Omaha, Nebraska: A Grand Slam Destination for AMATYC 2023!
by Amanda Kriesel Olson, Local Events Coordinator

Just like a well-played baseball game, the city of Omaha is ready to knock it out of the park when it comes to hosting the 2023 AMATYC Annual Conference. While an AMATYC conference in any location is sure to bring a great crowd, this conference in Omaha isn’t just about numbers; it’s a chance to explore a city that embraces its unique heritage while offering an array of exciting tourist attractions. So, grab your mitt and bat as we dive into why Omaha is a grand slam destination for college mathematics educators.

Swing for Success: Omaha’s rich baseball history is as legendary as a home run hit. As the home of the NCAA College World Series, the city embraces the national pastime with open arms. Take a swing by visiting the iconic TD Ameritrade Park Omaha, the place where future stars of baseball have battled it out on the diamond. Immerse yourself in the vibrant baseball culture and let the spirit of the game inspire your teaching strategies.

Grand Slam Attractions: Omaha isn’t just about baseball. The city offers a diverse range of attractions that are sure to keep you entertained during your visit. Check out the Henry Doorly Zoo, ranked as one of the best in the world, and marvel at the exotic wildlife. Take a stroll through the picturesque Heartland of America Park, with its stunning fountains and scenic views. And don’t forget to explore the historic Old Market District, a bustling area filled with charming shops, restaurants, and art galleries.

Friendly Locals – Omaha’s All-Star Hospitality: Just like a supportive crowd cheering for their team, the people of Omaha are known for their warm and welcoming nature. Whether you’re asking for directions, striking up a conversation in a local cafe, or seeking recommendations, you’ll find friendly locals ready to assist you. The city’s hospitality ensures that your visit will be filled with memorable encounters and a sense of belonging.

Attending the 2023 AMATYC Annual Conference not only offers an opportunity to enhance your professional development, but it also presents a chance to experience the winning charms of Omaha itself. From its vibrant culinary scene to its rich cultural offerings and warm hospitality, Omaha truly hits a home run as a tourist destination. So pack your bags, grab your glove, and get ready to swing for the fences as you embark on a trip to Omaha. It’s a conference that’s sure to leave you feeling like a true MVP in the math teaching field.

CC DataFest 2023 Is a Success!
by Rebecca Wong and Rachel Saidi Co-Chairs of Statistics and Data Science ANet

On the weekend of April 14-16, 2023, eight teams from six community colleges participated in our second CC DataFest. Sponsored by the American Statistical Association (ASA), DataFest is an annual celebration of data in which teams of undergraduates from throughout the country work together to find meaning in a large, rich, and complex data set. Teams were matched with volunteer mentors who were available to provide advice to students throughout the weekend. This year’s data set was provided by the American Bar Association (ABA). Teams investigated data from a project called ABA Free Legal Answers, a free online legal services clinic. The ABA was interested in finding out who tended to use the service, at what times, and for what needs.

After a weekend of exploring the data, teams submitted a five-minute, two-slide presentation with their findings. Project submissions were reviewed by ten volunteer judges who were all data science professionals. Special recognition was given in the following areas:

- **Best Insights**, awarded to
  - Borough of Manhattan CC (NY)
  - Peter Vaicilulis, Joaquin Soto-Jerome, Florian Daniel Charles
  - Montgomery College (MD)
  - Luiz Mata Lopez, Veer Banwait, Adeev Lev Wohl

- **Best Statistical Analysis**, awarded to
  - West Valley College (CA)
  - David Veksler, Malcolm Berry, Matthew Okner

- **Best Visualization**, awarded to
  - Red Rocks CC (CO)
  - Jesse Ayala, Mark Irby-Gill, Alex King-Bailey, James Lawson, Jason Ma
  - Borough of Manhattan CC (NY)
  - Peter Vaicilulis, Joaquin Soto-Jerome, Florian Daniel Charles

All participants received a DataFest t-shirt and students from award-winning teams will also receive a student membership to the ASA. We thank Pearson for their sponsorship of this year’s event.

Last year we piloted the first virtual DataFest event open solely to students from two-year colleges. This year we increased participation in CC DataFest from our 2022 pilot. We look forward to continuing to grow this annual event. For more information about how your college can participate, contact the AMATYC Statistics and Data Science ANet Co-Chairs, Rebecca Wong (rebecca.wong@amatyc.org) and Rachel Saidi (rachelsaidi@montgomerycollege.edu).
**President’s Message**

As educators, we know that collaboration lies at the heart of effective mathematics teaching and learning. We understand the transformative power of collaboration in fostering a vibrant learning environment, empowering our students to achieve their goals, and to advance the efforts of the mathematics community to provide students with an education that aligns with their interests and aspirations. Whether collaboration is among disciplinary societies, faculty members, or between students, it has the potential to drive meaningful change, growth, and create a culture of success.

