

# CCSC Central Plains 2025

Conference of the Consortium for Computing Sciences in Colleges, Central Plains Region April 4th-5th, 2025 on the campus of Drake University in Des Moines, Iowa

## Welcome

Welcome to the 31st annual Consortium for Computing Sciences in Colleges Central Plains Region Conference, which includes opportunities to see great research papers on a variety of topics in CS education; workshops on teaching with generative AI, collaborative projects, Codespaces, and containers; nifty assignments, and a panel on developing academic programs focusing on AI. We are also looking forward to showcasing students with a research poster competition, a hackathon, and a programming competition.

We are especially excited about our keynote speakers. Meredith Moore will share her expertise on accessible computing and what every CS educator should know. John Emmons will share on experiences in leading AI teams.

This conference would not be possible without the dedication of many contributors. We extend our gratitude to the authors who submitted their work, the reviewers who ensured a high-quality program with a 53% paper acceptance rate, the committee members who planned and organized the event, the session moderators, and all the on-site volunteers working to create a pleasant experience for everyone. And, thank you to our national partners for their very generous support!

We hope you have an enjoyable and enlightening conference!

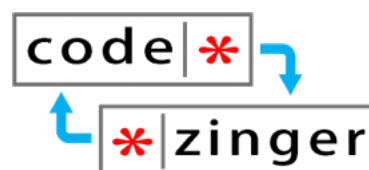
## National Partners

**R**ephactor



The logo for codegrade, featuring a blue graduation cap icon above the word "code" in blue lowercase letters, followed by "grade" in a lighter blue lowercase font.

**GitHub**



# Keynote Speaker: Meredith Moore - Drake University

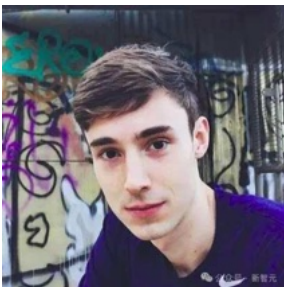


Dr. Moore is an Assistant Professor of Computer Science at Drake University. Dr. Moore obtained her B.S. in Computer Science and Neuroscience from Drake University in 2015. She then went on to get her Ph.D. from Arizona State University in Computer Science as a National Science Foundation Graduate Research Fellow. Dr. Moore's research focuses on using machine learning to improve the accessibility of technology for individuals with disabilities.

**Title:** *Accessible Computing: What Every CS Educator Should Know*

**Abstract:** Computer science education plays a crucial role in shaping the future of technology, yet accessibility and inclusion are often overlooked in curricula. This keynote will provide a practical guide to accessible computing, equipping attendees with strategies to create more inclusive learning environments. We'll explore why accessibility matters—ethically, legally, and pedagogically—and how it benefits all students, not just those with disabilities. Key topics include the difference between teaching accessibility as a subject and teaching accessibly as an educator, the fundamentals of disability language, and the distinction between assistive and accessible technology. Attendees will also gain insight into accommodations, Universal Design for Learning (UDL), and effective ways to support neurodivergent students in CS classrooms. The session will wrap up with simple, actionable steps that educators can implement immediately, along with a curated list of resources for those who want to explore accessibility in more depth. Whether you're new to accessibility or looking to refine your approach, this talk will provide the knowledge and tools to make computing education more accessible.

# Banquet Speaker: John Emmons - Salesforce



John Emmons completed the engineering dual-degree program between Washington University in St. Louis and Drake University in 2016. He went on to get a Master's degree in computer science, focusing on deep learning, from Stanford University in 2018. He spent the next five years as a machine learning scientist at Tesla, eventually leading the Autopilot Vision team. For the last two years, he has served as the Director of AI at Salesforce. When John isn't running AI teams, he likes to run long distances on the road and boasts a sub-3-hour marathon time.

**Title:** *AI Engineering: Lessons from the Frontlines*

**Abstract:** From self-driving cars to generative AI, John Emmons (Drake Graduate, 2016) shares the career decisions that took him from the Midwest to Silicon Valley—then back again—and the lessons learned along the way. Drawing from his experience leading high-pressure AI projects at Tesla Autopilot and Salesforce AI, he provides insights into how real-world AI systems are built, the skills that matter most in the industry, and practical advice for those looking to break into the field from the perspective of an AI engineering manager.

