This year will be truly exciting! Not only does the 48th AMATYC Annual Conference present the opportunity to network with and learn from colleagues and other great minds in mathematics education, but this year you will have the opportunity to visit Toronto, the capital city of Ontario and the largest city in Canada. If you’ve never been to Toronto, it’s an opportunity you don’t want to miss!

Canadians are known for being polite, courteous, and welcoming, and it is our hope that you will be able to experience this first-hand in Toronto this fall. And as we learn to adjust to the new normal in our post-pandemic learning environments, we can rethink how we structure our classrooms and our teaching to extend this warm welcome to all learners in our classrooms. We have keynote sessions from Peter Liljedahl on “Building Thinking Classrooms” and Ben Orlin on “How to Speak Math,” and featured sessions from Sunil Singh on “The Power of Mathematical Storytelling” and Stan Yoshinobu on “Equitable and Inclusive Teaching Practices in College Mathematics.” If you are interested in reaching people of different backgrounds, ethnicities, identities, orientation, learning experiences, or abilities, the conference sessions this year will help you to say “You're Welcome” to all your students!

The conference is being held at the Sheraton Centre Toronto in the heart of downtown Toronto. You’ll be minutes away from the world-famous CN Tower, the tallest free-standing structure in the western hemisphere and one of the most popular tourist attractions in the world. It boasts a glass floor on the observation deck so you can see the ground below you, and a revolving restaurant where you can take in a great meal while enjoying a bird’s-eye view of the whole city. For the very daring, there’s even an opportunity to put on a harness and walk around the edge of the tower!

Next to the tower is Ripley’s Aquarium. Its ten galleries feature a total of 450 different species and over 20,000 creatures. Each gallery is home to a different aquatic theme or habitat, including the rainbow reef, ray bay, planet jellies, and the dangerous lagoon.

Also nearby is the famous distillery district and the Winter Village, also known as the Christmas Market, which will be starting up just in time for the conference. You can experience the magic and romance of the holiday season in an intimate and historic setting, as you shop and dine at a variety of quaint boutiques and vendors on a cobblestone street under a canopy of lights. With luck, there will even be a November snow to make the experience even more picturesque and magical!

► Continued on page 4
Choosing to Change the Narrative

Laura Watkins
Glendale CC • Glendale, AZ

Over my career teaching at a community college, I have been fortunate to have the opportunity to attend a number of international mathematics education conferences. As a result, I have had conversations with educators around the world to better understand their educational systems, from primary through postsecondary school. These conversations have led to a greater appreciation of the egalitarian nature of higher education in the U.S., and particularly, a greater appreciation of community colleges. It is precisely the open access policies of community colleges that provide opportunities for postsecondary education for all students; more importantly, opportunities for those students who have been underserved or are otherwise underprepared. Many of our students come from low-income families, are students of color or first-generation college students, or are balancing work, school, and home responsibilities. Yet, at the community college they can pursue their educational, vocational, and personal enrichment goals as members of our community.

As student enrollment patterns and course/degree completion patterns of students were studied over the last decade, it became clear that offering long sequences of developmental mathematics courses provided obstacles for students striving to successfully complete their math sequence and achieve their academic goals. Placement into courses often occurred based on scores on placement tests, which have been shown to be inaccurate. The data show that many students do well in a transfer-level mathematics class, more than previously thought. In lieu of a placement test, many institutions have begun using multiple measures (high school GPA, ACT/SAT scores, high school mathematics courses taken) to determine a student’s readiness for transfer-level mathematics. This change has led to many of us teaching classes where students arrive with a wider variety of mathematical backgrounds than before.

In an effort to help students enroll and succeed in appropriate transfer-level courses, mathematics departments have been offering corequisite courses in which support for developing prerequisite skills is offered alongside the transfer-level course or developing a pathways model that provides students with the opportunity to complete their first transfer-level mathematics course within one year. While these strategies do not eliminate failure in postsecondary mathematics, evidence shows that when students are provided appropriate support the majority can succeed in these transfer-level math courses (e.g., Logue & Watanabe, 2014; Sowers & Yamada, 2015). In conversations with faculty, I have heard concerns about the ability to provide appropriate academic support for all students who have been placed through multiple measures. These concerns have likely been amplified by the recent pandemic.

Some instructors have expressed concern with difficulty in engaging their students in meaningful ways while ensuring that students can successfully complete the course. In the midst of these challenges, it is easy to focus on the mathematics students do not know or cannot do. I know that I occasionally get frustrated and fall back on this deficit narrative – which is unproductive for me and my students. Narratives such as this indicate who we perceive as mathematically capable. All will have a more positive experience if we keep our focus on helping students to build community and a sense of belonging while supporting them in increasing their knowledge and ability to do mathematics by using an anti-deficit perspective (Peck, 2021; University of Wisconsin La Crosse, n.d.).

Let us consider what we, as instructors, can do to encourage the development of an anti-deficit perspective. As we all know, teaching a class of students with a wide range of mathematical knowledge is challenging. One strategy for addressing this is to choose learning tasks with a low floor and high ceiling. A low floor, high ceiling task is one that allows all learners to find a point of entry and engage within their own level of comfort. An added benefit of such tasks is they can then be extended to become more challenging and reach higher-level instructional goals. Perhaps the class is studying a unit on quadratic functions and one of your instructional goals is to have students identify the salient characteristics of the quadratic functions. The instructor can provide a graph of a quadratic function, for example $f(x) = 0.5(x + 1)(x - 3)$, with instructions to identify eight characteristics of the function. The instructor provides students a few minutes of individual thinking time followed by a few minutes of small group collaboration before engaging in a class discussion about what students observed about the function and its graph. This activity situates all students as being capable of reasoning mathematically and possessing resources they can use to make sense of the mathematics. As students share observations such as “the graph crosses the x-axis at -1 and 3,” “the graph increases to the left of 1 and to the right of 1,” and “the graph reaches its minimum at 1,” we can learn what characteristics they have already noticed and how they describe them. We need not be afraid of their imperfect language or inconsistencies in their thoughts. Being flexible in accepting those initial descriptions from students, imprecise or incorrect as they may be, provides a catalyst for engaging students in productive sensemaking that can lead to developing precise mathematical terminology and definitions. This should enable students to apply definitions and communicate their observations using correct mathematical language. Through experiences like this, our students learn that doing mathematics is not about remembering the right procedure for a given problem and calculating the correct answer quickly and accurately. Rather, doing mathematics is about making sense of ideas, reconciling inconsistencies, making connections between different representations of the same mathematical idea, and so much more.

