



CCSC

CONSORTIUM FOR
COMPUTING SCIENCES
IN COLLEGES

Central Plains Region



30th Annual Conference

April 5-6, 2024



Graceland
UNIVERSITY | 1895

It is my pleasure to welcome you to the 30th Annual Consortium for Computing Sciences in Colleges Central Plains Region Conference hosted by Graceland University in the community of Lamoni, Iowa!

The conference this year appeals to a variety of different levels with a broad range of papers, nifty assignments, and workshops. Topics range from the effect of Generative AI to engaging younger students in coding. The diverse program is sure to have something for everyone.

There will be two outstanding speakers to share with us. Dr. Monica McGill has a passion for computing education research. She founded her own company, Institute for Advancing Computer Education(IACE), which focuses directly on equity-focused K-12 CS education.

The banquet speaker is Mr. Kevin Juhnke who has been at Principal Financial Group since his graduation from Graceland in 1990. His experience ranges from COBOL developer to Enterprise Architecture. Both speakers will deliver valuable insights for attendees. Additionally, the program includes activities for students: paper and poster presentations, Hack-A-Thon reports, and a programming contest.

I look forward to seeing you!

Kevin Brunner
Conference Chair



CCSC NATIONAL PARTNERS

Rephactor



codegrade

PRE-CONFERENCE WORKSHOP

GitHub Classroom

Presenters: Carter Zenke, Harvard University /
Charlie Liu, Yale University

This workshop introduces participants with hands-on work to GitHub Classroom, a free, web-based application that enables teachers to distribute, collect, and autograde programming assignments in any language. GitHub Classroom effectively provides an abstraction layer atop Git and GitHub, automating tasks for students and teachers that would otherwise be time-consuming and tedious via a CLI or GUI, particularly for larger courses. To distribute an assignment, a teacher need only create a “repository” with starter code (and optional tests) in their own

“organization” on GitHub, which students can then “accept,” automatically creating within that same organization a copy thereof to which the student has write access. To submit work, students need only upload (or push) files to the same place, which automates execution of any tests. Students’ submissions (and the results of any such tests) are then accessible via the teacher’s own dashboard. GitHub Classroom does not strictly require familiarity with Git for students and teachers; basic operations can be performed via GitHub’s GUI. But some comfort with cloning, adding, committing, and pushing files with Git is ideal. By workshop’s end, participants will be prepared to use GitHub Classroom in their own courses.

KEYNOTE SPEAKER Dr. Monica McGill

Navigating the Technological Tide: How Leveraging Past Perspectives Can Help You Create Sound Software for Everyone

In the ever-expanding landscape of our digital existence, artificial intelligence (AI) is seamlessly integrating into the fabric of our lives, much like a dye diffusing through water. While technological progress is not a novel concept, insights from the past offer invaluable lessons about how innovation shapes our world. Drawing from these historical lenses, my keynote talk aims to provide a framework within the realm of computer science that encompasses AI and technological advancements. Join me on a journey to delve into its nuanced impact on present and future developers, emphasizing the importance of adopting critical perspectives and providing you with some basic tools on how to do so. Leveraging these insights can imbue your projects with depth, reflection, and profound meaning in the ever-evolving landscape of computing and AI.



BANQUET SPEAKER Mr. Kevin Juhnke

Perspectives on Technology's impact on Financial Services and the Future Workforce

A variety of experiences over a 30+ year career in the computing field at Principal Financial provides for a life-long journey with many fascinating insights. Mr. Juhnke will focus his thoughts on:

- 🟡 Business and market challenges in Financial Services and their impact on an organization's Technology Strategies
- 🟡 The impact key maturing and emerging technologies have on the Financial Services industry including...
 - 🟡 Cloud Advancements
 - 🟡 Generative AI
 - 🟡 Blockchain
 - 🟡 "Citizen" Development

He concludes his thoughts with perspectives on areas where educators can help position students to be more marketable and impactful in financial services tech jobs after graduation.



