Regional Finalists of the 2023 AMATYC Student Research League
by Vinodh Chellamuthu, Coordinator

This year’s competition was held March 17-April 3. The students solved a Challenge Problem titled “End Hunger for a Better Tomorrow.” The teams used mathematical modeling to design a program or initiative addressing food insecurity among students in low-income communities.

For each AMATYC Region, the top three teams that meet a minimum score from the evaluators are Regional Finalists. The 2023 Regional Finalists are as follows:

Central
Flora Debarthe, Jennifer Nguyen, Amir Nezami
Metropolitan CC-Blue River (Faculty Mentor: Jenny Beck)

Mid-Atlantic
Anhui Zhang, Peter Fortin
Northern Virginia CC-Manassas (Faculty Mentor: Matthew Westerhoff)

Midwest
Hadi Soweidan, Soliman Touelh, Ali Yassine
Henry Ford College (Faculty Mentor: Paul Rodgers)
Quintin Gutowski, Batoul Hamka, Ali Mourtada
Henry Ford College (Faculty Mentor: Michael Zalzali)
Hussein Askar, Abdulaziz Alkhali, Harmandeep Kaur Sahota
Henry Ford College (Faculty Mentor: Cassandra Fluker)

Northwest
Eric Cornia, Ryan Optiz, Jonathan Rodriguez
Casper College (Faculty Mentor: Kendall Jacob)
Jordan Stauffer, Kade Neville, Jaqueline Chimbo
Casper College (Faculty Mentor: Mark Kuhlman)

Southeast
Raghavendra Kapavarapu, Han Lin, Nathan Hoang
Forsyth Technical CC (Faculty Mentor: Paul Peng)

Southwest
Olive Campbell, Adrianna Ormsby, Noe Gonzalez, Jr.
Estrella Mountain CC (Faculty Mentor: Sara Meana)
Pedro Castillo, David Gonzalez, Jennifer Turrubiates
Lone Star College-North Harris (Faculty Mentor: Jennifer Travis)
Mohammed Alabdali, An Ton, Aisha Badmus
Tarrant County College (Faculty Mentor: Nena Kabranski)

West
Carolin Egler, Melina Eftekhari, Naythan Chan
MiraCosta College (Faculty Mentor: Zika Perovic)

The top submissions are currently being evaluated for the national awards. Registration for next year’s competition begins January 1, 2024. You can be involved by mentoring a team or by serving as an Evaluator for your region. For more information, visit www.amatyc.org/StudentResLeague. To learn more or share ideas about Student Research League, please join the SRL Community on myAMATYC or contact Vinodh Chellamuthu at SRL@amatyc.org.

Mu Alpha Theta
by Jonathan Weisbrod, Liaison

Welcome back to the new academic year to all chapters of Mu Alpha Theta, the national mathematics honor society for two-year colleges and high schools. This issue highlights the Mu Alpha Theta chapter of Dallas College in Texas, which was chartered in 2005. Members of the chapter participated in the 15th Annual Texas Oklahoma Regional Undergraduate Symposium (TORUS) in February where one of the teams won the symposium’s Math Jeopardy event. Two students were recently selected as fellows in the 2023-24 cohort of the Scaling Up Research Experiences in Community Colleges (SURE-C^2) program.

In June, four students from Dallas College participated in the 2023 Mu Alpha Theta National Convention in Fayetteville, AR. They received a Mu Alpha Theta National Convention Grant this year and I had the privilege of meeting them there. Mu Alpha Theta National Convention grants are reserved for chapters who will be attending the national convention for the first time. More information can be found at https://mualphatheta.org/national_convention_grants.

Best of luck to our two-year college Mu Alpha Theta chapters this academic year. Anyone interested in starting a chapter can learn more by visiting www.mualphatheta.org or emailing info@mualphatheta.org.

From left to right: Professor Yanjing (Yan) Avram, Grant Gansle, Apeksha Shah, Habiba Kouadio, and Jesus Torres of Dallas College at the 2023 Mu Alpha Theta National Convention.
As I entered my 28th year of teaching mathematics this fall, I was reflecting on the transformation of mathematics curricula I have observed over the past three decades. When I was completing my bachelor’s degree in the early 1990’s, instruction was generally lecture-based with the instructor using chalk and a blackboard. Fast forward to today, most of our classrooms have digital platforms with wireless networks to connect students to a variety of resources for enhancing instruction and classroom engagement. While the physical environment of the mathematics classroom has certainly changed, there have also been significant shifts in mathematics curricula and pedagogy that have redefined how we teach and learn mathematics. These changes have occurred as a result of a mathematics education community that strives to be vibrant, adaptable, and inclusive; a community that wants to empower our students for the challenge of working and living in our rapidly changing world.

I think one of the most significant shifts in mathematics curriculum has been due to the significant advances in technology since the introduction of the graphing calculator. Today the use of technology in the classroom has become nearly ubiquitous. When attending the AMATYC Annual Conference I am always impressed by the creative uses of technology that are shared, from the creation of a spreadsheet to automate Newton’s Method in calculus to the use of statistical packages to perform the heavy lifting in a statistics class to three-dimensional graphing utilities that can graph curves and surfaces in space. Technological tools such as these can make mathematics more accessible and help students explore and visualize mathematical concepts in new and exciting ways.

Providing students with opportunities to visualize and use mathematics in more authentic ways is also having a transformative effect on mathematics curricula. Many of us are placing a greater emphasis on connecting the mathematics we teach to the real world by presenting mathematical concepts in real-world contexts. Instead of teaching abstract formulas or procedures in isolation, there are faculty who place those ideas within a situation that students can relate to, thereby reducing the emphasis on rote memorization and abstract calculation. By providing authentic mathematical experiences for our students, these faculty help students to see connections to other disciplines and even to their everyday lives; thus, providing an opportunity to develop an appreciation of the mathematics they study.

