47th AMATYC Annual Conference
October 28 – 31, 2021

Sheraton Phoenix Downtown
340 North 3rd Street
Phoenix, AZ 85004

Keynote Speakers

Lindy Elkins-Tanton
Arizona State University
The NASA Psyche Mission: Journey to a Metallic World

Talithia Williams
Harvey Mudd College
Power in Numbers: Unveiling Hidden Figures

Featured Speakers

James Tanton
Mathematical Association of America
The Astounding Mathematics of Bicycle Tracks

Scott Adamson
Chandler-Gilbert CC
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AMATYC 2021 EVENTS

FRIDAY 10:00 A.M. – 11:15 A.M., ROOM LAVEEN B
Elements for Successful Courses in the Digital-Age

FRIDAY 12:25 P.M. – 1:40 P.M., ROOM LAVEEN B
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On-site Conference Registration

Sheraton Phoenix Downtown
AMATYC Registration Desk — Valley of the Sun Foyer

Wednesday, October 27 .................................................................................................................. 4:00 pm - 8:00 pm
Thursday, October 28 ................................................................................................................... 7:00 am - 6:00 pm
Friday, October 29 ......................................................................................................................... 7:00 am - 4:00 pm
Saturday, October 30 .................................................................................................................... 7:00 am - 8:00 am
Saturday, October 30 ..................................................................................................................... 10:00 am - Noon

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President’s Welcome
Kathryn (Kate) Kozak

On behalf of the AMATYC Executive Board, the AMATYC Office staff, the Conference Committee, and the Local Events Committee, I would like to welcome you to Phoenix and the 47th AMATYC Annual Conference. The years 2020 and 2021 have been challenging years for most of us. So, we are very excited that you are able to join us at this conference. There are so many great sessions for you to gain the professional development that you may have put on hold during the pandemic. There will also be time for you to network with colleagues and friends from throughout the country. Thursday starts with themed sessions sponsored by several different committees. After the themed sessions, you will find both 50-minute sessions and 25-minute sessions presented by mathematics faculty wanting to share with you. The Thursday keynote session will be presented by Lindy Elkins-Tanton, when she will enlighten us about the NASA mission to the asteroid “Psyche.” At the Saturday morning keynote session, Talithia Williams will describe her journey into statistics using the framework of “Hidden Figures.”

On Thursday evening there will be the research session where you can learn about the latest research in improving student learning in mathematics. In addition to the themed sessions, 50 minute sessions, and 25 minute sessions there are other opportunities for learning such as committee and ANet meetings, the poster sessions, and the one-on-one conversations with vendors in the exhibit hall where the exchange of ideas abound. This year the committee and ANet meetings are offered throughout the conference. Remember, committee and ANet meetings are a setting to have open discussions about specific topics and they are open to all conference attendees. And, of course, much of the learning and sharing at the conference will come from your informal conversations with your colleagues.

There are so many sessions that are being given by high quality presenters. The focus of the sessions range from equity, international, student success, statistics, technology, pathways to success, and many others. The variety is vast. To aid you in finding a presentation that will fit your needs and professional development needs, there is a program key. They will help identify which sessions are focused on the type of information you would like to learn more about.

Each year AMATYC recognizes colleagues and students for outstanding performance and service at the two keynote sessions. Awards given this year include three Teaching Excellence awards, the Student Research League awards, the Hobbs award, the Peskoff award, and the Herb Gross Presidential awards. The 2020 Mathematics Excellence award was awarded to Rikki Blair. However, since the AMATYC Annual Conference in Spokane was offered virtually instead of in Spokane, the award was not presented to Rikki in person. She will be presented with this award at the AMATYC Annual Conference in Phoenix. Please join me in recognizing her and the other colleagues for their exemplary work.

Thank you to the many individuals who have contributed in big and small ways of bringing this conference together! Our Conference Committee and AMATYC staff in Memphis have worked year-round to plan this excellent conference. The Phoenix Local Events Committee is managing the Hospitality Area and can connect you with others interested in exploring the greater Phoenix area. Finally, thank you to our exhibitors, presenters, presiders, and of course, you, the engaged conference attendee. Rekindle old friendships, make new friends, and experience all the conference has to offer. Whether this is your first AMATYC conference or your 47th, you will find numerous opportunities to connect and be fired up for math.