8:30

REGISTRATION OPENS

Shaw Center / Lobby

PRE-CONFERENCE WORKSHOP

📍 Higdon Administration Building

9:00 – Noon

Moderators: Wen-Jung Hsin, Nic Boscan***Distributing, Collecting, and Autograding Assignments with GitHub Classroom***

Carter Zenke, Harvard University, Charlie Liu, Yale University

Harpham Heritage
Chapel (Rm 204)

* LUNCH ON YOUR OWN *

OPENING OF CONFERENCE

📍 Shaw Center

1:00 – 1:15

Welcome

Carol Hall

1:15 – 2:15

Keynote: *Navigating the Technological Tide: How Leveraging Past Perspectives Can Help You Create Sound Software for Everyone*Dr. Monica McGill, Founder, President & CEO,
Institute for Advancing Computer Education (IACE)

Carol Hall

CONFERENCE ACTIVITIES

📍 Resch Science & Technology Hall

2:30 – 3:30

Room 103

Moderators: Joseph
Kendall-Morwick, Jace
Elliott**Panel: *Cyberpalooza: Experiences Presenting Cyber/CS Subject to High School Students***Charles Hoot, Nathan Eloe,
Matthew Schieber,
Zhengrui Qin, Northwest
Missouri State University

Room 104

Moderators: Bill Siever,
Adam Sherer**Paper: *Examining Student Use of AI in CS1 and CS2***Eric D. Manley, Timothy
Urness, Andrei Migunov,
MD Alimoor Reza, Drake
University**Paper: *The Effect of ChatGPT: Student Perspective and Performance Achievement***Wen-Jung Hsin, Park
University

Room 105

Moderators: Joan
Gladbach, Matt Mangels**Paper: *Key Performance Indicator Selection for Online Teaching Performance Prediction***Gary Yu Zhao, Cindy
Zhiling Tu, Northwest
Missouri State University**Paper: *Auto-Graded Review Questions: A Modern Take on a Classic Technique***Jason E. James,
Mahmoud Yousef,
University of Central
Missouri**Paper: *Inclusive Practices and Universal Design in the Computer Science Classroom***Meredith Moore, Timothy
Urness, Drake University

Refreshments will be available in the Resch Lobby — feel free to take them with you to the next session.

3:30 – 4:15	Lobby	Hallway	
	Break with Vendors & Partners	Rephactor, ACM2Y, CodeGrade	
4:15 – 5:15	Room 103	Room 104	Room 105
	<p>Moderators: Charles Riedesel, Josh Obersteadt</p> <p>Workshop: Getting Started with Large Language Models for the CS Curriculum</p> <p>Eric D. Manley, Drake University</p>	<p>Moderators: Ron McCleary, Josh Newton</p> <p>Nifty Assignment: Using Generative AI to Design Programming Assignments in Introduction to Computer Science</p> <p>Rad Alrifai, Northeastern State University</p> <p>Nifty Assignment: Teach Me Video Project</p> <p>Wen-Jung Hsin, Park University</p> <p>Lightning Talk: Digital Inclusion: Navigating Web Accessibility Compliance and Legal Impacts</p> <p>Jali Purcell, Drury University</p>	<p>Moderators: Mahmoud Yousef, Jack Flickinger</p> <p>Paper: Engaging Middle Schoolers in Game Programming: A Scratch-Based Workshop Experience</p> <p>Abbas Attarwala, California State University – Chico</p> <p>Paper: Teaching Functional Programming in F# to Grade 9 and Grade 10 Students</p> <p>Abbas Attarwala, California State University – Chico</p>
5:15 – 5:45	Lobby	Room 104	
	Meet & Greet	Board Meeting	

CONFERENCE BANQUET

📍 Shaw Center

6:00 – 7:45	Meal & Speaker	Lobby
	<p>Perspectives on Technology's impact on Financial Services and the Future Workforce</p> <p>Mr. Kevin Juhnke, Director of Enterprise Architecture Principal Financial Group</p>	

CAMPUS MAP & LOCATIONS

Scan the code on your device to visit our virtual map ➞

experience.graceland.edu



CONFERENCE ACTIVITIES

📍 Resch Science & Technology Hall

8:30 – 9:00	Hallway	Room 104	Room 105
	Organizers: Kevin Brunner, Rinor Berisha Poster Contest Setup		Moderators: Scott Sigman, Ayrianna Teachout Hack-a-thon Presentations
9:00 – 10:00	Hallway	Room 104	Room 105
	Poster Contest	Moderators: Diana Linville, Luis Garcia STUDENT PAPER <i>Progress on the Development of Software for the Modeling of Finite Machines</i> Lead Author: Kieran Smith, Drake University Supervising Faculty: Adam Case, Drake University LIGHTNING TALKS <i>Use of Generative AI In an Upper-Level Programming Course: Student Experience</i> Brian Hare, University of Missouri – Kansas City Teaching CS1 with AI, Charlie Liu, Yale University, Carter Zenke, Harvard University Coding Practice with Advent of Code John Cigas, Park University	Hack-a-thon Presentations

Refreshments will be available in the Resch Lobby — feel free to take them while viewing the posters.