In recent years faculty have made significant efforts to redesign the educational environment for students. A number of effective strategies to help our classrooms become more inclusive have emerged. Universal Design for Learning, for example, has become increasingly important as we provide opportunities for mathematics to be accessible to all students. There are faculty who include diverse perspectives and use culturally responsive materials in which the identities of the students are honored by integrating culturally relevant examples and practices into the lessons. Collaborative learning materials are implemented in many classrooms so that students can form a sense of community. This practice allows students to build upon each other’s knowledge and perspectives about mathematics while providing an opportunity to challenge misconceptions about who can “do math” and what it means to “do math.” Strategies such as these can help challenge stereotypes and counteract biases while creating a more inclusive learning environment.

Transformations that occur in the mathematics curriculum at two-year colleges reflect the evolving nature of our students, of education, of technology, and of our society. In a sense, this can feel like a journey that never ends; a journey where we travel from where we are now to some ill-defined point in the future. Because we have a responsibility to prepare students, during our journeys we make changes that can enhance students’ learning experiences while empowering them to become confident and competent problem solvers. As we adapt our course materials and teaching methods, we hope that students will develop the skills and mindset necessary to apply mathematics to their everyday lives and future careers and that they experience an environment that is inclusive, supportive, and empowering for all students.

I want to express my sincere gratitude for the opportunity to serve as the President of AMATYC for the last two years. It has been an incredible journey. I wouldn’t have been able to perform the duties of president without the love and support of my husband, Tom, for whom I am eternally grateful. The journey of the past two years has provided me the opportunity to advocate for AMATYC as well as mathematics faculty and students at two-year colleges across the nation. I have had the pleasure of working with amazingly supportive Executive Board members, whom I am pleased to call friends. I am particularly grateful for Anne Dudley, George Hurlburt, and Kate Kozak for their insights and support over the past two years. I would be remiss if I didn’t thank April Ström and Jennifer Travis for kindly reviewing my articles and providing valuable insights. Lastly, I am grateful for you, the members of AMATYC. Without you, the AMATYC community wouldn’t be the same; I truly value your contributions to the mathematics education community.

Doing the important work of transformation is both a personal and a collective journey in which we keep what is effective and strive to replace what isn’t, for the benefit of our students and ourselves. I hope that you will continue to make AMATYC your professional home as we continue on our journeys together. And I hope to see you in Omaha!
AMATYC Mathematics Leadership Excellence Award — Final Call for Nominations
by Kathryn Kozak, Past President

Please nominate a colleague for the 2024 AMATYC Mathematics Leadership Excellence Award (MLE Award), formerly known as the Mathematics Excellence Award. This award is intended for educators who have made outstanding contributions through leadership in mathematics or mathematics education in the first two years of college. For more information or to submit a nomination, please visit www.amatyc.org/MLEAward. The deadline for nominations is November 1, 2023. If you have additional questions please contact Kathryn Kozak at kathryn.kozak@amatyc.org.

AMATYC Regional Scholarship Winners Chosen
by Sarah Pauley, Northwest Region VP

Wow! Seventy-three AMATYC members applied for the AMATYC Regional Scholarship! Sixteen winners were recently chosen and awarded a discounted conference registration to the AMATYC Annual Conference in Omaha. Each region awarded one scholarship at random and an additional eight scholarships, funded by the AMATYC Foundation, were awarded at random from all who applied. Congratulations to the winners!

Regional Winners
Northeast: Aisha Arroyo
Mid-Atlantic: Brandie Biddy
Southeast: Ervin China
Midwest: Laurel Cuitright
Central: Aleta Speegle
Southwest: Prudence York-Hammons
Northwest: Tracey Hollister
West: Sam Pearsall

At-Large Winners
Sherri Warren
Sean Saunders
Darlene Bush
Patrick Wilcher
Alexander Torgov
Florian Haiduc
Michelle Younker
Dan Brown

In Memory of
Tom Adamson
by Scott Adamson

Many in the AMATYC community knew my dad, Tom Adamson, who passed away on Saturday, July 22, 2023, after a battle with dementia. He taught students mathematics for 50 years including 22 years at Itasca CC (Grand Rapids, MN) and 23 years at Phoenix College (Phoenix, AZ). Tom was a long-time member of AMATYC and served on the Board as Treasurer (2003–2005).

It was a true blessing that my dad and I shared the same profession of inspiring students to love and appreciate mathematics. What a wonderful joy to be able to share this profession, to work in the same community college district, and to share our passion for teaching together by presenting at national conferences.

Dating back to the early 1990s, my dad and I would co-present at the National Council of Teachers of Mathematics and American Mathematical Association for Two-Year Colleges conferences, and at Phoenix College Mathematics Awareness events.

Early on, my dad played the role of Dr. A. Bard (note the palindrome!) and I was Cal Chulus (get it?). Or, later we had a series of presentations at AMATYC focused on the “Mathematics Attic” where we encouraged math educators to modernize their curriculum and pedagogy. Even with 50 years of teaching experience, my dad was always on the cutting edge using, for example, Earth Algebra, active learning pedagogies, and authentic assessments where students engaged in real-world data analysis and report writing. He joined Marvin Johnson and my brother Bill to write their own basic mathematics book that focused on and encouraged the use of calculators. He even used a very special textbook — College Algebra: A Make It Real Approach co-authored by me! He played an important role in encouraging the use of the Maricopa Modules back in the 1990s. My dad was so interested in finding ways to inspire students to find the value of and beauty in mathematics.

I remember two big moments in my professional life that involved my dad. First, in my first year of teaching at Payson High, my dad and President Wilson (Itasca CC, Grand Rapids, MN) visited my classroom. To have two giants in the field of education (from my perspective) visit in my rookie year of teaching was intimidating. But, I love remembering that moment and the encouragement they both gave. In summer 2005 my dad suffered a brain aneurysm. By spring 2006 he was back in the classroom at Phoenix College. As part of his rehabilitation, he was required to have some classroom observations to ensure he was back to his normal self. It was my honor to be one of the colleagues he asked to observe him and to provide feedback. The tables were turned…I was giving him feedback and encouragement!