# Friday, April 4th

9:00 - 12:00	<b>Pre-Conference Workshop</b> C-S 301  <i>Teaching with AI (GPT)</i>  Carter Zenke (Harvard University), Rongxin Liu (Harvard University)		
12:00 - 1:00	<b>Lunch on your own</b>		
1:00 - 2:15	<b>Welcome &amp; Keynote</b> Shivers Moderator: Eric Manley  <i>Accessible Computing: What Every CS Educator Should Know</i> Meredith Moore (Drake University)		
2:30 - 3:30	<b>Student Success</b> C-S 301  <i>Improving Student Success Through Parachuting</i> Chris Bourke (University of Nebraska-Lincoln), Nirnimesh Ghose (University of Nebraska-Lincoln)  <i>Impact of COVID-19 on Live-Coding in First-Year Computer Science Education: A Literature Review</i> Sourabh Kulkarni, Abbas Attarwala, Jaime Raigoza (California State University, Chico)  <i>The Impact of Class Size and Course Modality on Student Learning Outcomes: A Case Study of Applying Infrastructure as Code Principles in IS/Cyber Graduate Course Design</i> Annamaria Szakonyi (Saint Louis University)	<b>AI Program Panel</b> C-S 207  <i>Prompting Collaboration: Development of an Interdisciplinary Applied AI Minor Program</i>  Ajay Bandi, Benjamin Blackford, Aziz Fellah, Trevor Meyer, Robert Voss (Northwest Missouri State University)	<b>ACM2Y Partner Presentation</b> C-S 235  <i>Creating Effective Learning Outcomes and Competencies with Bloom's for Computing</i>  Markus Geissler (Cosumnes River College), Tim Preuss (Minnesota State Community Technical College)

3:30 - 4:15	Break		
4:15 - 5:15	<b>Curriculum and Course Design</b> C-S 301 Moderator: Andrei Migunov  <i>Getting Your Hands Dirty: Teaching an IoT Course with an Interdisciplinary Component</i> Nathan W. Elie (School of Computer Science and Information Systems, Northwest Missouri State University), Alexander W. Taylor (School of Agricultural Sciences, Northwest Missouri State University)  <i>Creating a Consolidated 3-in-1 Multi-B.S. Program Structure in a Resource-Limited Computer Science &amp; IT Department to Achieve ABET Accreditation for All Three Programs</i> Kriti Chauhan, Katherine Lehtola, Dylan Hulon, Antoni Sayre, James Church, Leong Lee (Austin Peay State University)  <i>A Comparison of Three Lab Environments for Digital Forensics Course</i> Zhengrui Qin (Northwest Missouri State University)	<b>Nifty Assignments</b> C-S 207  <i>Remote Protocol Analysis Lab</i> Michael J. Ham (Dakota State University)  <i>Dynamic Bracketology with C++ AI for NCAA March Madness</i> Roy Michael Manfredi (Westminster College)  <i>Teaching Cellular Concepts: An Into With GSM</i> Kyle Cronin (Dakota State University), Michael J. Ham (Dakota State University)	<b>Codespaces and Containers Tutorial</b> C-S 235  <i>An Instructor's Introduction to Codespaces &amp; Development Containers</i>  Bill Siever (Washington University in St. Louis), Michael P Rogers (University of Wisconsin Oshkosh)
	5:15 - 5:45	<b>Board Meeting</b> C-S 301	<b>Meet and Greet</b>
6:00 - 8:00	<b>Conference Banquet</b> Shivers Moderator: Eric Manley  <i>AI Engineering: Lessons from the Frontline</i> John Emmons (Salesforce)		