Teaching with an anti-deficit perspective requires us to choose to change the narrative through intentional actions that build students’ agency as learners of mathematics. Through this we can acknowledge that anyone can learn mathematics, that learning takes time, and that imperfect articulation of mathematical ideas is part of the learning process and not a cause for embarrassment. Through our work to combat negative beliefs about who is good at math, we can cultivate positive mathematical identities in our students.

References on page 3
Why YOU Should Run for AMATYC Regional Vice President!
by Kathryn Kozak, Past President

One of the most important positions an AMATYC member can hold in the organization is that of Regional Vice President (VP). A Regional VP plays a role in every aspect of AMATYC, acting as the link between their region's members and the Executive Board. This is essential for AMATYC's mission to serve the diverse needs of its members, because each college, affiliate and region of AMATYC is unique. Each of the eight Regional VPs represents the affiliates and members of their region as a member of the AMATYC Executive Board and to other leaders, such as ANet Chairs. One of the many roles of the Regional VP is to attend a meeting of each regional affiliate at least once during their two-year term. At these meetings, the VP listens to faculty to learn about successes and concerns they may have in their college, affiliate, and state or province. The VP then shares this feedback with the AMATYC Executive Board, to help the Board make informed decisions that affect the higher education mathematics community.

Another important role of the Regional VP is to bring initiatives and requests from AMATYC to the faculty in their region. For example, VPs inform their regions of new AMATYC position statements and solicit feedback on proposed position statements. VPs also recruit volunteers for regional leadership positions for ANets and other services within AMATYC. In addition, the VP promotes membership in AMATYC to the members of each affiliate in the region.

VPs communicate with members of their region in a variety of ways, including email blasts, myAMATYC posts, virtual meetings, and the regional meeting at the AMATYC Annual Conference. For this reason, the VP must have good communication skills to write emails and posts, to set regional meeting agendas, and to organize and conduct the regional meetings.

All members of the AMATYC Executive Board write and review motions for consideration by the Board. The Board also approves all leadership appointments, develops the AMATYC budget, and approves policy changes. They also make every effort to ensure that the action items in AMATYC's strategic plan are being accomplished. Through these activities, the Board sets the direction of AMATYC. The Regional VPs play an invaluable role.

I encourage you to consider running for Regional Vice President, or to nominate someone for this position. Nomination packets are due by February 1, 2023. It is understandable to feel some reluctance to run for VP of your region if the incumbent is running. However, here are some things to consider:

- By running for office, you gain name recognition that may result in future leadership opportunities.
- The incumbent may not run; and, even if they do, you might win!
- The Northwest VP cannot run again due to term limits, so that position will not have an incumbent.

For more information about the nomination process, please visit www amatyc org/ExecutiveBoardNomin. If you are interested in a VP position or would like more information, contact Kathryn Kozak at kAthryn.kozaK@ amatyc.org.

Nominations for the AMATYC Teaching Excellence Award
by George Hurlburt, President-Elect

Every two years AMATYC honors teachers who excel in the teaching of mathematics in the first two years of college. It is very important that we recognize excellent teachers. Teaching is not an easy profession. Too often, teachers are underpaid, heavily scrutinized, and expected to do more and more with fewer resources.

Each year, one teacher in the first two years of college can touch the lives of several hundred students. Awards, especially at a national level, bring to light the many sacrifices faculty members make to help students improve their lives. Please consider nominating a colleague who always goes that extra mile for students.

The Teaching Excellence (TE) Award is awarded to regular AMATYC members (individual, lifetime, retired, and adjunct) whose primary assigned duties are the delivery of instruction in the first two years of college. The number of TE awards given is based upon the total number of nominations received and the strength of the applicant pool. The number of awards can range from 0 to 8. The more nominations received, the more awards we can give!

The names of the AMATYC Teaching Excellence awardees will be announced at the 2023 AMATYC Annual Conference in Omaha. More information about the award, including instructions on how to nominate a colleague, are available at www amatyc.org/TeachExAward. Deadline for nominations is December 9, 2022.
Discover Exciting Ideas in Toronto
by Michael Pemberton, Program Coordinator

Make your plans now to join your colleagues and friends in one of the most diverse and multicultural cities in the world for the 48th AMATYC Annual Conference in Toronto, Ontario, November 17-20.

You can look forward to each day being filled with outstanding presentations that will greet you with inspiring ideas to increase student engagement and success, learning environments focused on equity and inclusion, innovative uses of technology, mathematics history from diverse cultures, revising curriculum within the STEM pathway, strategies for embracing the challenge of faculty leadership, and best practices based on research in the teaching and learning of mathematics. Be on the lookout in your mailbox or visit the AMATYC website to see the conference miniprogram. You can use the conference app to plan each day of the conference.