Just before he passed, he was making motions with his hand and my mom said, “what are you doing?” He said...“I’m writing on the chalkboard.” I am sure he was getting ready to teach in heaven! He loved his students, colleagues, and being in the classroom.

It’s so hard to whittle someone’s life and impact down to one short article. My dad was very special. He loved and was devoted to my mom, Carol. He impacted his family, students, and colleagues in profound ways. He will be missed.

To learn more about my dad, visit www.heritagesfsd.com/obituary/thomas-adamson.
**Student Mathematics League**
by Matthew Pragel, Coordinator

The fall round of the Student Mathematics League competition will be held October 28–November 11, 2023, and the spring round will take place February 17–March 2, 2024. To learn more or to register, visit www.amatyc.org/StudentMathLeague. The registration deadline is October 31. Contest problems are taken from topics in precalculus and other mathematics courses below calculus. Some previous competition questions are publicly available on the AMATYC website; additional past competition questions are available to AMATYC members. Teams consisting of the five top-scoring students at each participating college compete for both regional and national awards. If you have any questions about the competition, please contact Matthew Pragel at sml@amatyc.org. We hope that your college will be able to join us!

For those attending the AMATYC Conference in Omaha, the 19th Annual Faculty Math League competition will be held on Friday, November 10 at 3:10–4:10 pm. Bring your graphing calculator and compete for individual prizes and the regional championship.

**Project ACCCESS**
by Lisa Feinman, Coordinator

Over the summer 24 new Fellows were selected for Project ACCCESS Cohort 19. They will begin their journey in Omaha this November, sharing their ideas and experiences, and learning from each other and from facilitators who have volunteered to give back to the ACCCESS community.

Please keep ACCCESS in mind as you encourage your early-career faculty this semester. This is an excellent opportunity to participate with others from around the country in professional development relating to teaching math in the first two years of college.

For more information about Project ACCCESS visit www amatyc.org/ACCESS. If you have additional questions contact Lisa Feinman at LFeinman@ccbcmd.edu. **Applications for Cohort 20 will open March 1, 2024.** It is not too early to make plans for applying.

**AMATYC Summer Institute on Active Learning**
by Karen Gaines, TfP Project Director

The Teaching for PROWESS (TfP) project is pleased to announce the approval of an AMATYC Summer Institute focused on active learning to be held in Portland, OR, on June 20-22, 2024. The event is partially sponsored by the TfP project and is open to mathematics faculty at two-year institutions. College teams (preferably four people per college) are invited to apply to attend the Summer Institute focused on active learning in the STEM pathway. Topics include:

- Principles of active learning
- Existing models of active learning
  - Student engagement with rich mathematical tasks and with their peers
  - Instructor’s use of student thinking as a resource for learning
  - Equitable and inclusive teaching practices to close the opportunity gap
- Developing equitable course learning outcomes
- Creating a culturally relevant curriculum in mathematics courses
- Creating a welcoming environment for the multiple identities learners bring to the classroom
- Modernizing the mathematics curriculum
- Supporting instructional and departmental change

Attendance will require some financial support from your college, but the airfare, hotel accommodations for four nights, and supplies will be funded by the TfP project (NSF DUE-2013493). The request for applications will be available in November 2023, applications due February 2024, and the selection process completed in March 2024. Specific details will be updated on the TfP website (teachingforprowess.com) as they become available. Please consider forming a team from your department for this great opportunity.

Exciting Updates from a TfP Phase 2 College
by David Tannor, Kellogg CC

Kellogg CC is grateful to be part of the AMATYC Teaching for Prowess (TfP) initiative, funded by the National Science Foundation (NSF DUE-2013493, -2012962, -2013232, -2013550). Through its Bruin Excels in College Algebra (BECA) project, the college plans to:

- Develop, implement, and sustain a culture of active learning in the areas of curriculum, assessment, and instruction.
- Regularly and systematically collect and use local data for continuous improvement.
- Enhance and sustain a robust course coordination and placement process.

We have completed our first year, which was a period of planning. Here are some highlights. We formed a faculty learning community to manage BECA and to regularly engage in conversation about mathematics education scholarship and practice. Our group participated in the TfP IMPACT Summer Institute at Clackamas CC in Oregon, where we engaged in training activities on active learning. We also read and discussed chapters from Peter Liljedahl’s book, *Building Thinking Classrooms in Mathematics*.

We have increased our mathematics discipline partnership with our Center for Student Success. Our team member Sarah Imus used Marzano’s Taxonomy to create a student self-assessment tool for levels of mathematics understanding. During our spring semester we hosted a site visit to our campus from a TfP team. They provided us with invaluable feedback on:

- Using course coordination as a lever for cultural change in mathematics teaching and learning.
- Leveraging K-12 mathematics curricula experiences to develop mathematical tasks.
- Engaging members of our department in shared understanding of active learning.

For more information about BECA contact David Tannor at tannord@kellogg.edu.
Creating an Accessible Classroom

by Kathryn Kozak, Past President

We all want to create a classroom environment that is accessible for all our students. However, understanding how to create that environment takes an understanding of the needs of students with disabilities. To help STEM teachers learn to create accessible classroom environments, AMATYC collaborated with the Organization of Physics at Two-Year Colleges (OPTYCs) and the Two-Year College Chemistry Consortium (TYC,) on a grant proposal, Facilitating Accessibility in STEM for Students with Disabilities at Two Year Colleges. The proposal was approved for funding (NSF IUSE-2228226) and resulted in a June 2023 workshop, held June 26–28 at Minneapolis College in Minnesota. At the workshop participants learned how to better serve students who are neurodiverse or have mobility, hearing or vision disabilities. The ultimate goal of the project is to create a community of practice where STEM faculty can share knowledge and techniques that make their classes more accessible to all students.