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10:00 – 10:30	Refreshments & Poster Viewing		
10:30 – Noon	Room 103 Moderators: Judy Mullins, Eldar Omeragic Paper: <i>Coding Integrity Unveiled: Exploring the Pros and Cons of Detecting Plagiarism in Programming Assignments Using Copyleaks</i> Chandra Mouli Madhav Kotteti, Ratan Lal, Prasad Chetti, Northwest Missouri State University Paper: <i>Introducing Controlled Variability in Programming Assignments</i> Charles Hoot, Nathan W. Eloë, Diana Linville, Northwest Missouri State University Nifty Assignment: <i>The Interplay of 2D Arrays and Nested Loops</i> Cong-Cong Xing, Nichols State University, Jun Hung, South Dakota State University	Room 104 Moderators: Brian Hare, Alvaro Martin-Pena Workshop: <i>Ethical Consideration in Embracing Generative AI in Higher Education</i> Maria Weber, Annamaria Szakonyi, Tatiana Cardona, Dhananjay Singh, Saint Louis University	Room 105 Hack-a-thon Presentations

CCSC-CP BUSINESS

📍 Shaw Center

Noon – 1:00	Luncheon, Awards, & Meeting	Lobby
STUDENT PROGRAMMING CONTEST 📍 Resch Science & Technology Hall		
1:00 – 1:30	Programming Contest Setup & Testing	Rooms 106, 130, & 131
1:30 – 4:30	Programming Contest	Rooms 106, 130, & 131
4:30 – 5:00	Pizza & Prizes	Room 104

STEERING COMMITTEE 2024 CCSC Central Plains Conference

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Maddy Martin Graceland University

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Diana Linville Northwest Missouri State University

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Joan Gladbach University of Missouri Kansas City

Publicity at Graceland

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Tiffany Smith Graceland University

Keynote Speakers

Kevin Brunner Graceland University

Bill Siever Washington University in St. Louis

Pre-Conference Workshop

Wen Hsin Park University

Judy Mullins Retired

Joan Gladbach University of Missouri Kansas City

Papers

Ron McCleary Retired

Charles Riedesel University of Nebraska Lincoln

Judy Mullins Retired

Panels, Tutorials, Workshops

Mahmoud Yousef University of Central Missouri

Mohammad Rawashdeh ... University of Central Missouri

Ron McCleary Retired

Judy Mullins Retired

Lightning Talks

Wen Hsin Park University

Joseph Kendall-Morwick... Washburn University

Bill Siever Washington University in St. Louis

Nifty Assignments

Brian Hare University of Missouri Kansas City

Mohammad Rawashdeh ... University of Central Missouri

Bill Siever Washington University in St. Louis

Ron McCleary Retired

Judy Mullins Retired

K-12 Nifty Assignments & Lightning Talks

Bill Siever Washington University in St. Louis

Perla Weaver Johnson County Community College

Belinda Copus University of Central Missouri

Mohammad Rawashdeh ... University of Central Missouri

Student Paper Session

Scott Sigman Drury University

Joseph Kendall-Morwick... Washburn University

Wen Hsin Park University

Mahmoud Yousef University of Central Missouri

Student Poster Competition

Joseph Kendall-Morwick... Washburn University

Ron McCleary Retired

Student Hack-a-thon

Scott Sigman Drury University

Chris Branton Drury University

Bill Siever Washington University in St. Louis

Mahmoud Yousef University of Central Missouri

Student Programming Contest

Charles Riedesel University of Nebraska Lincoln

Joan Gladbach University of Missouri Kansas City

Brian Hare University of Missouri Kansas City

Two-Year College Outreach

Suzanne Smith Johnson County Community College

Trisch Price Johnson County Community College

Mahmoud Yousef University of Central Missouri

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