2024 Midwest Conference Schedule
September 20-21, 2024
Grand Valley State University (Robert C. Pew Campus) Grand Rapids, Michigan
Meeting in DeVos D & E - Student Showcase and Programming Contest Results

Friday, September 20th	
9:00 am – 12:00 pm	**Pre-Conference Workshop** (DEV 205D) FENDING OFF GITASTROPHE: A WORKSHOP ON ARCHITECTING COLLABORATIVE PROJECTS AND GIVING GREAT FEEDBACK **Michael P. Rogers**, **Bill Siever**
11:00 am – 4:00 pm	**Registration** (Exhibition Hall – DEV 105E)
1:00 pm – 1:15 pm	**Conference Opening** (Loosemore Auditorium – DEV 122E) Conference Chair, Site Chair, GVSU Welcome
1:15 pm – 2:00 pm	**Keynote Address** (Loosemore Auditorium – DEV 122E) RAISING THE BAR: WHAT WORKS, WHAT DOESN'T, AND WHAT TO DO NEXT WITH ALTERNATIVE GRADING **David Clark**
2:15 pm – 3:45 pm	**Concurrent Session I**

Paper Session #1 (DEV 203D)	Industry Panel (Loosemore Auditorium DEV 122E)	Vendor (Room: DEV 205D)
Session Chair: Karl Schmitt	Session Chair: Zachary Kurmas	Session Chair: Takako Soma
MIND THE GAP: SEVEN YEARS OF FRESHMEN RETENTION DATA AND THE IMPACT OF COVID-19 ON UNDERGRADUATE COMPUTER SCIENCE STUDENTS **Jennifer Coy, David Largent, Sugandha Malviy**a	WHAT CS STUDENTS NEED TO HEAR FROM INDUSTRY **Kelsey Brennan** Atomic Object	(2:15 pm to 2:45 pm) ACM CCECC AND ACM2Y OVERVIEW AND RESOURCES **Ahmed AlMahmeed Pam Schmelz**
UNDERSTANDING THE EFFECTS OF ADDING A CS0 COURSE TO A COMPUTER SCIENCE CURRICULUM: A LONG-TERM STUDY **David Surma, Zoe Surma**	**Tim Jaroch** EliteOps **Scott Jasperse** Consultant	(2:45 pm to 3:45 pm) CodeGrade INTEGRATING GENERATIVE AI IN THE CODING CLASSROOM: RESPONSIBLE USE AND IMPACT WITH CODEGRADE. **Youri Voet**
A COMPARATIVE ANALYSIS OF STUDENT PROGRESS: TRADITIONAL TOOLS VS. COMPETENCY-BASED EDUCATION IN CS 1310 FOUNDATIONS OF COMPUTER SCIENCE AT WESTERN MICHIGAN UNIVERSITY **Wassnaa Al-Mawee**	**Vincenzo Pavano** Corewell Health **Carmen Rodriguez** MillerKnoll	

3:45 pm – 4:15 pm	**Break** (Exhibition Hall – DEV 105E)
3:45 pm – 5:45 pm	**Student Posters & Showcase** (Exhibition Hall – DEV 105E) Chair: Dave Largent, Andy Harris

Friday, September 20th - Continued		
4:15 pm – 5:45 pm	**Concurrent Session II**	
Paper Session #2 (Loosemore Auditorium DEV 122E) Session Chair: Md Haque LEVERAGING VISUALIZATION FOR CRYPTOGRAPHY EDUCATION **Imad Al Saeed** A LEARN-BY-DOING SOFTWARE SECURITY COURSE **Charles Moreno, Carson Peterson, BJ Klingenberg, Bruce DeBruhl** A PITFALL OF SQL AGGREGATE FUNCTIONS **Jamil Saquer**	**Tutorial** (DEV 205D) ANALYZING THE CONTENTS OF AI BENCHMARKS USING PYTHON **Bill Nicholson**	**Tutorial** (DEV 203D) COURSE IN A BOX: AI **Ramachandra B. Abhyankar**
6:00 pm – 7:45 pm	**Dinner and Evening Address** (Regency Dining Room) THE FUTURE NOW: THE TOP TRENDS IN SOFTWARE DEVELOPMENT **Jonathan "J" Tower**, Trailhead Technology Partners,	
8:00 pm – 8:30 pm	**CCSC Midwest Region Business Meeting** (DEV 205D) Note: *Steering Committee Immediately following*	
8:00 pm – 10:45 pm	**Student Programming Competition Practice Session** (TBD), *Paul Talaga, Md Haque, Nathan Sommer*	
9:00 pm – 10:00 pm	**Two-Year Institutions BOF** (DEV 203D)*, Kris Roberts*	