The workshop started with a discussion of the Universal Design for Learning framework. This framework helps instructors to design a classroom to help all students. Often a technique that is essential for a student with a disability may be valuable for other students also. For example, creating a description for a graph so that students with visual disabilities can understand what the graph displays can help all students better understand the graph.

In another workshop session, faculty from Landmark College described how to structure a classroom for students with neurodiversity disabilities (ND). They discussed the characteristics of students with ND and highlighted that these students may have sensory, social, and communication issues. Abstract thinking may be a challenge. Some ND students need to work in a distraction-free environment. Clear and consistent guidelines in multiple modalities are very important for these students. Understanding these characteristics may help you understand behaviors you may see in your classroom.

Another important topic discussed during the workshop was the accessibility of classroom materials. For students with visual disabilities, visualizations should have alternative tags (“alt tags”). For a graph, the alt tag should describe what the graph is displaying. If your description is too long for an alt tag, you can put the graph’s description above the image of the graph. For mathematical equations, using the equation editor in Microsoft Word can allow the equations to be read by a screen reader. The new version of Word can read the document to you so you can hear what a student using a screen reader would hear. This allows you to modify the organization of the document so that it makes more sense when a person hears it. Another important tip was to use headings in your document; the screen reader sees the headings and alerts the student that a new section is beginning.

For deaf and hard-of-hearing students, videos should be closed-captioned. Automatically generated captions from YouTube are not very accurate, especially for mathematics, so they should be edited. One suggestion is to write a script before creating the video, and then upload the script for YouTube to create the captions. Your campus disability services office may provide resources to help create captions for your videos. For videos shown in class, a best practice is to turn on the closed captions so that the student with a disability does not need to request it. This can also help other students in the class who might have distractions or prefer to read the information. If you have an interpreter in your class, remember to speak directly to the student, not the interpreter, and remind other students to do the same.

There is so much to learn about teaching a student with a disability. The community of practice being developed after the workshop will help instructors share resources and suggestions with one another. Once the community of practice has been established, the plan is to open this community to all. We hope to offer additional workshops on this topic so more faculty can learn. Stay tuned for more information.
The AMATYC Foundation hopes that you are able to attend the AMATYC Annual Conference in Omaha, November 9-12, 2023. The year 2024 is the 50th Anniversary of AMATYC. To encourage giving on behalf of AMATYC's 50th Anniversary, the Foundation will have prizes that showcase the 50th Anniversary logo. Those who have donated $50 or more in 2023 by 4:00 pm Central on Friday, November 10, will be entered into a random drawing for one of these prizes. The Foundation will be announcing the ten winners at the AMATYC Conference Keynote Breakfast on Saturday morning.

In addition to the $50 for the 50th, you can also participate in the Foundation's annual dot campaign. The dot campaign encourages you to give a dollar for every conference you have attended—you then get a dot with a number representing the number of conferences for your conference name tag. For example, if you have attended 24 conferences, you would donate $24 to the AMATYC Foundation and receive a dot with the number 24 to put on your name tag. If you have attended only one conference, this one, then people will know that you are new to AMATYC and welcome you to the family. Donating to the Foundation and wearing a dot lets other conference attendees know how many conferences you have attended, and helps advertise the dot campaign to other attendees.

This year's dot campaign includes the chance to win three prizes. Two of the prizes will be awarded based on regional competitions. Each region will choose a random person from all who donated to the AMATYC Foundation since January 1, 2023. Of these people, the member whose region donates the most money will receive a two-year membership to AMATYC. The other prize, a one-year membership to AMATYC, will be awarded to the member whose region has the highest percentage of members donating to the AMATYC Foundation. Another prize is a regular registration to the AMATYC Annual Conference in Atlanta. This will be awarded to one individual randomly chosen from all those who donated to either the dot campaign or the $50 for the 50th campaign.

If you are not able to attend the AMATYC Annual Conference in Omaha, please consider donating to the AMATYC Foundation. The Foundation supports AMATYC by funding important activities such as Project ACCCESS, minigrants, regional affiliate scholarships, and travel grants. Speaking of the AMATYC travel grants, the following people received the $400 travel grants during the August 1, 2023, random drawing:

- Jen Euteneuer, Southeast CC, NE
- Chamila Ranaweera, Southeast Technical College, SD
- April Crenshaw, Chattanooga State CC, TN
- Matthew Watts, Red Rocks CC, CO

Another group of winners was chosen in early October and will be announced in the next issue of the AMATYC News. Because of your support of the organization the Foundation is able to fund these and other activities. Thank you for your support no matter how big or small! Together, you and AMATYC can open doors to mathematics for all students.

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**Online Community Update**  
by Evan Evans, Digital Coordinator

Exciting News: The Digital Coordinator position will become the Online Community Assistant Coordinator (OCAO). Responsibilities of the new OCAO position include developing the vision for IMPACT Live!, assisting the Online Community Coordinator, and creating user-friendly web pages on myAMATYC (https://my.amatyc.org). To apply visit www.amatyc.org/AMATYCVolunteerPositions.

We are still highlighting communities and ANets on IMPACT Live! (www.amatyc.org/live) as they host bimonthly discussions. In addition, we are sharing the Standards Revision Groups (SRGs) and their important work in updating our standards.

The current site houses the traditional and digital enhanced versions of Crossroads, Beyond Crossroads, and IMPACT, as well as current AMATYC position papers. A goal of IMPACT Live! is to be a living extension of our signature IMPACT document. In this spirit the SRGs are highlighting any proposed changes to any of our AMATYC documents that will go into the digital enhanced versions, as well as collecting your feedback on their proposals.

It is not too late to get involved. If you are interested in being a part of the IMPACT review team or any SRG, please contact Standards Committee Chair Julie Phelps at jphelps@amatyc.org. Also visit the IMPACT Live! site to check out the latest news, hosts, and podcasts that support the IMPACT document.