AMATYC Statement on Equity and Diversity
The American Mathematical Association of Two-Year Colleges (AMATYC) respects the contributions that all individuals can make within the organization, the profession, and as mathematics students. AMATYC is committed to promoting equal opportunities in membership, appointment, employment, recruitment, scholarship, training and other professional practices for its members, the profession, and mathematics students without regard to age, color, creed, disability, economic or social status, ethnic origin, gender, marital status, national origin, political belief, race, religion, or sexual orientation.

See AMATYC’s Welcoming Policy on page 16.
Phoenix Local Events Coordinator’s Message

Ana Jiménez

Welcome to Phoenix! We are excited to share our beautiful sunshine, endless blue skies, and majestic mountainscapes with you. It’s been a year of growth, when we have all lived the life of the Phoenix: rising from the ashes of 2020’s, closed campuses, immeasurable loss, and uncertain phutures to soar above it all in 2021, providing exemplary virtual education, authentic connections, and stability to our resilient students.

I’m certain you will have a phantastic experience at this year’s conference: learning new strategies, discovering new passions, reconnecting with colleagues, and making new phriends. While you’re here, be sure to stop by the Hospitality “Room.” You can sign up for daily group excursions and sightseeing with your phellow mathies, go to our map wall to represent, sign up for dinner companions, and challenge yourself with some phun puzzles! The Hospitality “Room” will also have a card to sign for those who contribute to our phenomenal community project!

Remember to take pictures #PhoenixPhotoPhun #AMATYC to be entered in the photo contest for January’s issue of AMATYC News.

Please be sure to thank the Local Events Committee for all of their hard work. You’ll find Team Leaders Anne Dudley, Chris Oehrlein, David Dudley, Frank Marfai, James Sousa, Matt Coignet, Patrick Kimani, Shannon Ruth, Tami Tacker, as well as other LE Committee members, wearing the bright yellow “Fired Up for Math” shirts.

Southwest Region Vice President’s Message

April Ström

Welcome to Phoenix, AZ, and the 47th AMATYC Annual Conference! Did you know that Phoenix is the birthplace of many famous people, including Stevie Nicks, Dierks Bentley, and Lynda Carter? Speaking of Lynda Carter (a.k.a. Wonder Woman), we are super excited to have had Ana Jiménez from Pima CC serve as our Local Events Coordinator and lead a group of extremely dedicated faculty from the Southwest Region (Arizona, Arkansas, New Mexico, Oklahoma, and Texas) to plan the best AMATYC adventure for you. Phoenix offers such a unique environment for outdoor explorers, foodies, and entertainment gurus! My personal Phoenix “phavorites” include sightseeing at the Grand Canyon (just a 4 hour drive north of the conference hotel), hiking on any trail (though hiking Camelback Mountain in central Phoenix is a must for serious hikers!), enjoying the many culinary delights (from coffee cafes to Mexican food to Irish pubs!), and visiting local museums (the Heard Museum offers an amazing display of American Indian art!). With late October temperatures in the low 80s, there is definitely something for everyone here in Phoenix.

Since our last AMATYC Annual Conference was a virtual one, we are even more fired up for math at our in-person conference! We are beyond excited to have Lindy Elkins-Tanton, who will present a keynote on the upcoming NASA Psyche launch, and Talithia Williams, who will give a keynote about the power in numbers. We also have an amazing line-up of featured speakers local to Phoenix – James Tanton and Scott Adamson! Come learn about the mathematics of bicycle tracks (Tanton) and taking online teaching innovations back to the classroom (Adamson). Hosted by ArizMATYC and the Southwest Region, this conference is fired up to be an opportunity for professional development like no other.

The Local Events Committee is also delighted to announce our Community Project focused on raising funds to help students in the Kamanzi Village in Kenya. Located two hours outside of Nairobi, the Kamanzi Secondary School was home to Patrick Kimani, Mathematics Faculty at Glendale CC in Arizona. Kimani served as the school’s math teacher from 1994 - 1996, doubling as the Headmaster his second year. In 2019, I had the amazing opportunity to visit the Kamanzi Secondary School with Kimani and it was an experience of a lifetime! With a focus on equity and accessibility, we plan to raise funds to help students go to school. Like most schools in Kenya, school attendance requires a uniform: a prohibitive obstacle for many. Another equity obstacle specific to female students is education lost due to absences resulting from lack of menstrual hygiene products during menstruation. Our focus, therefore, is funding uniforms and sanitary pads for Kamanzi Secondary School students. As you get fired up for AMATYC in Phoenix, please also consider giving to our community project!