Collaboration brings together individuals with different backgrounds, experiences, and areas of expertise and can build understanding. Involvement in a professional society like AMATYC connects us to a hub that brings together mathematics educators from diverse backgrounds and geographical locations. AMATYC provides a platform for mathematics faculty teaching in the first two years of college to connect, share ideas, and collaborate on innovative projects; for example, myAMATYC (https://my.amatyc.org) or AMATYC Annual Conferences (www.amatyc.org/Conferences). As members of the mathematics education community, we can use our voices in collaboration with other professional societies in order to leverage our collective strength to contribute to the advancement of mathematics education and promote research-based practices. For example, AMATYC, in collaboration with The Organization for Physics at Two-Year Colleges (OPTYC) and Two-Year College Chemistry Consortium (2YC3), is offering the Facilitating Accessibility in STEM for Students with Disabilities at Two Year Colleges workshop (www.amatyc.org/AccessibilityInSTEM) to create a community of practice where STEM faculty can share knowledge and techniques that make their classes more accessible to all students. This multidisciplinary collaboration provides a powerful opportunity for the sharing of ideas and strengthening of our community to better serve our students.

When we collaborate with other faculty, we tap into a rich reservoir of knowledge and perspectives, enabling us to expand our own understanding and discover innovative approaches to teaching. Faculty collaboration is instrumental in developing a robust and cohesive mathematics curriculum. By working together, we can align learning objectives and create a curriculum that creates a seamless progression of mathematical concepts. Considering that often the courses we teach are in service to other disciplines, connecting with faculty teaching physics, chemistry, or other disciplines provides the opportunity to share expertise and diverse perspectives through a cross-pollination of ideas related to the mathematics we teach. Such collaboration between mathematics departments and other disciplines fosters interdisciplinary connections and prepares students for the interdisciplinary challenges they may face in their careers. By working together, perhaps through a learning community, we foster a sense of camaraderie and support with fellow educators and create networks that offer the opportunity for sharing effective resources, practices, and pedagogical approaches. These networks become invaluable sources of inspiration and motivation that help us to stay current with developments in education and to continuously refine our teaching. In this way, collaboration strengthens our collective capacity to inspire and engage our students.

Of course, collaboration is not limited to educators. Through our own experiences we know how beneficial it can be for students to discuss mathematical ideas together. When students collaborate, they have the opportunity to actively construct knowledge, develop critical thinking skills, and build teamwork abilities that are essential in today’s interconnected world. Opportunities to work with a few other students while solving problems encourages students to explore multiple perspectives, articulate their thoughts, consider alternative solutions, and make informed decisions all while learning from their peers. Collaborative activities could be in the form of working problems at a whiteboard, using a spreadsheet or graphing software on a computer or tablet, or even an escape room activity in the classroom. By engaging in collaborative activities, students can develop a deeper understanding of mathematical concepts and gain the confidence to tackle complex problems while nurturing creativity and innovation as students brainstorm ideas and explore novel approaches collectively.

As we know, community college classrooms can be quite diverse in terms of gender, race/ethnicity, socio-economic status, educational background, and a variety of other characteristics. Through collaborative learning we create opportunities for students from different backgrounds, with varying levels of mathematical ability, to work together towards a common goal. Collaboration that promotes inclusivity can create an environment that values and respects these diverse voices. An inclusive approach not only supports students who may struggle with mathematics but also nurtures a sense of belonging and equity within the classroom. For this reason, ensuring that collaborative activities are flexible and accessible to all students is important. Permitting the use of appropriate assistive technologies, or perhaps adapting materials or providing alternative means of participation might be necessary in order to accommodate diverse learning needs. Most important is the need to cultivate an inclusive mindset by promoting empathy, respect, and appreciation for diverse perspectives. By creating a supportive and empowering environment where all students can actively engage, contribute their unique strengths, and experience the benefits of collaborative learning, we can empower students to become active participants in the learning process, critical thinkers, and effective collaborators. This is the power of collaboration!

Together, let us harness the power of collaboration to inspire innovation, transform mathematics education, and shape a brighter future for our students.

Together, we can make a difference.
OPEN POSITION: ONLINE COMMUNITY ASSISTANT COORDINATOR

AMATYC is searching for an Online Community Assistant Coordinator (OCAC). The primary responsibility of this position is maintaining IMPACT Live! The OCAC also assists the Online Community Coordinator in maintaining myAMATYC (https://my.amatyc.org).

The term for this volunteer position is January 1, 2024, through December 31, 2027, with possible reappointment for one additional 4-year term. The OCAC must be an AMATYC member during the entire term of appointment. AMATYC supports this position by reimbursing some of the costs of attending the AMATYC Annual Conference.