Conference highlights include two exciting keynote sessions – Peter Liljedahl on “Building Thinking Classrooms” and Ben Orlin on “How to Speak Math.” Looking to hear about the work being done by the AMATYC ANets? Look for their meetings scheduled throughout the conference. After the sessions end, you and your colleagues can continue your discussion in the Impromptu Room.

Begin your Thursday morning at 8:00 am with any of four themed sessions to explore equity centered on students and faculty, student engagement in developmental courses, international mathematics, and industry applications in mathematics. If this is your first conference, join an AMATYC 101 tour at either 8:00 am or 8:20 am to learn more about our organization and the Sheraton Centre Toronto conference space.

On Friday morning at 8:00 am, there are three more themed sessions on math pathways, embracing leadership, and fresh approaches to math intensive concepts. Each 15-minute talk makes it easy to check out the presentations and move between rooms for any that catch your eye.

Teaching for PROWESS (TfP), an NSF-funded project, will sponsor a symposium on active learning. First, on Friday morning at 8:00 am is the TIP keynote address “Actively Motivating Active Learning in Mathematics,” immediately followed by a workshop “Actively Learning Mathematics Through Active Learning.” Saturday morning at 10:45 am will bring the symposium’s second two-hour presentation “Actively Motivating Transformational Change in Mathematics Education.”

On Friday at 3:10 pm, featured speaker Sunil Singh will share with us “The Power of Mathematical Storytelling.” He will address the question “Why did the romance of mathematics end?” and the needed solutions by examining the global history of mathematics. Then end your day with the fun and fast-paced presentations of the AMATYC Ignite event at 6:00 pm.

Saturday also holds many opportunities to learn and discover at sessions and workshops throughout the day. At 2:15 pm, featured speaker Stan Yoshinobu will engage us in strategies and classroom scenarios to create equitable, inclusive environments during his interactive session “Equitable and Inclusive Teaching Practices in College Mathematics.”

Join us on Sunday morning for more presentations, and our Toronto Farewells session at 10:30 am. This is a great time 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, a preview of the Toronto Virtual Days on December 2-3, and a look towards the 2023 AMATYC Annual Conference in Omaha.

So come for the conference and stay for the city! When you factor in the conference sessions that will intrigue you and ignite your passion, as well as the diverse and unique attractions and experiences that the city has to offer, it should be easy to see that the 48th AMATYC Annual Conference in Toronto will be one to remember! So put on a toque, pick up a double-double and some Timbits, and join us in Toronto this November, where everyone is welcome, eh!

➢ Toronto, Cont’d from page 1

While we can’t make any promises about the weather, we can promise that you won’t go hungry in Toronto! In the spirit of the You’re Welcome conference theme, you will find a multicultural and diverse array of delicious food options within a short distance of the hotel. For a high-end and truly Canadian dining experience, try Canoe, offering another great view of the city while you dine! For a sampling of the various culinary delights Toronto has to offer, try out the Beyond Kensington Market Toronto Food Tour. This three-hour walking tour of the Kensington Market makes stops at six quintessential food vendors. You can sample food from Middle Eastern, Caribbean, South American, Asian, Scandinavian, and Indigenous North American cultures, while learning about the area, its history, its culture, and its hidden gems!

If you appreciate unique entertainment, you can see an award-winning independent film at the Lightbox, the permanent year-round home of the Toronto International Film Festival, take in a live show at one of Toronto’s many theatres, including the off-Broadway productions staged at the various Mirvish theatres, or laugh out loud at Second City, a comedy theatre home to some of Toronto’s funniest improv actors. Sports lovers can catch a Toronto Raptors basketball game, wander through the Hockey Hall of Fame, or learn the Canadian rules of football at a Toronto Argonauts game.

You also won’t want to miss the St. Lawrence Market, only a short walk from the hotel and home to over 100 different vendors selling artisan clothing, jewelry, art, coffee, tea, chocolate, meats, cheese, and many more food options (didn’t we tell you that you wouldn’t go hungry?)! And be sure to try a Canadian bacon (peameal) sandwich, unofficially dubbed Toronto’s signature dish by our mayor.
Statistics ANet Hosts

**IMPACT Live!**

by Rebecca Wong, Chair

In May, the Statistics ANet hosted IMPACT Live! The purpose of IMPACT Live! is to make IMPACT (Improving Mathematical Prowess and College Teaching) a living document rather than one that is published to sit on a shelf. Each month AMATYC ANets are invited to host IMPACT Live! activities centered on one of the IMPACT pillars, giving members the opportunity to focus on how IMPACT applies specifically to their ANet.

Mark Earley, Kelly Spoon, and I served on the Statistics ANet IMPACT Live! planning committee. The committee chose to focus on the IMPACT pillar of Ownership. Specifically, the committee focused on the IMPACT Ownership themes of faculty Taking Responsibility and Showing Initiative: taking responsibility for teaching an up-to-date, student-focused course and showing initiative by being committed to continued learning.

The month’s activities had several components:

- **IMPACTful Thoughts**, a blog post written by Mark Earley introducing the month’s theme.
- **IMPACT in Action**, weekly discussion topics that included conversations about the greatest challenges faced in teaching introductory statistics, and best sources of professional development in statistics education.
- **IMPACT Plus**, an article highlighting current research in statistics education.

Nick Horton from Amherst College wrote our IMPACT Plus article. In it he highlighted the Journal of Data Science and Statistics Education and included links to articles that might be of interest to faculty at two-year colleges. Recommended articles included “Student Perceptions of Engagement in an Introductory Statistics Course,” and “From Research to Practice: Using Assessment and Early Intervention to Improve Student Success in Introductory Statistics.”

I know that May was a busy month on college campuses with all of us wrapping up courses, giving and grading final exams and projects, and attending celebrations of student achievement. Fortunately, you can participate in IMPACT Live! anytime, not just in the month of May. To view the resources and participate in discussions simply log into myAMATYC and click on the IMPACT Live! link. Let’s keep learning together.