If you are a first-time AMATYC conference attendee, I invite you to join me for the AMATYC 101 session on Thursday morning for a walking tour and an overview of the conference. On behalf of ArizMATYC, ARKMATYC, NMMATYC, OKMATYC, and TexMATYC, welcome to the best of the Southwest – Phoenix, AZ! Until then, happy trails y’all!

AMATYC Statement on Native American Land

AMATYC respectfully acknowledges that the 47th AMATYC Annual Conference in Phoenix, AZ, is being held on unceded land of Indigenous peoples: the Hohokam, the Akimel O’odham, the Yavapai, and many others. Today, Arizona is home to 23 federally-recognized tribes, and the cultural practices of all these tribes continue to this day. AMATYC values the diversity and inclusion of all people and cultures, and supports actions that facilitate equity for all in mathematics education.
Thursday Keynote Session

Lindy Elkins-Tanton

The NASA Psyche Mission: Journey to a Metallic World

Thursday, October 28, 3:00 pm  
Room: Phoenix CDE

“Psyche” is both the name of a metallic asteroid, and the name of the NASA mission to visit that asteroid. Humans have never explored a world made of metal. The presentation will include how missions are planned, who plans them, and the steps to prepare for launch.

Lindy Elkins-Tanton is the Principal Investigator (lead) of the NASA Psyche mission, Managing Director of the Interplanetary Initiative at Arizona State University, and co-founder of Beagle Learning, a tech company training and measuring collaborative problem-solving and critical thinking. Her research concerns terrestrial planetary formation and evolution, and she promotes and practices inquiry and exploration learning. Her mission is to create a generation of problem-solvers.

Elkins-Tanton received her B.S., M.S., and Ph.D. from MIT. She was a researcher at Brown University, faculty at MIT, and a director at the Carnegie Institution for Science before moving to the directorships at Arizona State University. She has collaborated on over 115 articles or chapters, co-authored six books, and was the primary supervisor for at least 20 post-doctoral, graduate, or undergraduate researchers. At ASU she has taught many courses in her research area as well as professional development courses.

Elkins-Tanton has led four field expeditions in Siberia. She is a two-time NAS Kavli Frontiers of Science Fellow and served on the Planetary Decadal Survey Mars panel, and the Mars 2020 Rover Science Definition Team, and now serves on the Europa Clipper Standing Review Board. In 2010 she was awarded the Explorers Club Lowell Thomas prize. Asteroid (8252) Elkins-Tanton is named for her. In 2013 she was named the Astor Fellow at Oxford University. She published the book Earth, co-authored with Jeffrey Cohen, in 2017. She is a fellow of the American Geophysical Union, and of the American Mineralogical Society, and in 2018 she was elected to the American Academy of Arts & Sciences.

Saturday Awards Breakfast Session

Talithia Williams

Power in Numbers: Unveiling Hidden Figures

Saturday, October 30

Breakfast Served: 7:45 am – 8:00 am (ticket required) • Program: 8:30 am - 10:00 am  
Room: Phoenix CDE

Hidden Figures brought visibility to African American women serving as NASA “human computers” in the 1960s, dreaming the impossible in a field where their presence was lacking. Demands of today’s STEM workforce require recruiting and training individuals typically underrepresented in math. Hear the speaker’s journey as a woman of color in statistics. Share ways to excite public interest in mathematics, building upon the rich legacy of these Hidden Figures.

Talithia Williams is an innovative, award-winning Harvey Mudd College professor, a co-host of the PBS NOVA series NOVA Wonders and a speaker whose popular TED Talk, “Own Your Body’s Data”, extols the value of statistics in quantifying personal health information. She demystifies the mathematical process in amusing and insightful ways to excite students, parents, educators and the larger community about STEM education and its possibilities.

Williams is a proud graduate of Spelman College (B.A., math), Howard University (M.S., mathematics) and Rice University (M.A., Ph.D., statistics). Her research focus involves developing statistical models that emphasize the spatial and temporal structure of data and applies them to problems in the environment. She’s worked at NASA, the Jet Propulsion Laboratory, and the National Security Agency and has partnered with the World Health Organization on research regarding cataract surgical rates in African countries.