For more information and application instructions, please visit www.amatyc.org/page/AMATYCVolunteerPositions page.
There were 103 teams that competed in the 2022-2023 Student Mathematics League. Many thanks to the local contest moderators and the test development team for all of their hard work to make this a successful competition. The Student Mathematics League competition will return in fall 2023 and registration information will be posted to the AMATYC website in August. We hope that you will be able to join us next year!

The final results are listed below:

Final Team Results

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<th>Rank</th>
<th>Team Name</th>
<th>Score</th>
</tr>
</thead>
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<tr>
<td>1.</td>
<td>Evergreen Valley College (CA)</td>
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<td>2.</td>
<td>Oakland CC (MI)</td>
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<td>3.</td>
<td>UW-Eau Claire-Barron County (WI)</td>
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<td>4.</td>
<td>Pasadena City College (CA)</td>
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<td>5.</td>
<td>El Camino College (CA)</td>
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<td>6.</td>
<td>Pellissippi State CC (TN)</td>
<td>207.5</td>
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<tr>
<td>7.</td>
<td>Santa Monica College (CA)</td>
<td>202.5</td>
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<tr>
<td>8.</td>
<td>Los Angeles City College (CA)</td>
<td>173.0</td>
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<td>9.</td>
<td>Diablo Valley College (CA)</td>
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</tr>
<tr>
<td>10.</td>
<td>Edmonds College (WA)</td>
<td>165.0</td>
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Final Individual Results

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<th>Name</th>
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<tbody>
<tr>
<td>1.</td>
<td>Ralph Cao, Evergreen Valley College (CA)</td>
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</tr>
<tr>
<td>2.</td>
<td>Jiabei Lyu, UW-Eau Claire-Barron County (WI)</td>
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<td>3.</td>
<td>Haoze Tang, Santa Monica College (CA)</td>
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<td>4.</td>
<td>Jonah Weston, Pellissippi State CC (TN)</td>
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<td>5.</td>
<td>Ian Kao, Foothill College (CA)</td>
<td>62.0</td>
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<td>6.</td>
<td>Praneel Samal, College of the Canyons (CA)</td>
<td>58.5</td>
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<td>7.</td>
<td>Karen Mosoyan, Los Angeles City College (CA)</td>
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<td>8.</td>
<td>Jonghyun Park, Oakland CC (MI)</td>
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<td>9.</td>
<td>Shuyu Liu, UW-Eau Claire-Barron County (WI)</td>
<td>56.5</td>
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<tr>
<td>10.</td>
<td>Karen Susanto, El Camino College (CA)</td>
<td>55.5</td>
</tr>
</tbody>
</table>

Top Schools and Students by Region

Northeast: NHTI - Concord’s CC (NH)
Garima Rastogi, NHTI Concord’s CC (NH)
Anshul Rastogi, NHTI Concord’s CC (NH)

Mid-Atlantic: Middlesex College (NJ)
Ezra Goldfarb, Middlesex College (NJ)

Southeast: Pellissippi State CC (TN)
Jonah Weston, Pellissippi State CC (TN)

Midwest: Oakland CC (MI)
Jiabei Lyu, UW-Eau Claire-Barron County (WI)

Central: Anoka-Ramsey CC (MN)
Eleanor Fredine, Anoka-Ramsey CC (MN)

Southwest: Tarrant County College (TX)
Matthew Walton, Tarrant County College (TX)

Northwest: Edmonds College (WA)
Gaurang Pendharkar, Bellevue College (WA)

West: Evergreen Valley College (CA)
Ralph Cao, Pasadena City College (CA)

Mu Alpha Theta Mathematics Honor Society

by Jonathan Weisbrod, Liaison

Happy summer everyone! Now is a great time to start thinking about Mu Alpha Theta chapter goals. Does your institution have a chapter of Mu Alpha Theta? If not, perhaps petitioning for one can be a goal. To get started visit www.mualphatheta.org. For those of you with established chapters, I suggest providing opportunities for members to develop their experiences and apply for Mu Alpha Theta scholarships in the coming year.

The Mu Alpha Theta Two Year College Scholarships are available for students who advanced the mission of Mu Alpha Theta by excelling in mathematics, providing exemplary leadership and loyalty to their Mu Alpha Theta chapters, and providing service in the field of mathematics to local projects. Applications are due February 1, so fall activities play a crucial role in applications.

This month, I am highlighting one of the 2023 scholarship winners and his chapter. Max Ritter (pictured) of Saint Paul College in Minnesota, served as the president of his local chapter and significantly increased the diversity among Mu Alpha Theta members over the past year. He participated in the AMATYC Student Research League and was named a Science Scholar at Saint Paul College. This year, he will be transferring to Minnesota State–Mankato where he will major in engineering.