The IMPACT of Small, Brave Steps

by Jennifer Ackerman, Innovative Teaching and Learning ANet Chair

In my journey as an educator I’ve learned to do what I expect from my students: to be brave, and even uncomfortable, with trying something new, and to be willing to fail on the path to achieving success. It hasn’t always been easy, and there have been failures along the way, but sometimes the hardest part of making a positive change for student success is taking the first step.

Consider the issue of equity, for example. It’s important to acknowledge that before any real change can be made, there must be at least some change in perspective, whether that’s getting “buy-in” for an external initiative or a true, intrinsic desire for creating a more equitable classroom. It takes so much effort and strength (in ourselves) for faculty to change the way we see things and try something different. There must be a willingness to go into the unknown or unfamiliar, which I think is very brave.

Faculty face so many demands on their time that it can be difficult to find time for self-reflection or exploration. An important factor that has contributed to my growth has been collaborating with other faculty. Faculty support each other just by talking about different ideas. What did you try? What worked? What didn’t work? What have you read? What do you plan to try next?

A great way to share ideas and learn from other faculty is to participate in the IMPACT Live! discussions hosted on myAMATYC by the Mathematics Standards in the First Two Years of College (IMPACT) Committee. Each month has a specific theme centered around the four pillars of the IMPACT document PROWESS: PRoficiency, OWnership, Engagement, and Student Success. This website provides a forum that is designed by faculty to foster collaboration among AMATYC members and friends.

The IMPACT Live! focus is on Student Success and is hosted by the Innovative Teaching and Learning Academic Network (ITL ANet) and Project ACCCCESS. One goal is to provide practical ideas that faculty can investigate and then put into practice as they prepare for a new semester. The discussion posts provide an important forum for sharing ideas, research, and experiences.

I hope you and your colleagues can lift each other up to provide support and help each other take the next small, brave step to implement innovative and equitable ideas that create ripples of positive change for student success.
Tips for Faculty Resiliency
by Janna Liberant, Rockland Community College

Do you feel tired and stressed out this semester? Many faculty report that they feel especially exhausted and dispirited, even after returning to campus to teach their students. They feel that students are missing basics and their lack of motivation is extremely difficult to overcome. In a recent conversation the phrase “I feel like I am swimming upstream” came up.

Faculty experts in stress, anxiety and inclusion offer guidance for caring for our own mental health and supporting students. In 2021, I hosted a roundtable discussion at State University of New York to engage faculty in a conversation about how to promote resiliency. Here are some suggestions that emerged from discussions with colleagues from different disciplines.

One suggestion was to reflect on what’s missing in our lives and fill that gap with a hobby. For instance, someone who feels they are spending too much time on teaching virtually and attending other online meetings could take up mindfulness or yoga. Several faculty members mentioned that they are already taking classes and reading.

We should also set boundaries between work and our personal lives. For example, consider making a policy of not sending emails during the weekend or some fixed portion of the weekend. This is a challenging policy to implement, since in our profession timely response is crucial in helping our students succeed.

Elimination of assignments or activities that don’t have a clear purpose was cited as great advice. Many faculty used the pandemic to reflect on the meaningfulness of their assignments and the amount of work they do themselves. Some rearranged activities and rewrote their syllabi to accommodate new teaching methods. Some mathematics faculty used online content and learning management systems in order to grade the assignments and exams, allowing instructors to put extra energy into more purposeful activities. Students are likely to appreciate fewer categories of assignments.

Faculty can make their online courses more inclusive by gathering feedback from students on how to make learning spaces more accessible. We may be observed and evaluated at regular intervals, but what about gathering our own data? Can we make our own surveys that are closely related to the courses and topics we are teaching? This may help students connect with us better and reduce their feeling of burnout.

Instructors should also adjust their assumptions about when students are and aren’t engaged. For those still teaching remote classes, what does a blank screen represent? A blank screen could simply mean a student may not feel comfortable showing their surroundings or may not be feeling well. Our assumptions can hinder the teaching process and alienate our students. Instead of making assumptions, sometimes we need to slow down and take a deep breath.

What are your strategies for coping with stress? I would love to hear from you at jliberan@sunyrockland.edu.

Future AMATYC Conferences

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<th>Year</th>
<th>Location</th>
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<tr>
<td>2022</td>
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<tr>
<td>2023</td>
<td>Omaha, NE</td>
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For additional information, contact the AMATYC Office at amatyc@amatyc.org.

What We Need to Succeed
by Ben Aschenbrenner, Equity ANet Chair

As the semester ends, I’m thinking about self-care and the overlap between what our students need and what we need to be successful. If you have never tried making a list of what students need, get a few colleagues together and brainstorm the question: “What do my students need to be successful in my class?” After you finish, you can reflect on whether those things are so different from what you need (though I’m spoiling the punchline a bit here).

This semester in one of my quantitative reasoning classes I revisited the concept of doing three-minute mindfulness exercises every class session. This commitment takes no more than five minutes and gives me a chance to ground myself before starting the lesson and jumping into learning. It also gives my students exposure to mindfulness and breathing exercises.

Speaking from my own perspective and what my body feels during these minutes, I often felt anxious about judgment, but probably the most visceral sensation was always the heaviness of my own heart. These have been such hard years and, without getting into specifics of my own challenges, I find that I am carrying a lot on my shoulders. How can it be different for our community college students, especially non-traditional students or first-time students or students coming from poverty?