In 2015, she won the Mathematical Association of America’s Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member, which honors faculty members whose teaching is effective and extraordinary, and extends its influence beyond the classroom. It is this excellence that attracted the attention of online educational company The Great Courses, which selected Williams to produce Learning Statistics: Concepts and Applications in R, a series of lectures in which she provides tools to evaluate statistical data and determine if it’s used appropriately. She is the author of Power in Numbers: The Rebel Women of Mathematics, a full-color book highlighting the influence of women in the mathematical sciences in the last two millennia.

Faith and family round out a busy life that she shares with her husband and three amazing boys. Through her research and work in the community at large, she is helping change the collective mindset regarding STEM in general and math in particular, rebranding the field of mathematics as a logical, productive career path that is crucial to the future of the country rather than dry, technical, or male-dominated.
It’s a classic in the mathematics community: If you come across the pair of bicycle tracks on the ground, can you determine which way the bicycle went? Find out as the presenter rides his bicycle. Then explore additional surprises about this and see standard geometry put to wild quirky use!

James Tanton (PhD, Princeton 1994, mathematics) is an author, a consultant, and an ambassador for the Mathematical Association of America in Washington D.C., currently serving as their Mathematician-at-Large. He has taught mathematics both at university and high-school institutions. He is absolutely committed to promoting effective and joyful mathematics thinking, learning, and doing at all levels of the education spectrum.

He has written over a dozen books, including The Encyclopedia of Mathematics (Facts on File, 2005) and two wordless puzzle books Without Words and More Without Words (Tarquin, 2015) – which have each been translated in Serbian – and How Round Is a Cube? (AMS, 2020). He advises on curriculum, consults with teachers, and gives demonstration classes, public outreach talks, professional development sessions across the globe.

Tanton created the MAAs Curriculum Inspirations project, serves as chair of the Advisory Council for the National Museum of Mathematics (New York), serves on the Board of Great Minds, and is founder of The Global Math Project, an initiative set to transform the entire world’s perception of what mathematics can and should be. At present, over 6.5 million students and their teachers across the planet have taken part in a common joyous piece of mathematics to see how classroom mathematics serves as a portal for human joy, wonder, and delight. James received the 2020 Joint Policy Board for Mathematics Communications Award.

At the 2019 AMATYC Annual Conference, Tanton showed us “A Dozen Proofs that 1 = 2: A Misguided Review of Mathematics” as well as teaching us the International Math Salute (youtube.com/watch?v=gSMeawFz0Sw)

He grew up in Adelaide, Australia, and now lives in Phoenix, AZ.

Scott Adamson

Fired Up to Take Online Teaching Innovations Back to the Classroom!

Saturday, October 30 • 10:45 am – 11:35 am • Room: Phoenix A

After a year of transitioning to asynchronous, online instruction, it’s time to think about how this work can be leveraged in the return to face-to-face instruction. This session will include discussion of the innovative, online pedagogical strategies that supported student learning that can also be effective in the face-to-face environment.

Scott Adamson is an award-winning mathematics professor who strives to help students develop mathematical reasoning and persistent problem solving as they work to make sense of big mathematical ideas. He structures the classroom environment so that students are afforded the opportunity to make sense of mathematics and strives to develop enthusiastic learners in the classroom. After teaching high school students for 10 years, Adamson currently teaches students at Chandler-Gilbert CC. He holds a B.S. and MAT in Mathematics Education from Northern Arizona University and a Ph.D. in Curriculum and Instruction (emphasis on Mathematics Education) from Arizona State University. He tells his colleagues and himself that we need to stop teaching mathematics and start teaching students! Certainly, we will teach our students the beauty, wonder, and utility of mathematics, but we must realize that the positive relationships that we build with our students are most important! In 2017, at the AMATYC Annual Conference, Scott gave the Opening Session Keynote address which led to a TEDx Talk called “Is it 1957 or 2017?”

Whova App

We’re very excited to be using the Whova conference app this year! Attendees can log into Whova using the information that was emailed directly to them. Logging in gives you full access to Whova’s personalized, interactive features. For questions, visit us at registration. While we recommend logging into Whova, you can view the program sessions using the link on the conference website at www.amatyc.org/2021ConfHome.

Use the Conference App to Evaluate Each Session!