Saint Paul College re-established their Mu Alpha Theta chapter in 2019. The college is an institutional member of AMATYC and a frequent participant in the AMATYC Student Mathematics League and the AMATYC Student Research League.
The SIMIODE Challenge Using Differential Equations Modeling (SCUDEM) is an opportunity for three-member student teams in high school and undergraduate curricula from around the world to build and present differential equations models in one of three areas of their choice: (a) physics/engineering, (b) chemistry/life sciences, and (c) social sciences/humanities. Problems have included modeling how disputes in refugee camps are resolved, determining when a prey decides to flee an approaching predator, embodying how a cockatiel continues rotating on a small wheel, and the evolving strategy birds use in making their nests using mammal hair over leaf material.

Students will work on their model of choice from October 20–November 13, 2023, and submit a ten-minute video for judging. In the past each team has received on average 8–10 volunteer judges’ reports with constructive feedback and also received one of three awards, Outstanding, Meritorious, and Successful. Outstanding videos are posted at www.youtube.com/c/SIMIODE. The recognition of participation, the joy of working with others on modeling, and the feedback of judges make this a wonderful experience for students.

The registration fee is $33 per student. The registration deadline is October 18. MathWorks is supporting SCUDEM with a FREE copy of MATLAB and tutorials for each student team member and coach.

Please see https://qubeshub.org/community/groups/scudem for complete description, information, and registration for the upcoming SCUDEM competition. On the site you will also find links to previous SCUDEM problem statements and student submissions, including video presentations from Outstanding Award teams. There are SCUDEM teams who give talks at regional and national meetings as well as at the SIMIODE EXPO conference each February (https://qubeshub.org/community/groups/simiode/expo/). If you have additional questions, contact Brian Winkel at Director@simiode.org.

We seek volunteer judges who are willing to view three of the ten-minute video submissions related to one of the three problems. Many judges enjoy the opportunity so much they view more than three videos. Judging is a good way to get a feel for what your students are capable of doing and seeing student models presented to motivate modeling in your coursework.

SCUDEM is sponsored by SIMIODE - Systemic Initiative for Modeling Investigations and Opportunities with Differential Equations, a non-profit organization (https://qubeshub.org/community/groups/simiode). SIMIODE offers free Open Educational Resources in support of modeling to motivate teaching differential equations, a pivotal STEM course. SIMIODE provides hundreds of completely free downloadable and customizable modeling scenarios and ideas in a rich Community of Practice. Materials in SIMIODE are very supportive of community college mathematics curricula. While SIMIODE features differential equations activities, many of the Modeling Scenarios are appropriate for post-integration material applications and fit well in community college course offerings in addition to differential equations courses offered there. For example, “How long does it take an ant to build a tunnel of length x?” (https://doi.org/10.25334/dqrp-g032). We invite you to join our community and share the experiences of teaching through modeling.
HOME RUN PRESENTATIONS AWAIT IN OMAHA

by Michael Pemberton, Program Coordinator

Step up to the plate and begin making your plans to join colleagues and friends for the 49th AMATYC Annual Conference in exciting Omaha, Nebraska, November 9-12.

Whether this will be your first AMATYC Annual Conference or you’re an experienced professional, begin making plans so that you can take home grand-slam ideas for student engagement and success, innovative uses of technology, mathematical games and puzzles, history on diverse cultures, authentic placement and assessment, and best practices based on research in the teaching and learning of mathematics. The conference miniprogram is on-deck and available on the AMATYC website for you to plan each day of the conference.

Get into the game with our ANets! Begin your Thursday morning by attending themed sessions to learn about active learning in mathematics-intensive courses, authentic placement and assessment practices, inspiring student curiosity in and out of the classroom, ways that racism is everyone’s (mathematics) problem, or developing a data science program at two-year colleges. The 15-minute themed session talks make it easy to check out presenters and then change rooms for another talk that catches your attention. ANets are also hosting sharing sessions and scheduled meetings throughout the conference. Want more time to discuss what you learned in a session? Continue the conversation in the Impromptu area located in the Junior Ballroom foyer with great views of the Missouri River.

AMATYC rookies may join a walking tour of the CHI Health Center and Hilton Omaha while learning more about AMATYC and meeting AMATYC leaders along the route. These tours leave the Registration area on Wednesday evening at 5:00 pm and again on Thursday morning at 8:00 am. Thursday’s keynote is always a highlight. This year, Linda Braddy will share her experience promoting the use of evidence-based teaching practices that improve student learning outcomes and promote social justice.

The Center for Undergraduate Research in Mathematics (CURM) has organized a two-session symposium for this year’s conference that focuses on empowering faculty and providing resources to develop an undergraduate research program at their colleges. The symposium keynote “Undergraduate Research in Mathematics for Two-Year College Students” is Friday morning at 8:00 am, followed immediately by a two-hour workshop. As of this writing, CURM has applied for a new grant, and the symposium will focus on how to be involved in the grant. If the grant is not funded, then the symposium will be scaled back to a session on “Undergraduate Research in Mathematics for Two-Year College Students.”