I once attended a presentation where the speaker gave an audience member the microphone to hold on to with both hands and told them to keep holding it tight. Then the presenter started handing them other things to hold on to. The participant struggled to latch on to anything new as they held onto that microphone, representing some personal problem or thing that the participant’s (or student’s) mind was holding on to. The question was, how can a person learn (i.e. grab on to new things) when their mind is holding on tightly to something else?

I believe that as we invest in our own mental health and take care of ourselves we can deepen our compassion and empathy for our students’ challenges and lives. Nobody needs you to solve their problems for them, but often the challenges our students face are deep, difficult, and long-term. Success in college is not easy for even those who have nothing to do but study and be students. I think our job is to continue to work to design our classrooms and our institutions to be places where even students who are carrying a lot of extra baggage internally can have space to set it down and focus on learning and growing. Isn’t that the larger meaning of a college education?

Traveling to Canada

Check the Canada Border Services Agency site at https://cbsa-asfc.gc.ca/menu-eng.html for the most current information about border requirements and vaccination policy.

Get your Passport for Toronto

If you are not a Canadian resident, you will need a passport for the 2022 AMATYC Annual Conference in Toronto. The U.S. Department of State encourages you to apply at least 4-6 months before planned travel. Apply or renew now!
The Student Mathematics League returned to its regular format during the 2021-22 academic year. Here are the final results of the competition:

### Final Team Results

1. Pasadena City College (CA) 164.5 points
2. College of the Canyons (CA) 164.0
3. Tarrant County College (TX) 148.0
4. Bellevue College (WA) 138.5
5. Johnson County CC (KS) 134.0
6. Oakland CC (MI) 127.5
7. County College of Morris (NJ) 124.0
8. Pellissippi State CC (TN) 116.0
9. Normandale CC (MN) 113.0
10. Cape Fear CC (NC) 106.0

### Final Individual Results

1. Junyang Xu, Pasadena City College (CA) 56.5 points
2. Praneel Samal, College of the Canyons (CA) 51.5
3. Naveen Kannan, Johnson County CC (KS) 47.5
4. Yuheon Joh, Diablo Valley College (CA) 43.0
5. Roman Yakunin, College of the Canyons (CA) 35.5
6. Sijia Zhang, Bellevue College (WA) 35.0
7. Gaurang Pendharkar, Bellevue College (WA) 33.0
8. Yikun Wang, Pasadena City College (CA) 31.5
9. Jonah Weston, Pellissippi State CC (TN) 31.0
10. James Kieser, Illinois Central College (IL) 30.0

### Top Schools and Students by Region:

**Northeast:** Middlesex CC (MA) 113.0
- Jacob Tan, Middlesex CC (MA) 30.0

**Mid-Atlantic:** County College of Morris (NJ) 116.0
- Alicia Baum, County College of Morris (NJ) 31.0

**Southeast:** Pellissippi State CC (TN) 116.0
- Jonah Weston, Pellissippi State CC (TN) 35.0

**Central:** Johnson County CC (KS) 113.0
- Naveen Kannan, Johnson County CC (KS) 35.5

**Southwest:** Tarrant County College (TX) 113.0
- Brittney Walker, Tarrant County College (TX) 33.0

**Northwest:** Bellevue College (WA) 113.0
- Sijia Zhang, Bellevue College (WA) 31.0

**West:** Pasadena City College (CA) 113.0
- Junyang Xu, Pasadena City College (CA) 30.0

Many thanks to the moderators for their help administering and grading the tests this year. Additional thanks go to TJ Duda and rest of the test development team for creating an amazing contest, year after year. The Student Mathematics League competition will return in 2022-2023. Registration information will be posted to the AMATYC website in August. We hope that you will be able to join us next year!
Pilot DataFest Competition for Community Colleges
by Rachel Saidi, Data Science Subcommittee Chair, and Rebecca Wong, Statistics ANet Chair

On April 9-10, the Statistics ANet and Data Science Subcommittee co-sponsored a pilot ASA DataFest for Community Colleges. DataFest, sponsored by the American Statistical Association (ASA) is an annual 48-hour competition in which teams of undergraduate students work to reveal insights into a rich and complex data set. The first ASA DataFest was held in 2011 at UCLA. Since then, participation has grown steadily. This year, DataFest competitions were hosted by over 35 colleges and universities, including UCLA, Duke, Purdue, and Penn State.

For the first time, we organized a DataFest solely for community college participants. Teams were recruited through the ASA DataFest site, myAMATYC announcements, and ANet emails. The event was held virtually, allowing for participation from teams from across the country. Four community college teams participated: County College of Morris, Lone Star College-North Harris, and two teams from West Valley College. Each team was assigned a data science practitioner as a mentor for the event.

Teams were provided with a large, challenging dataset to explore. After two days of intense data wrangling, analysis, and presentation design, each team submitted a 5-minute video using only two slides to convey their findings. Presentations were evaluated by a team of volunteer judges and three awards were given: Best in Show, Best Visualization, and Best Use of Statistical Analysis.

All participants were awarded student memberships to the American Statistical Association (ASA) which includes a one-year subscription to the Significance magazine. Judges were impressed by the quality of students’ work. One wrote in an email: “Thanks so much for organizing this and sending out the judging information! I’ve sent in my scores, and I just wanted to pass along how impressed I was with the student work. I was particularly impressed with how carefully all the groups thought about the game and what the different events represent.”

We are grateful to the volunteers and faculty members who helped to create this opportunity for students, and we hope to run this event again next year. For more information, contact Rachel Saidi at rachelsaidi@montgomerycollege.edu or Rebecca Wong at rebecca.wong@amatyc.org. Start recruiting your team members now for this fun event!

Summer Reading with an International Theme
by Barbara Leitherer, International Mathematics ANet Chair

With summer upon us and temperatures in the 90s in many parts of the country, I thought it would be a good idea to share some reading recommendations for the hotter days ahead. I extend my appreciation to Hong Yuan who was the main creator of the reading list below. The examples are truly fabulous and interesting, both for students and faculty.