AMATYC values your feedback! Please use the Whova conference app to evaluate each session you attend. Click the Surveys button, then Session Feedback, and select the desired session. Thank you!
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2021 AMATYC EXHIBITS
SHERATON PHOENIX DOWNTOWN
VALLEY OF THE SUN
EXHIBIT HOURS

Thursday, October 28
Grand Opening
4:30 pm - 7:00 pm

Friday, October 29
9:15 am - 12:35 pm
1:25 pm - 5:00 pm
Exhibitors Featured
9:15 am - 10:15 am

Saturday, October 30
9:45 am - 1:00 pm
Exhibitors Featured
10:00 am - 10:45 am

**Note: Allowing a vendor to scan your badge will grant them access to your contact information.**

**Exhibitor**

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- WIRIS
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AMATYC Committees/Subcommittees/ANets

Academic committees and AMATYC networks (ANets) are critical to the fulfillment of AMATYC’s mission. Their meetings are open to all interested individuals. Participation in committees and ANets provides AMATYC members with opportunities to learn more about an area of interest as well as a chance to share their expertise with others. Committees and ANets develop position statements, work on projects, organize themed sessions, and serve in an advisory role to the AMATYC Executive Board and the Delegate Assembly. Committees and ANets accomplish their work by meeting during the annual conference and using electronic communication during the year. Below is a summary of the focus of each academic committee and ANet, as well as our two standing subcommittees.

To learn more details about each committee or ANet and their ongoing work plus links to blogs or discussion groups, use the AMATYC website, www.amatyc.org/AMATYCCommittees.

Every group will hold a 50-minute meeting during the conference. The first one begins at 10:20 am on Thursday, October 28. Check below and on the next pages for the time for each group, as well as a list of the sessions sponsored by these groups.

Committees

Developmental Mathematics
This committee shares best practices for training and mentoring faculty, identifies programs designed to ease the transition from high school to college mathematics, fosters connections with other professional organizations, and increases involvement with national policy-making boards on issues relating to developmental mathematics. **Subcommittees:** Instruction and Faculty Development; Content, Assessment and Research; New Life for Developmental Math

Chair: Kathryn Van Wagoner  
Weber State University, Ogden, UT  
kathrynvanwagoner@weber.edu

Meeting: Friday, October 29, 10:15 am - 11:05 am  
Room: Cave Creek

Equity
The purpose of the Equity Committee is to increase mathematics achievement for diverse learners through education about equitable classroom practices and structural equality, and to work collaboratively with other groups in AMATYC to promote equity.

Chair: AJ Stachelek  
Hostos CC, Bronx, NY  
equityinmathed@gmail.com

Meeting: Friday, October 29, 11:25 am - 12:15 pm  
Room: Cave Creek

Innovative Teaching and Learning
The goals of the Innovative Teaching and Learning Committee are to: (1) Identify and examine issues that pertain to effective teaching and learning, distance learning and technology in education as they relate to mathematics students, faculty, programs and curricula in the first two years of college; (2) Facilitate sharing and networking on crucial issues, ideas, and current practices in traditional, hybrid, distance and active learning; (3) Develop criteria for evaluating data, software, and internet resources; (4) Share demonstrably effective ways to implement these resources; and (5) Maintain and update position papers on effective teaching and learning.

Chair: Jennifer Ackerman  
Jefferson CTC, Louisville, KY  
jackerman006@kctcs.edu

Meeting: Saturday, October 30, 1:05 pm - 1:55 pm  
Room: Cave Creek

Mathematics and Its Applications for Careers
This committee addresses mathematics for areas such as Engineering Tech, Health, Business Tech, Information Tech, Emerging tech, Trades, etc.

Chair: Nolan Outlaw  
Wake Technical CC, Raleigh, NC  
nloutlaw@waketech.edu

Meeting: Saturday, October 30, 11:55 am - 12:45 pm  
Room: Cave Creek

Mathematics Intensive
This group concentrates on mathematics courses past the developmental/foundations level. Such courses may lead to AA or AS degrees, be used as transfer credit, or be taken for student enrichment. **Subcommittees:** Precalculus; Calculus and Beyond

Chair: Bob Cappetta  
Florida SouthWestern State College, Ft. Myers, FL  
cappetta@fsw.edu

Meeting: Friday, October 29, 2:55 pm - 3:45 pm  
Room: Cave Creek

Mathematics Standards in the First Two Years of College (IMPACT)
This committee will focus on promoting the AMATYC standards as well as maintaining the digital products to support those standards.