Saturday, September 21st		
7:30 am – 8:30 am	**Continental Breakfast** (Room: Exhibition Hall – DEV 105E)	
8:00 am – 12:00 pm	**Student Programming Contest** (TBD), *Paul Talaga, Md Hague, Nathan Sommer*	
8:30 am – 10:00 am	**Concurrent Session III**	
Panel (DEV 203D) *USING CS2023 TO CREATE COMPUTER SCIENCE COURSES AND CURRICULA* **Cathy Bareiss, Amruth N Kumar**	**Works In Progress** (Loosemore Auditorium DEV 122E) Session Chair: Dominic Wilson ENHANCING STUDENT ENGAGEMENT AND INTERDISCIPLINARY RESEARCH WITH IOT AND DRONE FRAMEWORKS **Ahmed A. Elmagrous, Saleh M. Alnaeli** AUTOMATED THREAT DETECTION TO SUPPORT THE PROCESS OF SECURITY REQUIREMENTS ELICITATION **Sugandha Malviya** A MALLEABLE FRAMEWORK FOR EFFICIENT LEARNING **Pradip Peter Dey, Mohammad Amin Bhaskar Raj Sinha, Hassan Badkoobehi** TOOL SUPPORT FOR TEACHING DEDUCTIVE DATABASES **Ramachandra B. Abhyankar** THE CHANGING FACE OF COMPUTER SCIENCE EDUCATION – WHAT LIES BEHIND AND WHAT LIES AHEAD? **Anuradha Rangarajan, Calvin Nobles, Maurice Dawson, Rangarajan Parthasarath**y ARTIFICIAL INTELLIGENCE IN THE HIGHERED CLASSROOM – BOON OR BANE? **Anuradha Rangarajan, Calvin Nobles, Maurice Dawson, Rangarajan Parthasarathy**	**Tutorial** (DEV 205D) SUPERCHARGING PYTHON SCRIPTING EDUCATION WITH CHATGPT! -- HOW I USE CHATGPT IN MY ADVANCED PYTHON SCRIPTING CLASS **Pak Kwan**
10:00 am – 10:30 am	**Break** (Room: Exhibition Hall – DEV 105E)	

Saturday, September 21st - Continued		
10:30 am – Noon	**Concurrent Session IV**	
Nifty Assignments (Loosemore Auditorium DEV 122E) Session Chair: Ahmed Elmagrous AI AS A LEARNING TOOL FOR INTRODUCTORY PROGRAMMING **James Roll** STOPPING TO TEACH THE HALTING PROBLEM **Edward Aboufadel, William Dickinson** CHECKSUMS EVERYWHERE **James K. Huggins** UNUSUAL STANDARDS **James K. Huggins** IN SUPPORT OF EQUITABLE GRADING PRACTICES: A TOOL TO AUTO GENERATE MULTIPLE VERSIONS OF PAPER QUIZZES **Amy Larson** BUILDING STRONG PROGRAMMING SKILLS WITH WEAK ENCRYPTION **Amy Larson**	**Paper Session #3** (Room: DEV 205D) Session Chair: Stefan Brandle DEVELOPING AN OPENCV-BASED APP FOR SEGMENTING CELLS IN TOMATO FRUIT TISSUE **Jorge Daniel Quinteros, Lei Zhang, Esther van der Knaap Sofia Visa** PEDAGOGICAL IMPLICATIONS OF PARSER COMBINATORS IN PROGRAMMING LANGUAGES COURSES: A COMPARATIVE STUDY **Abbas Attarwala, Pablo Raigoza** USING PROBLEM-DRIVEN LEARNING TO TEACH COMPUTATIONAL THINKING IN CS1 **Rocky K.C. Chang**	**Tutorial** (DEV 203D) GRADING ACCORDING TO SPECIFICATIONS: A TUTORIAL AND DISCUSSION **David Largent**
12:15 pm – 1:15 pm	**Lunch Break** (Room: Exhibition Hall – DEV 105E)	
1:15 pm – 2:15 pm	**CCSC: MW 2025 Conference Planning** (DEV 203D)	

The CCSC Midwest Conference Committee thanks our National Partners ACM2Y & ACM CCECC, Code Grade, GitHub, and Rephactor for their continued support of our activities and UPE for student prizes

2024 Midwest Conference Zoom Links

Links are provided for all sessions. Participants are expected to register (and pay) for most sessions (with exception of Industry Panel). Logins are monitored.