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**AMATYC Webinars**  
by Mari Menard, Coordinator

Share a new technology, testing idea, or instruction concern via AMATYC Webinar! From corequisites to calculus, AMATYC webinars have it all and you choose. AMATYC ANets can share and recruit members via webinar. For more details about AMATYC webinars, contact Mari Menard at marimenard@amatyc.org. Visit www.amatyc.org/Webinars to submit your proposal today.
Be Surprised by Omaha!
by Amanda Olson, Local Events Coordinator

Omaha is a big city with a small-town feel that has plenty to discover! From one of the world’s best zoos to the world’s most haunted museum to lively historic neighborhoods and a nationally recognized culinary scene, Omaha has attractions ready to surprise you at every turn. The city brims with unique boutiques, specialized shops, inviting restaurants, a delightful candy store, and a sprawling 24/7 outdoor playground.

Explore the RiverFront at the Gene Leahy Mall in the heart of downtown where you can walk the trails, admire the sculpture garden, enjoy the city views, and more. On your way to visit the outstanding Henry Doody Zoo, take a walking tour of the city’s public art and view one of the country’s largest community murals and one of the world’s largest collections of bronze and stainless-steel works of art.

Finish your day with exciting evening entertainment. You might consider a night out in the historic Benson Entertainment District where lively conversations and live music pour out from the brewerries and bars. Enjoy the Skee-Ball, classic arcade games, and pinball machines at Beercade, or catch a show at Reverb Lounge or the Waiting Room Lounge.

Nebraska has been home to excellent brands that have expanded to the rest of the country. If they haven’t reached your area yet, make sure to try them while you’re visiting. Scooters Coffee got its start in Nebraska. When you stop in to get your coffee, make sure to add a delectable dessert. Dorothy Lynch Dressing is crafted in Nebraska, and even Kool-Aid has its roots here. If you’re in the mood for fast food you can’t miss with a shake, fries, and a Runza Sandwich. What’s a Runza? Come to Omaha to find out!

What do President Gerald Ford, Malcolm X, and Gabrielle Union all have in common? They’re from Nebraska! So are Fred Astaire, Warren Buffet, Hilary Swank, Marlon Brando, and JoJo Siwa. Omaha is a city that hosts the world’s billionaires, passionate college baseball fans, and so much more. Come see what Omaha has for you!

RMETYC Research Session in Omaha
by Frank Marfai, RMETYC ANet Chair

AMATYC’s Research in Mathematics Education at Two-Year Colleges (RMETYC) ANet is committed to sharing research findings that connect our teaching practices to our work in our departments. This year’s Research Session will be 7:00-9:10 pm on Thursday evening at the AMATYC Annual Conference in Omaha.

Join colleagues at this annual event to learn about current research on the teaching and learning of mathematics and statistics in the first two years of college. The evening begins with a keynote address by Wendy Smith from University of Nebraska-Lincoln, titled “Research on Partnerships to Support Transfer Students.” Her keynote will focus on establishing co-equitable partnerships of instructors, advisors, and administrators across institutions, working together to better support transfer students. Wendy is a research professor and director of the University of Nebraska-Lincoln’s Center for Science, Mathematics, and Computer Education. As a mathematics education researcher, her research has focused on equitable teaching and learning, frequently involving partnerships across and within K-12 and higher education. The keynote will be followed by concurrent breakout sessions focused on findings from current research projects.

The first breakout session features a presentation by Megan Selbach-Allen, “Unpacking ‘Non-math’ Talk as a Driver of Student STEM Persistence,” which will examine a successful developmental mathematics classroom to understand the structural and in-classroom forces that appear to drive the higher pass rates and students’ persistence in STEM pathways. The second presentation in this session, “A Highly Effective, But Underused Teaching Strategy” by Eyob Demeke, will discuss factors influencing instructors’ decisions on implementing active-learning techniques in first-year math courses. The third presentation in this breakout session, “Growing the Math SoTL Community: Factors that Support Engagement” by Megan Breit-Goodwin, will explore factors that promote mathematics faculty participation in Scholarship of Teaching and Learning (SoTL) and the ways two-year college faculty can help grow the mathematics SoTL community.

In the first presentation of the other breakout session, titled “A Learning Inventory’s Effect on Transfer of Mathematical Knowledge,” Jason Farrington will present the results of research exploring the extent to which the use of a learning inventory affects students’ ability to transfer their mathematical learning to novel contexts. In the second presentation in this breakout session, “Studying the Impact of CUREs on Community College Students,” Frank Marfai will share findings of students’ affect with regard to Course-based Undergraduate Research Experiences (CUREs) implemented in mathematics, statistics, and other STEM courses in one community college district. In the third presentation in this breakout session, “Planning Lessons for Exponential Functions in a Community College,” Dexter Lim will discuss aspects of exponential functions that instructors consider the most important to include in their lessons, based on interviews with full-time community college instructors.

We hope you will join us for this evening Research Session in Omaha. For more information about RMETYC or the Research Session, please contact me at frank.marfai@phoenixcollege.edu.
Disability Equity
by Benjamin Aschenbrenner, Equity ANet Chair

This summer I’ve been thinking a lot about disability equity and ableism. I’m going to try to weave some disparate threads together so stay with me.

The CDC’s current infographic on disability states that 27% of American adults have a disability. The CDC defines a disability as “any condition of the body or mind … that makes it more difficult for the person with the condition to do certain activities and interact with the world around them.” One of the things I like about the definition is that it is sufficiently broad to help us see that disability really does affect all of us, though not equally.

I have a close family member who suffers from anxiety and depression. Though this person does not receive disability-related aid and would not identify as a person with a disability, they meet the definition, and would probably, in a time of their life when their depression is highly activated, meet the ADA’s more stringent definition, that a person has a physical or mental impairment that is substantially limiting one or more major life activities.