On Friday morning at 10:20 am, featured speakers Corey Hatt and Paula Jakopovic will share with us “The Nebraska Math Readiness Project: A State-wide Collaboration”, which has involved seven community colleges and 67 high schools, and has helped prepare more than 2,750 students for college-level mathematics since 2018. Friday also holds many more opportunities to take in home run presentations throughout the day. Don’t miss the featured presentation “Making Sense of Linear Equations Through Arithmetic Sequences” at 3:10 pm. Ryota Matsuura will describe an approach that lowers barriers to entry into linear equations and deepens student understanding of this essential content. End your day by joining in the fun and fast-paced presentations during the popular AMATYC Ignite event at 6:00 pm.

At Saturday’s Awards Breakfast Aaron Yazzie, mechanical engineer at NASA Jet Propulsion Laboratory, will share his passion for STEM outreach through his extensive contributions to NASA’s quest to not only study the development of terrestrial planets in our solar system, but also to search for evidence of past life on Mars.

Join us for the ninth inning on Sunday morning for more presentations and the Closing Session at 10:30 am. This is a chance to reflect on the fantastic ideas you can share with your colleagues and students and what this year’s conference has meant for you. You can also learn about opportunities to get more involved in AMATYC, the Delegate Assembly, and a preview of next year’s 50th Anniversary Conference in Atlanta!
Apply Now for the AMATYC Regional Scholarship!
by Sarah Pauley, Northwest Regional VP

The AMATYC Regional Scholarship is back and ready to help you get to the annual conference in Omaha! Apply now at www.amatyc.org/RegionalScholarship. The application is quite simple – just fill out your name and contact information to be entered.

The Regional Scholarship helps one AMATYC member from each region defray the costs of attending the annual conference. Each scholarship is in the amount of a discounted conference registration and any AMATYC regular member can apply. Winners are selected by the Regional Vice Presidents in a random drawing.

Each region awards one scholarship. But wait – there’s more! Thanks to the AMATYC Foundation, an additional eight scholarships will be awarded at random among all who apply.

The deadline is September 1, so submit your application today! Support the AMATYC Regional Scholarship program by donating to the AMATYC Foundation and find out more at www.amatyc.org/donations.

Questions? Email your Regional Vice President or contact Sarah Pauley at sarahpauley@amatyc.org. Good luck!

New Professional Development Community on myAMATYC
by Karen Gaines, Online Community Coordinator

Professional development resources for AMATYC now have an additional home - a community on myAMATYC (https://my.amatyc.org). The new community is accessible to the public but also contains an area for discussions among those with an AMATYC login. The community has video resources, book and technology recommendations, links to the standards documents, links to forums and events, and also information about professional development opportunities within AMATYC.

Check out this new community as well as the other communities such as IMPACT Live!, Open Forum, and the ANets all on myAMATYC (https://my.amatyc.org).

### Future AMATYC Conferences

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<th>Year</th>
<th>Location</th>
<th>Dates</th>
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<tr>
<td>2023</td>
<td>Omaha, NE</td>
<td>November 9-12</td>
</tr>
<tr>
<td>2024</td>
<td>Atlanta, GA</td>
<td>November 14-17</td>
</tr>
<tr>
<td>2025</td>
<td>Reno, NV</td>
<td>November 13-16</td>
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<tr>
<td>2026</td>
<td>Philadelphia, PA</td>
<td>November 19-22</td>
</tr>
<tr>
<td>2027</td>
<td>Spokane, WA</td>
<td>November 11-14</td>
</tr>
<tr>
<td>2028</td>
<td>Phoenix, AZ</td>
<td>November 9-12</td>
</tr>
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</table>

For additional information, contact the AMATYC Office at amatyc@amatyc.org.

### SML Problem Corner
Can YOU work a Student Mathematics League problem?
This one is from the Spring 2014 competition.

A subset \( S \) of \( \{1, 2, 3, \ldots, n\} \) is called odd-neighbored if for each even number \( k \) in \( S \), if \( k < n \) then \( S \) contains both \( k \cdot 1 \) and \( k + 1 \), and if \( k = n \) then \( S \) contains \( k - 1 \). For example, \( \emptyset \), \( \{1, 3, 5, 7\} \), \( \{1, 2, 3, 5\} \), and \( \{3, 4, 5, 7, 8\} \) are all odd-neighbored subsets of \( \{1, 2, 3, \ldots, 8\} \). Find the number of nonempty odd-neighbored subsets of \( \{1, 2, 3, \ldots, 12\} \).
UNDERGRADUATE RESEARCH
OPENING DOORS TO GLOBAL, INCLUSIVE, AND EQUITABLE LEARNING