Leitherer, B. H., Dwarka, P. R., Xhane, E. K., & Rami, J. R. (2022, August). Undergraduate research in a 2-year college: Climate change, global learning, process, and observations. Presentation at International Conference of the Mathematics Education for the Future Project. Cambridge, UK. https://doi.org/10.37626/GA9783959872188.0.053
For more information about our work, contact Barbara Leitherer at bleitherer@ccbcmd.edu.

Active Learning
by Robert Cappetta, Math Intensive ANet Chair

The Mathematics Intensive Academic Network of AMATYC focuses on teaching and learning in the courses of precalculus, calculus, differential equations, and linear algebra. Traditionally, these have been taught using a traditional teacher-telling model, yet there is a strong effort to move in a different direction. Now, instructors are encouraged to implement more active learning models.

The importance of effective active learning strategies has been recognized by several mathematical professional societies, including the American Mathematical Society (AMS), the Mathematical Association of America (MAA), and the Society for Industrial and Applied Mathematics (SIAM), in addition to AMATYC.

The AMS recently published a comprehensive guide to active learning in collegiate mathematics. It is titled Transformational Change Efforts: Student Engagement in Mathematics through an Institutional Network for Active Learning (SEMINAL). The authors assert that over 40% of instructors teaching Precalculus and Calculus 1 and 2 believe that active learning is important but only 15% believe they are very successful with implementation. Clearly there is a need to support mathematics instructors.

The SEMINAL authors argue that students should engage deeply with mathematical thinking, there must be peer-to-peer instruction, teachers must take an interest in student thinking and use it to help develop concepts, and there must be focus on equity and inclusive teaching and learning practices. The authors describe several barriers, including concerns about student evaluations, instructor resistance, lack of common understanding, and pedagogical concerns such as increasing workloads and insufficient time to cover topics. Finally, many believe that these strategies are difficult to implement for an individual instructor and even more challenging to scale for an entire department.

Professional development is the solution. I encourage all mathematics instructors to attend the AMATYC Annual Conference in Toronto. There are many exceptional presentations that will share strategies for implementing active learning in mathematics courses. I welcome all people who teach precalculus, calculus and above to join the Mathematics Intensive Academic Network. We welcome your participation as we continue to strive to improve teaching and learning in these courses.
Developmental Mathematics ANet
by Kim Granger, Chair

You’re Welcome to join the discussion on Strategies and Mindset for Student Success in Developmental Mathematics! The Developmental Mathematics ANet is open to everyone, and we hope you will jump on board to join the team. Developmental Mathematics has been in a continuous state of redesign for more than a decade. The constant in the chaos has been a focus on student success, as developmental educators have been driven by the desire to develop and implement strategies that help our students succeed. One of the best ways to prevent redesign fatigue is to be part of a community where you can share ideas, hear from others, and be connected to a warm and welcoming body of fellow educators who will value your input.

If you are interested in collaborating with other faculty who are teaching developmental math courses, including corequisite courses, and if you are seeking ways to improve student success, then I hope you will get involved with the Developmental Mathematics ANet. There are many ways to get involved, including online participation in the IMPACT Live! community as well as in-person opportunities at the 2022 AMATYC Annual Conference in Toronto.

I hope you are excited to attend the conference in person this fall! Toronto will be an amazing opportunity to be together again, and 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 host a Themed Session titled “Student Engagement Strategies in Developmental Math Courses.” Each 15-minute talk will focus on one of the Community College Center for Student Engagement benchmarks to measure student engagement: Active and Collaborative Learning, Student Effort, Academic Challenge, Student-Faculty Interaction, and Support for Learners. For more information about these benchmarks visit www.cccse.org.
- On Saturday morning, we will host a sharing session titled “Student Support Tools and Strategies in Developmental Math Courses.” This session will spotlight resources such as videos, study skill tools, and class activities that faculty can use to promote student success. We hope you will come with great ideas to share.
- On Saturday afternoon, we will come together for our 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.

In addition to the many sessions we will be hosting in Toronto, the conference program will be filled with sessions marked “SM” for Strategies and Mindset for Student Success. These sessions will focus on improvement of the quality of developmental mathematics programs to better prepare students for success. I can’t wait to see you in Toronto.

In addition to the in-person opportunities for collaboration and professional development, you can also engage with the Developmental Mathematics Community through IMPACT Live! If you have not already done so, log in to myAMATYC (https://my.amatyc.org). Select “communities” and join the Developmental Mathematics ANet. We will be hosting the IMPACT Live! discussions in the month of September, with a focus on Student Success. Let me know if you have fun ideas for discussions we can facilitate in September. 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.

myAMATYC - Sustaining Thriving Communities of Collaboration
by Karen Gaines, Online Community Coordinator

The myAMATYC website (https://my.amatyc.org) is a platform designed to make real-time collaboration possible. Through the use of discussions, the sharing of documents, and accessibility of contact information, the site offers multiple ways to engage with your colleagues. Our organization is composed of many knowledgeable people who should be encouraged to share their wealth of information.

One way to get involved quickly is to join one of our many ANet communities or other specialized communities. Simply go to the All Communities pages from the navigation bar drop-down menu and find a community aligned with your interests. Within these communities you will find information and rich discussions centered on the community's interest. Feel free to also start discussions if you need assistance from other faculty.

Once you join a community, be sure to have the email notifications set up to your specifications. For email notifications of discussions, you have three options: real time, daily, or no emails. If you choose real time, these discussions will appear similarly to a listserv.