But as I think more closely about this person and their suffering from depression and anxiety, I have to acknowledge that they are also incredibly gifted and some of that is connected to their mental health challenges. One of the limitations that we face in talking about disability is seeing disabilities as deficiencies and not just as different ways of being. Some suggest that instead we should use the term differently-abled. The very definitions (both the CDC and ADA) imply this shortcoming, connecting the condition (impairment in the ADA definition) to some increased difficulty. But every challenge is also an opportunity, though we should tread carefully in how blithely we say this.

I suspect a large part of why differences in different human beings show up as deficiencies has to do with our difficulty in designing a world which is truly inclusive.

Is this fantastical thinking? Consider disabilities that limit mobility. We have machines and tools that can help us move without using our legs, but if curbs and doors are not thoughtfully designed then the differences lead to a perceived deficiency in the human. But the deficiency is not in the human, the deficiency is our conceptualization of how we interact with the world and construct our cities and buildings.

That perspective resonates with me as an equity educator. It reminds me that, though it is easier as an instructor or institution to blame poor outcomes on deficient students, it is more productive to consider how we can make adaptations to allow all students to flourish in our colleges.

As I think about all the students I have ever taught, I wonder how much of their struggle was about having a particular skill set and experience that did not align with what the system considered valuable and necessary for success.

In N. K. Jemisin’s Broken Earth trilogy, she depicts a world where humans have been divided into orogenes and stills, where orogenes are less than, despite having amazing abilities. It’s a useful exercise to walk down a road in a fantastic world where you can see shadows of our own broken world and understand that we still have work to do.

I’ll leave you with a quote from the lead video in the American Bar Association’s 21-day “Disability Equity Habit-Building Challenge”, which I highly recommend as a way to get you started on learning more about disability and the creation of a better world.

“Everything that’s wrong with our society was a set of choices, and the beautiful thing is that, together, we can make different choices.”

Mathematics Intensive ANet
by Robert Cappetta, Chair

The Mathematics Intensive ANet has been actively discussing the future of differential equations courses. There are many looming challenges. The first element of the discussion is what topics constitute the course. The Illinois Mathematics Association of Community Colleges has attempted to answer that question, as described in www.imacc.org/wp-content/uploads/2023/05/04-08-2023-Joint-Articulation-Guide.pdf.

According to the Illinois guidelines, first-order differential equations courses should include existence and uniqueness of solutions, initial value problems, numerical methods, separable equations, linear equations, exact equations, substitution methods and applications. Higher-order differential equations should include general solutions to both homogeneous and nonhomogeneous linear equations, linear independence, method of undetermined coefficients, variation of parameters, and applications.

Illinois also suggests that at least two additional topics from the following list should be included: solving initial value problems using Laplace transforms, power series solutions, partial differential equations and Fourier series, systems of linear differential equations, further numerical methods, and other advanced topics.

Recently, the members of the Mathematics Intensive ANet have been discussing the role of technology in differential equations courses. If the procedural elements of this course are easily managed with technology, which pencil and paper skills must students learn, and which ones can be assigned to technology? More pre-engineering majors than mathematics majors enroll in differential equations, so what is the appropriate role of theory and proofs? Finally, if applications are the primary goal of differential equations, when does it cease being a mathematics course and instead become a physics or engineering course?

Technology enables quick solutions to many traditional differential equations, but it also provides rich new insights. Modeling real-world phenomena with data is easier than ever. Visualizing solutions to differential equations provides interesting insights. Furthermore, using tools to solve challenging problems in areas like dynamical systems enable opportunities to deepen understanding. So, what does a “best practices” differential equations class look like today? Instructors need a community to attempt to answer that question.

Few people tend to teach differential equations at a given institution, so it is difficult to receive guidance from local colleagues, but the Mathematics Intensive ANet includes many instructors who eagerly discuss their ideas. In recent years the sharing session at the annual conference has had many interesting discussions on differential equations. Additionally, we encourage all members to participate in year-round conversations on this topic and others at https://my.amatyc.org. Let’s strive to help each other consistently improve our teaching and learning at all levels of mathematics in the first two years of college.
Mathematics Pathways ANet
by Helen Burn, Chair

The findings from an extensive analysis of developmental mathematics and mathematics pathways policies and practices across all 50 states and Washington, DC, will be unveiled during the 2023 AMATYC Annual Conference in Omaha in a session aptly titled "50-State Scan of Mathematics Policy and Practice in Higher Education." The data extracted from this scan paints a comprehensive picture of the prevailing landscape in higher education mathematics pathways across the nation, highlighting discernible patterns and trends that will serve to guide our future endeavors in the realm of mathematics pathways.

Leading the charge in this significant undertaking were Joan Zollner, Lindsay Fitzpatrick, and Dave Kung from the Charles A. Dana Center. Assisting them were several dedicated AMATYC members, including Alvina Atkinson, Megan Breit-Goowin, Helen Burn, Kathryn Kozak, and Trisha White. We extend our heartfelt gratitude to everyone who actively participated in interviews and correspondence, contributing essential data throughout the 2022-23 academic year. Generously funded with $15,000 courtesy of the Charles A. Dana Center, this project is an integral part of the Dana Center's Launch Years Initiative—an ambitious campaign striving to ensure every student, regardless of their circumstances, background, or location, gains access to superior math education pertinent to their future aspirations.

The accumulated data encompasses a wealth of contextual insights for each state, encompassing coordination between two- and four-year systems, including transfer agreements and common course numbers. It also explores the existence of state-level guidance or policies pertaining to developmental mathematics, corequisites, and mathematics pathways. Although the data analysis process is still in progress, we are pleased to share that the research team has successfully secured data from all 50 states and Washington DC. Preliminary analysis suggests that approximately 60% of states have state-level policies or guidance concerning mathematics pathways. For states embracing such pathways, the median number of mathematics pathways stands at three, with STEM/calculus, Quantitative Reasoning, and Statistics pathways emerging as the most popular choices. Impressively, eight states offer four or more mathematics pathways, encompassing pathways such as business, technical mathematics, elementary education, data science, and allied health.