by Barbara Leitherer, International Mathematics ANet Chair

“Internationalization at Home” is a concept that brings the world to the students rather than requiring them to study or intern abroad. At AMATYC we have followed that path so far and have concentrated efforts on a more globally oriented curriculum approach and culturally responsive teaching to satisfy the needs of students in the first two years of college. Literature indicates that another high-impact practice is to involve students in undergraduate research. When undergraduate research is centered around a global theme, it not only raises curiosity but also becomes an innovative venue to develop students’ cultural understandings and global mindsets. The following observations reflect on such undergraduate study directed by four mathematics faculty at the Community College of Baltimore County (CCBC).

Summary: Over a period of three semesters, the CCBC team guided honors students through independent research to analyze global climate change data provided by the World Wildlife Fund (WWF). Students were confronted with a large set of data primarily qualitative in nature. Data collection came from rural communities across the globe and, for the most part, resulted in responses to open-ended interview questions about changes in climate and weather patterns and the effect those factors have on personal livelihoods. Students had to learn the art of extracting information from text, defining and coding variables, and performing statistical tests. The final product was a research paper that each student wrote and presented to WWF and CCBC executives, the Honors Program director, and faculty advisors.

Making a case for belonging and equity: From the beginning faculty advisors asked students to practice open and transparent communication with one another. Students joined various team meetings so that they could learn how the flow of discussions was directed, ideas were interrogated, and personal interactions were handled. Evaluations showed that students noticed how well professors collaborated with each other. “They [the instructors] voiced their opinions and listened to each other. It made the whole atmosphere feel collaborative and made us all feel like one team.” Students’ sense of belonging gained even more meaning through the interactions with WWF scientists. They explained the data website www.wwfclimatecrowd.org to the students, approved their research themes and coding work and commented on their research paper drafts. Having been granted unconditional support and team acceptance, students felt they were being treated as equal partners, which in return spurred them on to deliver high-quality papers.

Making a case for global learning: Before starting out, students were unaware of the severity of climate change. Their initial perception was that it happens in isolated events. However, after finishing their research papers, they realized that climate change was global, more impactful, and more serious than they had expected. Due to the open-ended format of survey questions, students fully relied on personal stories of farmers, fishermen and cattle herders as their primary resources of information. That gave them deep insights into rural communities whose living conditions were uprooted by global climate change. In the process of reading stories filled with insecurity, sadness and despair, students developed empathy toward the people they studied and were more careful with coding and analyzing data to avoid errors.

By now, I hope that your curiosity has increased enough so that you want to continue learning about this undergraduate research study. If so, please join the International Mathematics ANet and dive into the upcoming article “Global Learning and Climate Change: Undergraduate Research Reflections from Student Scholars and Faculty Advisors at a Two-Year College” (Leitherer, Dwarka, Xhane, Ramil. It will be uploaded to myAMATYC (https://my.amatyc.org) in August. Happy summer reading!

TRAVELING WORKSHOP ON ACTIVE LEARNING

by Sonia Petch, Collin College

As part of the annual TexMATYC meeting, mathematics educators in Texas attended the AMATYC Traveling Workshop titled “Encouraging Diverse Learners to Take Ownership through Classroom Engagement.” The workshop was held March 4 in Houston, TX, in conjunction with the annual convention of the Texas Community College Teachers Association. The TexMATYC Board members were excited to include this professional development opportunity in their section programming.

The workshop was designed to empower faculty to incorporate engagement strategies in their courses and to encourage student participation and appreciation of mathematics while addressing the needs of diverse learners. The facilitators for the workshop were Karen Gaines, AMATYC Teaching for PROWESS Project Director and myAMATYC Online Community Coordinator, and Scot Pruyn, mathematics faculty member at Clackamas CC in Oregon City, Oregon, and AMATYC Teaching for PROWESS Phase I College leader.

The workshop modeled strategies to engage students in the classroom based on guiding principles of active learning. Participants had the opportunity to experience a problem-solving task and participate as students in visibly random groups using vertical whiteboards. Both facilitators were engaging and led quality discussions focusing on ways to create thinking tasks and facilitate their implementation in the classroom. The attendees provided positive feedback at the end of the workshop. The TexMATYC Board hopes to offer other workshops at future annual meetings.
Have you noticed the new look for IMPACT Live?! Check it out at www.amatyc.org/live. We are still highlighting communities and ANets as they host bimonthly discussions. In addition we are sharing the Standards Revision Groups (SRGs) and their important work in updating our standards. The site now houses the traditional and digital enhanced versions of Crossroads, Beyond Crossroads, and IMPACT, as well as current AMATYC position papers.

