: Exploring Afrofuturism in Computing Education at HBCUs.. 167
Jaye Nias (Spelman College, USA) and Jaycee Holmes (Spelman College, USA)

The Continued Journey Toward Including All Students: Results From a Mobile CSP Audit 172
Justin Cannady (College of St. Scholastica, USA) and Jennifer Rosato (College of St. Scholastica, USA)

Virtual Post Baccalaureate Technical Interview Development for Black Software Engineers 177
Kaylah Mackroy (Morehouse College, USA), Whitney Nelson (Morehouse College, USA), Talitha Washington (Morehouse College, USA), and Kinnis Gosha (Morehouse College, USA)

HBCU Technical Candidate Enhancement Program to Increase Computer Technology Company Interest 182
Kaylah Mackroy (Morehouse College, USA), Whitney Nelson (Morehouse College, USA), Nina Gilbert (Morehouse College, USA), and Kinnis Gosha (Morehouse College, USA)

Author Index **187**