The session on comprehensive analysis of the 50-state scan is scheduled for Saturday, November 11, from 2:15 to 3:05 pm. We eagerly wait your perspectives and insights on the data and welcome your inquiries regarding the current state of mathematics pathways. Your engagement and input are invaluable as we collectively shape the future of mathematics pathways in the United States.

FUTURE AMATYC Conferences

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Dates</th>
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<td>2023</td>
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<td>Phoenix, AZ</td>
<td>November 9-12</td>
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For additional information, contact the AMATYC Office at amatyc@amatyc.org.
AMATYC Foundation 2022 Honor Roll

The AMATYC Foundation sincerely thanks all who gave generously in 2022. These donations support AMATYC initiatives such as Project ACCCESS, student competitions, and member grants. Contributions to the Foundation also support travel and opportunity grants, and AMATYC Awards, including the Margie Hobbs Award and the Leila and Simon Peskoff Award. All contributions help AMATYC achieve its vision to be a leading voice and resource for excellence in mathematics education in the first two years of college. As always, thank you for your contribution and we look forward to seeing your name on the AMATYC Foundation 2023 Honor Roll next year!

AMATYC strives for accuracy within this Honor Roll listing. If information is incorrect or missing, or if a different name is preferred, please accept our sincere apology and contact Beverly Vance at amatyc@amatyc.org so that appropriate corrections can be made.

Endowment
Wanda Garner Family

President’s Club
Judy Ackerman
Allen Angel
Cheryl Cleaves
Anne Dudley
David Dudley
Karen Gaines
James (Jim) Ham
Alice Kaseberg
Elyan Martin-Gay
Marilyn Mays
Pat McKeeague
Fred Peskoff
Nancy Sattler
William Steenken
Eddie Tcherchtian
Peter Wildman

Patron
ArizMATYC
Gregory Foley
Jane Tanner
Jennifer Travis

Sponsor
Alvina J. Atkinson
Steven Blasberg
Alan Hayashi
George Hurlburt
Nicole Lang
Barbara Leitherer
Sarah Pauley
Laura Watkins

Friend
Aaron Altose
Alexander Atwood
Linda Blanco
Lisa Blaylock
James Chadic
Philip Cheifetz
Emie Danforth
Guy De Primo
Suzanne Doree
Mark Earley
Dennis Ebersole
Rob Eby
David Ellenbogen
Sophia Georgiakaki
Jeff Herrin
Kathryn Kozak
Mari Menard

Supporter
Kathleen Bavelas
Dan Fahringer
Bukarie Gjoci
Carol Howald
Julie Phelps
Jennifer Quinn
Matthew Rando
Mariah Ranade
Cathleen Rossman
Ann Sitomer
Paula Willhite
Asma Zangana

Contributor
Ganga Acharya
Jennifer Ackerman
Ellen Adams
Bismark Akoto
Jana Anderson
Katherine Anderson
Kari Arnoldsen
Aisha Arroyo
Judy Atkinson
Khaled Banihani
Rhonda Barlow
Scott Barnett
Pat Barrientos
Brandon Bartley
Joe Bauer
Michael Bellissimo
John Bennett
Jason Boehm
Jennifer Bready
Megan Brett-Goodwin
Cheryl Brindile
Brenda Bum
Eric Burnheimer
Cecelia Cano
Mindy Capaldi
Michael Caparula
Robert Cappetta
Meghan Carlson

Ervin China
Madeleine Chowdhury
Nick Chura
Casey Clark
Sarah Cole
Anna Cox
Thomas Crawford
April Crenshaw
Susan Crowe
Philomena D’Alessandro
R. Michael Darrell
Amanda Davis
Charles Davis
Johanna Debrecht
Kris Demaras
Jeanine DiDonato
Dawn Draus
Beth Dunn
Irene Durancyk
Pankaj Dwarka
Tanya Easley
Christina Elliott
Brendy Engler
Evans Evan
April Falace
Jason Farrington
Gregory Fein
Lisa Feinman
Vickie Flanders
Kristina Flores
Ramiro Garcia
Claudia Genoves-Martinez
Peter Georgakis
Norly Germain
Shanna Goff
Kim Granger
Julia Gregorio
Dori Haggerty
Shawna Hadler
Florian Halduc
Sarah Hand
Miriam Harris-Bozum
Darlene Hatcher
Nick Haverhals
Mary Headlee
Elena Heinke
Patricia Herman
Diane Hill
Diane Hirsch
Barbie Hoag
Lori Holdren
Braenne Hooks
Jessica Hoppe
Eric Hutchinson

Christopher Imm
Alberto Isassi
Jennifer Jameson
Andrew Jeanson
Benedictie Jeanson
Ana Jiménez
Dale Johanson
Elizabeth Johnson
Elizabeth Jones
Samuel Judnick
Geetha Kalyanaraman
Ryan Kasha
Sophie N. Kellman
Marty Kellum
Matthew Kennedy
Colby Keslar
Ben King
John King
Amanda Klinger
Jamie Kneisley
Arabela Koris
Erik Kox
Mark Kuhlman
Kyle Kundomal
April Lany
Maja Lanzetta
Jennifer LaRose
Dawn Laughter
Jennifer Lawhon
Phuong Le
Peder Liljedahl
Deborah Littke
Vincent LoCascio
Sarah Long
Phoebe Lutz
Frank Marfa
Madilyn Marshall
Stacy Martin
Sheba Mas-Oud
Vicky Mayfield
Sherry McCormack
James McCoy
Seth McElvaney
Jake McIntyre
Ashlee McQueen
Jose Maria Menendez
Brian Millville
Curtis Mitchell
Frank Monterisi
Cindy Moore
Camille Moreno
Jeff Morford
Ben Moulton
Glynis Mullins