The 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’s documents that will go into the digital enhanced versions, and 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 Julie Phelps, chair of the Standards Committee, at myAMATYC or at jphelps@amatyc.org. Visit the IMPACT Live! site (www.amatyc.org/live) to check out the latest news, hosts, and podcasts that support the IMPACT document.

STANDARDS TEAM UPDATES
by Julie Phelps, Standards Team Chair

Our standards reflect the shared values, aspirations, and responsibilities AMATYC projects upon teaching mathematics in the first two years of college. Keeping our standards current and innovative is essential to our organization. The 2023 Standards Team is pleased to share that the continuous improvement process for our standards (Crossroads, Beyond Crossroads, and IMPACT) is in process. The updates to the standards are available on myAMATYC. You can read the comments and see the feedback from the AMATYC community during the review process and forums. This year’s proposed updates are located on the Standards Documents page https://my.amatyc.org/impactlive-home/standards-docs. The updates include the Standards for Content, Standards for Intellectual Development and Standards for Pedagogy from Crossroads, as well as Curriculum and Program Development from Beyond Crossroads. We look forward to seeing these updates voted on at the Fall 2023 Delegate Assembly.

In addition, the Standards Team plans to continue review of the AMATYC standards on a regular basis and would like to see you get involved this year and for years to come. If you are interested in engaging in this work, please join an ANet to get involved in the standards updates. To do this, sign in to https://my.amatyc.org, then click on the Communities drop down, and choose All Communities to select an ANet you would like to join.

“Developmental Mathematics has been in a continuous state of redesign for more than a decade, but the constant in the chaos has been a focus on student success.”
-- Kim Granger, Developmental Mathematics ANet Chair

DEVELOPMENTAL MATHEMATICS ANET
by Kim Granger, Chair

The Developmental Math ANet invites you to join the discussion on Strategies and Mindset for Student Success in Developmental Mathematics! Over the past few years, I have heard comments such as “my institution got rid of developmental education,” or “developmental education is a thing of the past; it no longer exists.” On the contrary, very few institutions, especially community colleges, have eliminated developmental mathematics; however, the structure and curriculum have been redesigned so significantly that some no longer recognize it as developmental mathematics. In most cases, this was done through the implementation of corequisite courses, which replaced the prerequisite course sequence. Though many of the stand-alone courses have been removed from course schedules, most students still have access to the just-in-time remediation (developmental mathematics!) that is delivered through corequisite courses.

Many developmental educators have been teaching stand-alone developmental math courses for years and have been active participants in various redesigns. Over time, we’ve developed teaching techniques, activities and class procedures that have improved student success. The shift to corequisite courses has been a rocky experience for many as it has been a challenge to find the right supports, structure and strategies that best serve students as we work toward the goal of preparing them to succeed in college-level math courses. We are at a place where we can benefit more than ever from the opportunity to network and support one another as developmental educators.

The Developmental Mathematics ANet is open to everyone, and this is a great time to get involved! If you are interested in collaborating with other faculty who are teaching developmental mathematics, including corequisite courses, and if you are seeking ways to improve student success, then I hope you will use the Developmental Mathematics ANet as a resource. There are many ways to participate. We host regularly scheduled virtual meetings that provide an opportunity to share ideas, successes and challenges throughout the year. You can find the meeting schedule and links on myAMATYC (https://my.amatyc.org). There are also ongoing discussion board conversations at myAMATYC, and we will have an in-person meeting at the AMATYC Annual Conference in Omaha. Developmental Mathematics has been in a continuous state of redesign for more than a decade, but the constant in the chaos has been a focus on student success.

I hope that you are excited to attend the AMATYC Annual Conference in November. The Developmental Mathematics ANet is sponsoring several events. These events are an excellent place to connect with other developmental educators.

• On Thursday morning, we will come together for our official Developmental Mathematics ANet Meeting. Come join the discussion as we share ideas and build our network of fellow educators with a passion to improve student success in developmental courses. One topic we will focus our discussion towards is the developmental mathematics that is intended to prepare students for success in the STEM pathway.

• On Friday morning, we will host a sharing session titled “Integrate Study Skills into Your Courses to Increase Student Success.” If you have ideas you would like to present during this session, please reach out to Kim Granger before the conference.

In addition to the ANet time slots on the schedule, the conference program will have many presentations marked “SM” for “Strategies and Mindset for Student Success.” These are the sessions that focus on “improvement of the quality of developmental mathematics programs to better prepare students for success.” We look forward to seeing you in Omaha very soon!

For more information about the Developmental Mathematics ANet or to get involved in the leadership of the ANet, contact me at Kim.Granger@amatyc.org.
AMATYC 2023 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.