For instructions on how to receive updates on other content from the site (e.g., announcements, library entries, blogs) visit the Help FAQs in the navigation bar and choose “How can I control the frequency and format of emails I receive?”

You can engage with these collaborative communities either on your computer or on your mobile device through the myAMATYC mobile app, Connected. Whichever you prefer, please join in this exciting opportunity for collaboration by heading to https://my.amatyc.org.
Pathways ANet: 50 State Pathway Scan  
by Helen Burn, Pathways ANet Chair

We are pleased to announce that members of AMATYC Pathways ANet and Developmental Mathematics ANet have partnered with the Charles A. Dana Center at the University of Texas at Austin to conduct a scan of practices and policies around developmental mathematics and mathematics pathways across the 50 states and Washington, D.C. The project is guided by a team consisting of AMATYC members Alvina Atkinson (Southeast Regional VP), Megan Breit-Goodwin (Grants Coordinator), Helen Burn (Pathways ANet Chair), Kathryn Kozak (AMATYC Past President), and Trisha White (MOMATYC President-Elect). The project is funded through a generous grant of $15,000 provided by the Charles A. Dana Center under the leadership of Joan Zoellner, Lindsay Fitzpatrick, and Dave Kung. The scan is part of the Dana Center’s Launch Years Initiative, which aims to ensure that every student – regardless of circumstances, background, or zip code – has access to high-quality mathematics education that is relevant to their future.

The research will be completed in three stages. The first stage is already underway and consists of developing an intake form that identifies the data we will collect, including whether a state has mandates around mathematics pathways and how developed any mathematics pathways are (e.g., statistics, quantitative reasoning). We will also collect data on corequisite course offerings, developmental mathematics and placement. The second stage of the research will begin this summer and involves additional data collection. During this phase, we will leverage the knowledge of AMATYC Regional VPs and state-level mathematics leaders to collect data specific to their state. We would greatly appreciate your support should we reach out to you! The third stage of the research involves analyzing the data and preparing it for dissemination to multiple stakeholders by the end of 2022.

This project dovetails with a parallel effort being conducted by the Charles A. Dana Center around mathematics pathways in high schools. Together, these two 50-state scans will enable us to assess where we are as a nation in regards to mathematics pathways. This insight can guide efforts to develop and implement multiple mathematics pathways with the overall goal of improving student learning and success in mathematics. If you have questions about the project or wish to share information about your state, please reach out to me at hburn@highline.edu or one of the other team members listed above.

Grants: The Power of Collaboration  
by Megan Breit-Goodwin, Grants Coordinator

One of the best parts of engaging with funded projects is collaborating with colleagues across the country. Many projects develop from ideas sparked in collegial conversations, and projects establish and grow important partnerships among colleagues and institutions.

A meaningful collaboration emerged from a conversation held at the Developmental Mathematics ANet meeting at the 2021 AMATYC Annual Conference in Phoenix. ANet members identified a need for accessible information about state and system-level policies and practices in developmental and transition-level mathematics courses. Although this information exists, and much of it is public, the reality is that accessing it in a way that makes it possible to synthesize and use for local decision-making is cumbersome. The conversation continued at the Pathways ANet annual meeting, and again in follow-up meetings with a team of AMATYC members who volunteered to be involved.

By March of 2022, a meaningful partnership between AMATYC and the Charles A. Dana Center at the University of Texas at Austin was emerging and a project took shape. The project will consist of a scan of practices and policies around developmental mathematics and mathematics pathways across the 50 states and Washington, D.C. The scan will be conducted by AMATYC members, with the goal of making the information public by the end of 2022. The project expands the efforts of the Dana Center in capturing a national snapshot of state-level policies and structures in mathematics curricula in K-12 settings.

AMATYC and the Dana Center are excited to partner in this work, and facilitate the sharing of this information to support current and future efforts in transforming college mathematics to better support the experiences and outcomes of our students. For more information about this project, see the Pathways ANet article on this page.

I hope to see you at the 2022 AMATYC Annual Conference in Toronto, where there are sure to be more exciting conversations held at the ANet meetings. If you have questions about current AMATYC grants or ideas for a future grant-funded project, please contact me at Megan.Breit-Goodwin@anokaramsey.edu.

Professional Development Inspire Zone  
by Behnaz Rouhani, Professional Development Coordinator

Thank you to those who contributed to the fabulous Teaching Tip Video Program. The purpose of these videos is to answer a specific question related to teaching and learning and to deliver insights in a focused 15-minute presentation designed to fit busy schedules. Would you like to be a contributor? You can visit www.amatyc.org/TeachingTipVideos to browse through the great work of colleagues. As you navigate the website, please take note of the following categories:

- Assessment, Grading, and Feedback
- Faculty Personal Development
- Online Classroom Community
- Teaching Strategies
- Use of Technology in the Classroom

For the past academic year, the Wellbeing with Mindfulness (for Sustainable, Inspired Teachers) Working Group has been meeting on a monthly basis. Thank you to all who have attended our monthly sessions and contributed to the richness of our discussion. So many great ideas and resources have been shared. During a recent meeting, the group discussed an article that described “compassion fatigue.” It was noted that this kind of fatigue is on the rise among educators and the group discussed several ideas about self-care, self-compassion, and social support.

The next meeting is scheduled for September 16 at 4:00 pm EST. Hope you can join us then.