Keith Nabb
Sriram Nallani
Erin Newton
Jon Oaks
Chris Oehrelin
Amanda Olson
Ann Marie O’Neill
Enymida Onunwor
Ben Orlin
Mary Beth Orrange
Kalyn Owens
Miriam Pack
Dorcas Parson
Nikita Patterson
Melida Paz
Roxy Peck
Ryan Pesce
Celeste Petersen
Sandra Pettinico
Samuel Pinkava
Joni Pinot
Natalia Postigian
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Elizabeth Russell
Sean Saunders
Arthur Schultz
Megan Selbach-Allen
Sang Sertich
Amber Severson
Joan Smeltzer
Chelsea Smith
Julia H. Smith
Jude Socrates
George Soliman
Luc Solomon
Aletta Speegle
Kelly Spoon

*Cont’d on page 11*
November 9–12: 49th AMATYC Annual Conference, Convention Center (CHI Health Center), Omaha, NE. Website: www.amatyc.org/2023ConfHome

December 8–9: CMC3 Fall Conference, Hyatt Regency Monterey Hotel & Spa, Monterey, CA. Website: www.cmc3.org/conferences/fall/

February 2: GMATYC MECS Conference, Perimeter College/Georgia State Univ, Atlanta, GA. Website: http://sites.gsu.edu/pc-gsu-mathconference/

April 12–14: NYSMATYC 56th Annual Conference, Kingston, NY. Website: https://nysmatyc.org/

Honor Roll, Cont’d from page 10

Tristan Sprague-Williams
Karen Spratt
Aly Stachelek
Carrie Starbird
Lyudmila Stephens
Tod Stine
Tammy Sullivan
Amanda Swintek
Marcus Szwanowski

Cody Tabbert
Anthony Tavares
Jo Lynn Theobald
Vicki Todd
Ruth Trygstad
Amy Tucker
Steven Tucker
Whitney Turner
Dave Usinski
Sara Van Asten
Sidra Van De Car

Xianwei Van Harpen
Anne Vance
Don Vander Klok
Jason Vargas
Oscar Villalobos
Juan Vinton
Toby Wagner
Luke Walsh
Xiaomin Wang
Sherri Warren
Libby Watts
Fred Watts
Matthew Watts
Elizabeth Weaver
Nancy Elizabeth Wentzel
Emily Whittington
Darlene Williams
Eboness Williams
Dusty Wilson
Tawanna Wilson
Laura Wohlgezogen
Monica Wong
Elmira Yakutova-Lorentz
Catalina Yang
Prudence York-Hammons
Bruce Yoshiwara
Michelle Younker
Asma Zangana
Elizabeth Zeiss
Joan Zoellner
Steven Zollinger
Juan A. Zuniga Olea

AMATYC 2023-2024
Calendar of Events

Check the AMATYC website, www.amatyc.org, for information on conferences and meetings from other organizations.

A form is available at www.amatyc.org/AffiliateConferences to update or add affiliate conference information.

HIGHLIGHTS OF THE JUNE AND JULY BOARD MEETINGS

by Nancy Rivers, Secretary

The AMATYC Executive Board met virtually on June 22 and July 27, 2023, for their monthly meetings. These virtual meetings have replaced the Summer Conference Call previously used by the Board. Among actions taken by the Executive Board are the following:

• Appointed
  - Robert Cappetta, Chair of the Intensive Mathematics ANet
  - Christine Mirbaha, Chair of the Placement and Assessment ANet
  - Barbara Letherer, Chair of the International Mathematics ANet
  - Kimberlyann (Kim) Granger, Chair of the Developmental Mathematics ANet
  - Mark A. Early, Chair of the AMATYC Standards Team

• Approved a proposal to hold a Teaching for PROWESS Summer Institute at Clackamas CC near Portland, Oregon in June 2024.

• Created an Advocacy Task Force to investigate actions AMATYC can take to become a more welcoming and inclusive organization.

• Approved a two-year renewal of our current Higher Logic Thrive Community service.

STATISTICS AND DATA SCIENCE ANET

by Rachael Saidi and Rebecca Wong, Co-Chairs

We are looking forward to participating in this year’s AMATYC Annual Conference, November 9–12, 2023, in Omaha, Nebraska. Please visit www.amatyc.org/2023ConfHome for more information. The Statistics and Data Science ANet will host a themed session, “Building a Data Science Program at Two-Year Colleges.” If you are attending the conference we hope you will join us for this rich discussion!

With summer in the rear-view mirror, in case you would like suggestions for professional articles to jump-start your fall, below is a brief list of selections.


For more information about the AMATYC Statistics and Data Science ANet, contact Rebecca Wong (rebecca.wong@amatyc.org) or Rachel Saidi (rachel.saidi@montgomerycollege.edu).
FOCUS ON AFFILIATES: UMATYC

by Ben Moulton, UMATYC Newsletter Editor

The Utah Mathematical Association of Two-Year Colleges (UMATYC) was founded in November 1991. Over the years different institutions of higher education have been a part of UMATYC. As of 2023, institutions affiliated with UMATYC include Snow College, Salt Lake CC, Utah Valley University, Weber State University, Southern Utah University, and Utah State University-Price. UMATYC holds its annual conference every autumn. Last year UMATYC was fortunate to have AMATYC President Laura Watkins, an alumna of Utah State University, as our keynote speaker. This year the conference was held at Snow College (Richfield Campus) on September 30, 2023. The conference featured Douglas Corey of Brigham Young University presenting on the topic, “Modeling the World with Mathematics.”

UMATYC has recently increased membership benefits to include UMATYC networking forums and webinars as well as access to UMATYC newsletters and other correspondence. Membership also includes free registration for the annual UMATYC conference.

Formerly part of the AMATYC Central Region, affiliate boundary changes in 2015 moved UMATYC to become part of the West Region. UMATYC plays an active role as an affiliate of AMATYC, with many of its members serving on committees, presenting at conferences, publishing in the MathAMATYC Educator, and participating in Project ACCCESS. UMATYC also hosted the 2003 AMATYC Annual Conference in Salt Lake City.

Please visit the UMATYC website at www.umatyc.org for more information about UMATYC, including membership, updates, and events.