September 29-30: MichMATYC Conference, Jackson College, Jackson, MI.
Contact: Erik Brown, brownerik@jccmi.edu
Website: www.michmatyc.org

September 30: WisMATYC Fall Conference, Fox Valley Tech College, Appleton, WI.
Website: http://wismatyc.org/

October 6: ArizMATYC Fall Conference, Chandler-Gilbert CC, Chandler, AZ.
Website: https://arizmatyc.org/wp/

October 10: IMATYC Conference, Indian Hills CC, Ottumwa, IA.
Website: www.imatyc.org/

October 20-21, VMATYC Annual Conference, Blue Ridge CC, Weyers Cave, VA.
Website: https://vmatyc.org

November 9-12: 49th AMATYC Annual Conference, Convention Center (CHI Health Center), Omaha, NE.
Website: www.amatyc.org/2023ConfHome

December 8-9: CMC® Fall Conference, Hyatt Regency Monterey Hotel & Spa, Monterey, CA.
Website: www.cmc3.org/conferences/fall/
Many of our friends in humanities departments are extremely concerned about platforms like ChatGPT, and they fear that students will submit technology-created written assignments. To address this concern, many institutions are modifying plagiarism policies, and our colleagues in writing-intensive courses are discussing strategies and policies to ensure academic integrity.

What about mathematics? Do we have plagiarism policies? Is it plagiarism to submit a step-by-step solution from Mathematica or Wolfram Alpha without attribution? Questions about equity also arise. Some commercial platforms put their worked-out solutions behind a paywall. If some students have access to these expensive platforms and others do not, how does the instructor ensure fairness?

Is it plagiarism to view a solution online and then submit the work as your own? When students are working together, where is the line between collaboration and cheating? The standard in computer-based homework sets is to provide algorithmically generated problems, so that each student completes a different assignment. This was supposed to deter cheating, but now one could argue that technology that provides easy answers makes these platforms obsolete.

Practice is an essential part of the mathematical learning process. Yet, if formative assessments like homework sets and computer-based learning systems are easily subverted with technology, students may fail to practice, leading to disastrous results on summative assessments.

So, what is to be done?

1. Discuss with students the dangers of misusing tools. My favorite metaphor is that an athlete or artist would never hire someone else to train or rehearse so that they could spend their time doing something else.
2. Find ways to best use emerging technology. Consider a greater emphasis on real-world problems with mathematical modeling and use the technology to ease the computation.
3. Ask questions that are not easily solved by technology. For example, ask students to construct examples of functions with given characteristics.
4. Reduce class sizes in mathematics classes so that instructors can assign richer activities and provide more individual feedback.
5. Add lab hours to mathematics classes, so that students can engage in collaborative active-learning experiences.
6. Reconsider all written homework assignments and computer-based activities. Consider alternative assessments such as presentations, oral exams, and journals.
7. Re-evaluate testing in online mathematics courses. Consider requiring online students to take written tests at a testing center.

These issues will be a large part of our discussions at the AMATYC Annual Conference in Omaha. Consider attending the Mathematics Intensive Academic Network meeting and the Mathematics Intensive sharing session. We would love to hear your ideas.

I welcome your comments or concerns. Contact me at bob.cappetta@amatyc.org.
FOCUS ON AFFILIATES: ARKMATYC
by Teresa Jennings, Arkansas State University - Beebe

ArkMATYC hosted its first Virtual Mini Conference in March of 2022, led by then ArkMATYC President Duane Doyle. This was the first opportunity to meet as an organization for many years. Members from TexMATYC and OKMATYC joined members and friends of ArkMATYC in discussing a variety of topics, including:

- Implementation of Quantitative Literacy as a math option for some degrees, in place of College Algebra.
- Multiple measures for math placement of incoming students.
- Active learning in the classroom.
- Plans for the Southwest Regional Conference.

ArkMATYC hosted the AMATYC Southwest Regional Conference in North Little Rock, Arkansas this summer, June 15-17. The theme of the Conference was Making Mathematics Natural for All.

Andrew Bolton and Vic Ford, from the Arkansas Agriculture Cooperative Extension, opened the conference with the themed session at the Wyndham Riverfront Hotel on Thursday evening. The conference then moved to University of Arkansas Pulaski Technical College for breakout sessions and keynote speakers Linda Griffith on Friday and Frank Savina on Saturday. Linda was a professor of Mathematics at the University of Central Arkansas (1988-2016) and completed her career as a mathematics consultant for the Wilbur Mills Education Service Cooperative. Frank has led the design, development, and implementation of the Pathways to Calculus and Introductory Statistics project at the Charles A. Dana Center at the University of Texas at Austin. The Regional Conference provided a wonderful opportunity to rekindle excitement in the state affiliate and provide more opportunities for two-year college mathematics instructors to collaborate locally.

Connecting over dinner at Southwest Regional Conference in North Little Rock, AR.