Do you have any novel ideas that you are not sure how to implement? If you are interested in a brainstorming session or contributing a Teaching Tips video, please contact Behnaz Rouhani at brouhani@amatyc.org.
Highlights of the 2022 Spring Board Meetings
by Nancy Rivers, Secretary

The Spring Board Meeting of the AMATYC Executive Board was held March 25-26, 2022 in Memphis, TN and on April 8-9, 2022 virtually. An additional virtual meeting of the Board was held May 19, 2022. Highlights and actions taken by the Board during these meetings include:

- Endorsed the Initial Placement of Students into the Mathematics Curriculum position statement.
- Reaffirmed the Time Limits for Course Prerequisites position statement.
- Voted to support the American Statistical Association’s proposed bill titled The Data Science and Literacy Act of 2022 that focuses on data literacy.
- Endorsed the Conference Board of the Mathematical Sciences statement titled Equity, Diversity, and Inclusion in the Mathematical Sciences.
- Set the conference discount registration rate for the 2023 AMATYC Annual Conference in Omaha to be $410.
- Approved the Southwest Region hosting an AMATYC regional conference in summer 2023.
- Directed that a survey of current delegates be created and conducted to garner input that will be used in deciding whether the 2023 AMATYC Delegate Assembly will be held in-person or virtually.
- Appointed Gregory Foley as Chair of the Mathematics for Liberal Arts ANet.
- Approved the continuation of the Mathematics Standards in the First Two Years of College committee with a supported chair and supported digital coordinator through December 31, 2023.

The AMATYC Executive Board also met virtually on June 9 and July 7, 2022. Highlights of these meetings will be shared in the next issue of the AMATYC News.

Mu Alpha Theta
by Jonathan Weisbrod, Liaison

I would like to welcome Coahoma Community College in Clarksdale, Mississippi, as the newest two-year college chapter of Mu Alpha Theta! Does your institution have a Math Club? How about a chapter of Mu Alpha Theta? If your answer is yes to the former but no to the latter, this time of year is perfect for setting a club goal to establish a chapter of Mu Alpha Theta, the national high school and two-year college mathematics honor society. What are your club’s goals for the year? Could petitioning for a chapter of Mu Alpha Theta be one of them? Please reach out if you would like assistance.

Current Chapters: What has your chapter been up to recently? Please share as I would like to highlight some Mu Alpha Theta chapter activities in future issues of the AMATYC News. I can be reached at jweisbrod@rcbc.edu. Also, do you need funding to help defray the costs of chapter activities? Do not forget about Mu Alpha Theta grants. More information along with application requirements can be found here at https://mualphatheta.org/grants.

You can learn more about Mu Alpha Theta at mualphatheta.org. Any questions can be directed to me or to the national office at info@mualphatheta.org. Have a great start to the new academic year!

AMATYC 2022 Calendar of Events

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

October 1: MichMATYC Conference, Oakland CC (Auburn Hills Campus), Auburn Hills, MI. Website: https://michmatyc.org

October 7: ArieMATYC Fall Conference, Northland Pioneer College (Snowflake Campus), Snowflake, AZ. Website: http://arizmatyc.org/wp/

November 17-20: 48th AMATYC Annual Conference, Toronto, Ontario, Canada. Website: www.amatyc.org/2022ConfHome

December 9-10: CMC3 Fall Monterey Conference, Hyatt Regency Monterey Hotel and Spa, Monterey, CA. Website: www.cmc3.org/conferences/fall/

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

MathAMATYC Educator Volunteers Needed
by Kathryn Kozak, Past President

Mathematics love mathematics, but some mathematicians also enjoy writing. The MathAMATYC Educator is looking for AMATYC members who are interested in proofreading articles or serving on the editorial panel.

A proofreader for the MathAMATYC Educator is asked to review one article for each of the three issues a year. The responsibility of the proofreader is to make sure that the article is free of grammatical and typographical errors. The articles have already been accepted for publication, so the purpose of this review is to make sure the article is ready for printing. This important review is the last step in the publication of the article. If you are interested in serving as a proofreader, please contact Production Manager Keith Nabb at keith.nabb@amatyc.org.

The editorial panel includes members from each of the eight AMATYC regions. The Northeast region editorial panelist will be an open position starting January 1, 2023. The position is a three-year appointment. The duties of the editorial panelist are:

- Review submitted manuscripts that pertain to the panel member’s area of expertise and interest.
- Make recommendations to the Editor concerning publication of reviewed manuscripts.
- Work with the Editor to solicit articles and features from members at the annual conference.
- Work with the Editor to make recommendations and suggestions concerning policy, themes, content, and format changes to the journal.

If you are interested in being the editorial panelist for the Northeast region of AMATYC, contact Anders (AJ) Stachelek at ajstachelek@amatyc.org. To learn more about the position, contact George Alexander at george.alexander@amatyc.org.
Focus on Affiliates: KYMATYC
by Sherry McCormack, KYMATYC President

The Kentucky Mathematical Association of the Two-Year Colleges (KYMATYC) has as its mission to:
- encourage consistency in course content and placement.
- encourage articulation with four-year colleges.
- offer professional development opportunities.
- provide opportunities for members to become acquainted with each other, exchange information about available positions, report the result of innovations, and discuss other items of interest to mathematics faculty.

KYMATYC strives to maintain these objectives by organizing yearly conferences. The conference typically takes place in late February and is well-attended by educators from Kentucky and other regional affiliates. In 2022 the conference resumed in person, after remaining virtual in 2021. Seeing familiar faces as well as meeting new friends were highlights of the meeting.

KYMATYC is open to teachers of mathematics at the college level and to anyone else interested in mathematics. In past years the conference was delighted to welcome students who presented their own research. The conference rotates to various locations around the state to be accessible to all. It is held on a Friday and Saturday, with a program consisting of presentations, a keynote speaker, business meeting, after-math party (spoons anyone?), and lots of food. It is a great time for all and a wonderful opportunity to network, learn about exciting new applications in math, and even vent a little. The KYMATYC conference is always open for applications to present and encourage others to join in. In 2024, KYMATYC will be celebrating its 50th anniversary. Plans are underway to make it the best conference yet!