Chair: Julie Phelps  
Valencia College, Orlando, FL  
jphelps@valenciacollege.edu

Meeting: Saturday, October 30, 10:45 am - 11:35 am  
Room: Cave Creek

Placement and Assessment
This committee serves as a resource for the AMATYC membership on issues related to placement of students and assessment of student outcomes and mathematical programs. **Subcommittees:** Classroom Assessment; Course and Program Assessment; Placement

Chair: Rachel Bates  
Oklahoma State Regents for Higher Education, Oklahoma City, OK  
rbates@osrhe.edu

Meeting: Friday, October 29, 12:35 pm - 1:25 pm  
Room: Cave Creek

12
Research in Mathematics Education for Two-Year Colleges
The purpose of the Research in Mathematics Education for Two-Year Colleges (RMETYC) Committee is to encourage quality research in mathematics education in two-year colleges.

Chair: Ann Sitomer
Oregon State University, Corvallis, OR
ann.sitomer@oregonstate.edu

Meeting: Thursday, October 28, 10:20 am - 11:10 am
Room: Cave Creek

Statistics
The role of the AMATYC Statistics Committee is to provide a forum for the exchange of ideas, the sharing of resources and the discussion of issues of interest to the statistics community.

Chair: Julie Hanson
Clinton CC, Plattsburgh, NY
julie.hanson@clinton.edu

Meeting: Friday, October 29, 4:05 pm - 4:55 pm
Room: Cave Creek

Subcommittees

Data Science Subcommittee
The role of the Data Science Subcommittee is to support a community interested in increasing the presence of data science in two-year colleges by facilitating communication among interested two-year college faculty and encouraging professional development for the teaching and learning of data science.

Chair: Ambika Silva
College of the Canyons, Santa Clarita, CA
Ambika.silva@canyons.edu

Meeting: Thursday, October 28, 11:30 am - 12:20 pm
Room: Cave Creek

Pathways Joint Subcommittee
Pathways Joint Subcommittee (PJS) provides a forum for the exchange of ideas, sharing of resources, and discussion of issues of interest involving Mathematics Pathways in public, primarily associate-degree granting colleges.

Chair: Helen Burn
Highline College, Des Moines, WA
hburn@highline.edu

Meeting: Friday, October 29, 1:45 pm - 2:35 pm
Room: Cave Creek

Adjunct Faculty Issues
The focus is on adjunct faculty within two-year colleges, to improve their status, to disseminate and discuss information on issues that impact them, to provide greater professional development opportunities, and to encourage greater participation in AMATYC and its regional affiliates.

Leader: Patricia Barrientos
El Paso CC, El Paso, TX
pbarrien@epcc.edu

Meeting: Friday, October 29, 2:55 pm - 3:45 pm
Room: Desert Sky

International Mathematics
This ANet promotes global awareness among the AMATYC community by providing information on best practices and research studies regarding the teaching and learning of mathematics from around the world, creating professional development opportunities for the instruction of mathematics and statistics in a globalized context, sharing current information about international education conferences.

Leader: Barbara Leitherer
CC of Baltimore County-Essex, Baltimore, MD
bleitherer@cbccmd.edu

Meeting: Saturday, October 30, 2:15 pm - 3:05 pm
Room: Cave Creek

Division/Department Leadership
To provide professional development opportunities for mathematics department leaders (e.g. coordinators, chairs, etc.), to increase communication within the committee's constituency to enhance professional networking and support systems for mathematics department leaders, and to disseminate and discuss information on issues that impact college mathematics department leaders, particularly when the information applies to mathematics in the first two years of college.

Leader: Christine Mirbaha
CC of Baltimore County-Dundalk, Baltimore, MD
cmirbaha@cbccmd.edu

Meeting: Thursday, October 28, 12:40 pm - 1:30 pm
Room: Cave Creek

Mathematics for Liberal Arts
The purpose of this ANet is to create and maintain a learning community for teachers of courses such as Liberal Arts Math, Quantitative Reasoning, and Finite Math by identifying general topics covered in such courses, by discussing issues related to the transferability, prerequisite skills, and correct student placement in these courses.