# Saturday, April 5th

8:30 - 9:00	<b>Early Saturday Session</b> C-S 301  Student Papers or Lightning Talks	<b>Hack-a-thon Presentations</b> C-S 207 Moderator: Scott Sigman	<b>Poster Contest Setup</b> C-S 3rd Floor Moderator: Joseph Kendall-Morwick
9:00 - 10:00	<b>Assignments and Assessments</b> C-S 301  <i>Domino Tilings: Projects and Assignments for Students</i> Keith Brandt (Rockhurst University), William Klasinski (Rockhurst University)  <i>Pedagogical Evaluation of Generative AI course for Technologists</i> Ajay Bandi (Northwest Missouri State University)	<b>Hack-a-thon Presentations</b> C-S 207 Moderator: Scott Sigman	<b>Poster Contest</b> C-S 3rd Floor Moderator: Joseph Kendall-Morwick
10:00 - 10:30	<b>Break and Poster Viewing</b>		
10:30 - 12:00	<b>Bridging Education and Industry</b> C-S 301  <i>Adapt DevOps Method to Information Systems Capstone Course Projects</i> Gary Yu Zhao (Northwest Missouri State University), Cindy Zhiling Tu (Northwest Missouri State University)  <i>Developing a Enterprise Application Tool to Discover Midwest Job Trends</i> Chandra Bathula (Saint Louis University), Maria Weber (Saint Louis University)  <i>Internship Experience Sharing</i> Bin Peng (Park University), Wen-Jung Hsin (Park University)	<b>Saturday Morning Session</b> C-S 308  Student Papers, Lightning Talks, or Works-in-progress	<b>Hack-a-thon Presentations</b> C-S 207 Moderator: Scott Sigman
12:00 - 1:00	<b>Conference Luncheon</b> Shivers Moderator: Eric Manley  Lunch, Awards, and Meeting		
1:00 - 5:00	<b>Student Programming Contest</b> Upper Carnegie Moderator: Tim Urness  Includes pizza for participants		

# CCSC Central Plains Regional Board

<b>Title</b>	<b>Name</b>	<b>email</b>	<b>Institution</b>	<b>Expires</b>
Regional Rep & Board Chair	Judy Mullins	MullinsJ@umkc.edu	Retired	2026
Registrar & Membership Chair	Ron McCleary	ron.mccleary@yahoo.com	Retired	2026
Conference Chair	Eric Manley	eric.manley@drake.edu	Drake University	2025
Next Conference Chair	Tiffany Ford	fordt@otc.edu	Ozarks Technical Community College	2026
Past Conference Chair	Kevin Brunner	brunner@graceland.edu	Graceland University	2024
Secretary	Diana Linville	DIANAR@nwmissouri.edu	Northwest Missouri State University	2025
Regional Treasurer	Ajay Bandi	ajay@nwmissouri.edu	Northwest Missouri State University	2027
Regional Editor	Joan Gladbach	gladbachj@umkc.edu	University of Missouri-Kansas City	2027
Webmaster	Deepika Jagmohan	djagmohan@stchas.edu	St. Charles Community College	2025

# Conference Committee

## Conference Chair

Eric Manley (*Drake University*)

## Conference Publicity

Bill Siever (*Washington University in St. Louis*)

Joan Gladbach (*University of Missouri Kansas City*)

## Keynote Speakers

Eric Manley (*Drake University*)

## Pre-Conference Workshop

Wen-Jung Hsin (*Park University*)

Judy Mullins (*Retired*)

Joan Gladbach (*University of Missouri Kansas City*)

## Papers

Charles Riedesel (*University of Nebraska Lincoln*)

Ron McCleary (*Retired*)

## Panels, Tutorials, Workshops

Ron McCleary (*Retired*)

Mohammad Rawashdeh (*University of Central Missouri*)

Mahmoud Yousef (*University of Central Missouri*)

## Nifty Assignments

Mohammad Rawashdeh (*University of Central Missouri*)

Brian Hare (*University of Missouri Kansas City*)

Bill Siever (*Washington University in St. Louis*)

Ron McCleary (*Retired*)

## Lightning Talks

Wen-Jung Hsin (*Park University*)

Bill Siever (*Washington University in St. Louis*)

Joseph Kendall-Morwick (*Washburn University*)

## K-12 Nifty Assignments and 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*)

Wen-Jung Hsin (*Park University*)

Mahmoud Yousef (*University of Central Missouri*)

Joseph Kendall-Morwick (*Washburn University*)

## Student Poster Competition

Joseph Kendall-Morwick (*Washburn University*)

Ron McCleary (*Retired*)

## Student Hack-a-thon

Scott Sigman (*Drury University*)

Chris Branton (*Drury University*)

Mahmoud Yousef (*University of Central Missouri*)

Bill Siever (*Washington University in St. Louis*)

## Student Programming Contest

Charles Riedesel (*University of Nebraska Lincoln*)

Joan Gladbach (*University of Missouri Kansas City*)

Brian Hare (*University of Missouri Kansas City*)

Tim Urness (*Drake University*)

Andrei Migunov (*Drake University*)

## Two-Year College Outreach

Suzanne Smith (*Johnson County Community College*)

Trisch Price (*Johnson County Community College*)

Mahmoud Yousef (*University of Central Missouri*)

## Local Arrangements

Eric Manley (*Drake University*)

Tim Urness (*Drake University*)

Andrei Migunov (*Drake University*)