Friday Morning Workshop: 8:30 am - 12:00 pm (noon)
https://betheluniversity-edu.zoom.us/j/81848226468?pwd=eX4ivGQXN443CmLyrVwdQauXaf5Bmm.1
Meeting ID: 818 4822 6468   Passcode: 781897

Friday Conference Session: 12:00 pm (noon) to 8:00 pm
(Includes free WHAT CS STUDENTS NEED TO HEAR FROM INDUSTRY panel 2:15 pm**)**
https://betheluniversity-edu.zoom.us/j/81517706124?pwd=kWooz22v21bNoAAPGMla0fju1n1V1g.1
Meeting ID: 815 1770 6124   Passcode: 732334

Friday Programming Competition: 7:30 pm - 11:15 pm
https://betheluniversity-edu.zoom.us/j/81075899451?pwd=A5guIolVUFPS6uuKki8nwoADATzoDU.1
Meeting ID: 810 7589 9451   Passcode: 466370

Saturday Programming Competition: 7:30 am - 12:30 pm
https://betheluniversity-edu.zoom.us/j/81281138076?pwd=9dJwTK6fzTigHH1Q24959FN80RNb2j.1
Meeting ID: 812 8113 8076   Passcode: 355404

Saturday Conference Session: 8:00 am -1:15 pm
https://betheluniversity-edu.zoom.us/j/82399066369?pwd=oaTDTTG7hYqd1OHw128FEakkdz4VnA.1
Meeting ID: 823 9906 6369   Passcode: 212731

Parking & Other Information

The conference is located on the downtown campus (Robert C. Pew Grand Rapids Campus) in the Richard M. DeVos Center (DEV). Campus map: https://www.gvsu.edu/homepage/files/pdf/maps/robertc.pewgrandrapidscampus.pdf

Grand Valley State University
401 West Fulton Street
Grand Rapids, MI
49504-6431

Parking: On Friday, please park in the Seward ramp. You will have to **stop at the booth and get a free parking pass** from the attendant. You may park in the closer DeVos surface lot on Saturday.

The entrance to the Seward ramp is on the south side of Lake Michigan drive between Seward Ave NW and Winter Ave.

- If you are on US 131, exit at Pearl street and head West. Pearl becomes Lake Michigan Drive. The entrance will be on your left just past the railroad tracks.

- If you are on I-196, exit at Lake Michigan drive. After you exit, the road will curve sharply to the right and become Fulton St. Take Fulton East about 1 mile, then turn left (North) on Seward Ave. The next light is Lake Michigan Drive. Turn right (East) on Lake Michigan Drive. The entrance to the ramp is immediately on your right (South).

Art Prize: While you are in town, you should definitely check out Art Prize. Art Prize is a unique competition/exhibition that takes over most of downtown. Many businesses downtown will be exhibiting a few pieces of art. There are also a handful of major venues that will have many of the most popular pieces. The Ford Museum, DeVos Place, the Amway Grand Hotel, and the BOB are four of my personal favorite venues every year. These are all within walking distance of the conference and the downtown hotels. At minimum, I encourage you to take an hour or two and check out some of the most popular exhibits before heading back home.

See https://www.artprize.org/ for more details.

Restaurants: There are more good restaurants downtown than I can list here. Some of my favorites are
- Angel Thai 136 Monroe Center Street Northwest https://angelthaicafe.com/
- Two Beards 38 Commerce Ave SW https://twobeardsdeli.com/
- Tupelo Honey 140 Ottawa Ave https://tupelohoneycafe.com/restaurant/grand-rapids/

These are are some of my friends' favorites:
- San Chez Tapas 38 W Fulton https://www.sanchezbistro.com/
- Stella's Lounge 53 Commerce Ave. https://www.stellaslounge.com/

Beer: Grand Rapids likes to call itself "Beer City". Perhaps the most famous brewery in town is Founders (https://foundersbrewing.com/); but there are many breweries within a mile of the conference venue and hotels.

Congratulations to our Student Showcase Participants!