Leader: Froozan Afiat
froozana@512006@gmail.com

Meeting: Friday, October 29, 4:05 pm - 4:55 pm
Room: Desert Sky
<table>
<thead>
<tr>
<th>Thursday, October 28</th>
<th>Friday, October 29</th>
<th>Saturday, October 30</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme Session (T1)</strong></td>
<td>Developmental Mathematics Committee Meeting (M05)</td>
<td>Mathematics Standards in the First Two Years of College (IMPACT) Committee Meeting (M13)</td>
</tr>
<tr>
<td>AMATYC Is Making a Positive IMPACT on Student Success</td>
<td>10:15 am - 11:05 am Room: Cave Creek</td>
<td>10:15 am - 11:05 am Room: Cave Creek</td>
</tr>
<tr>
<td>8:00 am - 9:55 am Room: Maryvale A</td>
<td>What’s Really in Your Backpack? Unpacking Privilege (S042)</td>
<td>Developmental Mathematics Sharing Session (S094)</td>
</tr>
<tr>
<td>Sponsored by the Mathematics Standards in the First Two Years of College (IMPACT) Committee</td>
<td>10:15 am - 11:05 am Room: Encanto A</td>
<td>10:45 am - 11:35 am Room: Camelback B</td>
</tr>
<tr>
<td><strong>Theme Session (T2)</strong></td>
<td>Sponsored by the Statistics Committee</td>
<td>Sponsored by the Developmental Mathematics Committee</td>
</tr>
<tr>
<td>Active Learning in the Introductory Statistics Classroom</td>
<td><strong>Equity Committee Meeting (M06)</strong></td>
<td>Mathematics and Its Applications for Careers Committee Meeting (M14)</td>
</tr>
<tr>
<td>8:00 am - 9:55 am Room: Encanto A</td>
<td>11:25 am - 12:15 pm Room: Cave Creek</td>
<td>11:55 am - 12:45 pm Room: Cave Creek</td>
</tr>
<tr>
<td>Sponsored by the Statistics Committee</td>
<td><strong>IMPACT Live! - The Inside Scoop (S053)</strong></td>
<td>Adjunct Issues ANet Sharing Session (S096)</td>
</tr>
<tr>
<td><strong>Theme Session (T3)</strong></td>
<td>11:25 am - 12:15 pm Room: Camelback A</td>
<td>11:55 am - 12:45 pm Room: Maryvale A</td>
</tr>
<tr>
<td>Equity: From the Personal to the Institutional Level</td>
<td>Sponsored by the Mathematics Standards in the First Two Years of College (IMPACT) Committee</td>
<td>Sponsored by the Adjunct Faculty Issues ANet</td>
</tr>
<tr>
<td>8:00 am - 9:55 am Room: Encanto B</td>
<td><strong>Placement and Assessment Committee Meeting (M07)</strong></td>
<td>Data Science Sharing Session (S102)</td>
</tr>
<tr>
<td>Sponsored by the Equity Committee</td>
<td>12:35 pm - 1:25 pm Room: Cave Creek</td>
<td>11:55 am - 12:45 pm Room: Camelback B</td>
</tr>
<tr>
<td><strong>Theme Session (T4)</strong></td>
<td>Pathways Joint Subcommittee Meeting (M08)</td>
<td>Sponsored by the Data Science Subcommittee</td>
</tr>
<tr>
<td>Innovative Assessments to Help Your Students Rise from the Ashes</td>
<td>1:45 pm - 2:35 pm Room: Cave Creek</td>
<td>Placement &amp; Assessment During COVID-19 (S103)</td>
</tr>
<tr>
<td>8:00 am - 9:55 am Room: Deer Valley</td>
<td>Share Your Classroom Ideas for Teacher Preparation Courses (S064)</td>
<td>11:55 am - 12:45 pm Room: Phoenix A</td>
</tr>
<tr>
<td>Sponsored by the Innovative Teaching and Learning Committee</td>
<td>1:45 pm - 2:35 pm Room: Maryvale A</td>
<td>Sponsored by the Placement and Assessment Committee</td>
</tr>
<tr>
<td><strong>Theme Session (T5)</strong></td>
<td>Sponsored by the Teacher Preparation Committee</td>
<td><strong>Innovative Teaching and Learning Committee Meeting (M15)</strong></td>
</tr>
<tr>
<td>Lighting the Fire of Success with Pathways and Corequisites</td>
<td>Pathways Joint Subcommittee Meeting (M08)</td>
<td>1:05 pm - 1:55 pm Room: Cave Creek</td>