1st Place
Mexer: Materials, EXergy, and EneRgy Visualizer
Kenneth Howes & Edom Maru, Calvin University
(Presented by Kenneth Howes)

2nd Place
Using a Haptic Sensor to Train Proper Grip in Tennis Players
Mackenzie Niswonger & Christopher Laubach, Hope College

3rd Place
Flood Detection Warning System
Carter Meyer, The University of Wisconsin-Stout

Congratulations to our Student Programming Contest Participants!

Novice - 1st Place
Solo Duo
Kephas Raimi, University of Indianapolis

Regular - 3rd Place
IndentationError
Jonathan Gonzalez Martinez, Garrett Davis, University of Indianapolis

Regular - 2nd Place
The Red Buckets
Joan Gaine, Stephen West, Zach Winterfeldt, Minnesota State University Mankato
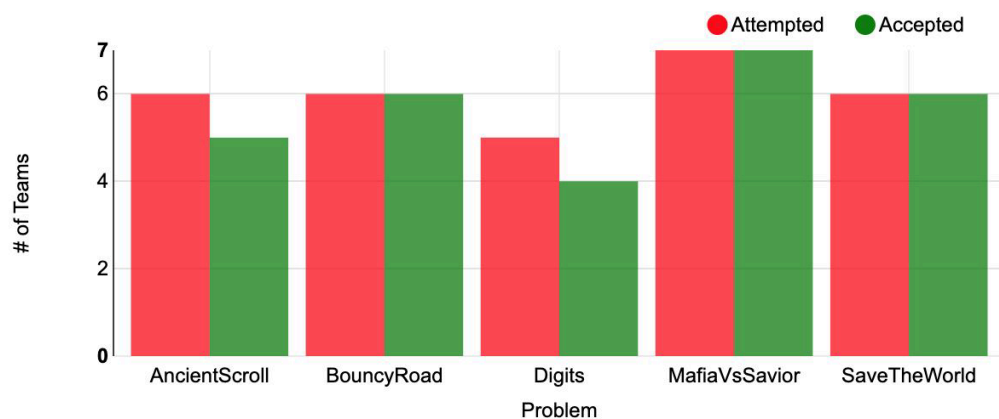
Regular - 1st Place
Blue Buckets
Mackenzie White, Hawi Atinafu, Nahome Woinu, Minnesota State University Mankato

Programming Contest Statistics

- 8 teams (15 last year)
- 5 Institutions (7 last year)
- 17 Students
- 7 Regular teams (2 on-site)
- 1 Novice team

Programming Contest Problems

- 5 Coding Problems - Solutions in C++, Java, Python
- All teams who participated got at least 1 problem
- 4 teams solved all problems

RANK	TEAM	SCORE		ANCIENTSCROLL	BOUNCYROAD	DIGITS	MAFIAVSSAVIOR	SAVETHEWORLD
1	Regular Team **Blue Buckets** Minnesota State University Mankato	5	399	176 2 tries	29 2 tries	69 2 tries	22 1 try	43 1 try
2	**The Red Buckets** Minnesota State University Mankato	5	556	109 5 tries	41 2 tries	93 2 tries	70 3 tries	63 2 tries
3	**IndentationError** University of Indianapolis	5	569	188 6 tries	36 1 try	60 2 tries	74 1 try	91 1 try
4	**The Quantums** Calvin University	5	1005	230 2 tries	179 4 tries	121 1 try	214 1 try	161 2 tries
5	**Findlay 1** University of Findlay	4	403	15 1 try	28 1 try	 9 tries	63 1 try	177 7 tries
6	**The girls.** Butler University	3	535	 7 tries	159 2 tries	 2 tries	152 1 try	204 1 try
7	**Not Null** Butler University	0	0					
	SUMMARY	27		👍 5 👎 18 ❓ 0 🕐 15min	👍 6 👎 6 ❓ 0 🕐 28min	👍 4 👎 14 ❓ 0 🕐 60min	👍 6 👎 2 ❓ 0 🕐 22min	👍 6 👎 8 ❓ 0 🕐 43min
1	Novice **Solo Dolo** University of Indianapolis	1	72				72 1 try	
	SUMMARY	1		👍 0 👎 0 ❓ 0 🕐 n/a	👍 0 👎 0 ❓ 0 🕐 n/a	👍 0 👎 0 ❓ 0 🕐 n/a	👍 1 👎 0 ❓ 0 🕐 72min	👍 0 👎 0 ❓ 0 🕐 n/a