</tr>
<tr>
<td>8:00 am - 9:55 am Room: Paradise Valley</td>
<td>1:45 pm - 2:35 pm Room: Cave Creek</td>
<td>Teaching for PROWESS: IMPACTing Active Learning on STEM Pathways (S104)</td>
</tr>
<tr>
<td>Sponsored by the Developmental Mathematics Committee</td>
<td><strong>Mathematics Intensive Committee Meeting (M09)</strong></td>
<td>1:05 pm - 1:55 pm Room: Maryvale A</td>
</tr>
<tr>
<td><strong>Theme Session (T6)</strong></td>
<td>2:55 pm - 3:45 pm Room: Cave Creek</td>
<td>Sponsored by the Research in Mathematics Education for Two-Year Colleges Committee Meeting (M16)</td>
</tr>
<tr>
<td>Imparting Global Competencies for Student Success</td>
<td><strong>Adjunct Faculty Issues ANet Meeting (M10)</strong></td>
<td>2:15 pm - 3:05 pm Room: Cave Creek</td>
</tr>
<tr>
<td>8:00 am - 9:55 am Room: Camelback A</td>
<td>2:55 pm - 3:45 pm Room: Desert Sky</td>
<td>Math Intensive Sharing Session (S115)</td>
</tr>
<tr>
<td>Sponsored by the International Mathematics ANet</td>
<td><strong>Undergraduate Research During COVID-19: Analyzing Real-World Data (S077)</strong></td>
<td>2:15 pm - 3:05 pm Room: Camelback B</td>
</tr>
<tr>
<td>Research in Mathematics Education for Two-Year Colleges Committee Meeting (M01)</td>
<td>2:55 pm - 3:45 pm Room: Camelback A</td>
<td>Sponsored by the Mathematics Intensive Committee</td>
</tr>
<tr>
<td>10:20 am - 11:10 am Room: Cave Creek</td>
<td>Sponsored by the International Mathematics ANet</td>
<td><strong>Sunday, October 31</strong></td>
</tr>
<tr>
<td><strong>Data Science Subcommittee Meeting (M02)</strong></td>
<td><strong>Let’s Rise Together from the Ashes of the Disinformation Era (S079)</strong></td>
<td>When Will I Ever Use This? -- Applications for Today’s World (S119)</td>
</tr>
<tr>
<td>11:30 am - 12:20 pm Room: Cave Creek</td>
<td>2:55 pm - 3:45 pm Room: Phoenix A</td>
<td>8:15 am - 9:05 am Room: Camelback A</td>
</tr>
<tr>
<td><strong>Division/Department Leadership ANet Meeting (M03)</strong></td>
<td>Sponsored by the Innovative Teaching and Learning Committee</td>
<td>Sponsored by the Mathematics and Its Applications for Careers Committee</td>
</tr>
<tr>
<td>12:40 pm - 1:30 pm Room: Cave Creek</td>
<td><strong>Statistics Committee Meeting (M11)</strong></td>
<td><strong>Applications for Careers Committee</strong></td>
</tr>
<tr>
<td>K-12 Statistics and Data Science: The Influence of Two-Year Colleges (S023)</td>
<td>4:05 pm - 4:55 pm Room: Cave Creek</td>
<td><strong>Chairs’ Sharing Session (S035)</strong></td>
</tr>
<tr>
<td>12:40 pm - 1:30 pm Room: Encanto A</td>
<td>Mathematics for Liberal Arts ANet Meeting (M12)</td>
<td>1:50 pm - 2:40 pm Room: Maryvale A</td>
</tr>
<tr>
<td>Sponsored by the Statistics Committee</td>
<td>4:05 pm - 4:55 pm Room: Desert Sky</td>
<td>Sponsored by the Division/Department Leadership ANet</td>
</tr>
<tr>
<td><strong>Chairs’ Sharing Session (S035)</strong></td>
<td><strong>IGNITE</strong></td>
<td><strong>Research Session</strong></td>
</tr>
<tr>
<td>1:50 pm - 2:40 pm Room: Maryvale A</td>
<td>6:00 pm - 8:00 pm Room: Encanto A</td>
<td>7:00 pm - 9:30 pm Rooms: Camelback A &amp; Camelback B</td>
</tr>
<tr>
<td>Sponsored by the Division/Department Leadership ANet</td>
<td><strong>Sponsored by the Innovative Teaching and Learning Committee</strong></td>
<td>Sponsored by the Research in Mathematics Education for Two-Year Colleges Committee</td>
</tr>
</tbody>
</table>
Increasing Student Success in Community College Mathematics Through Active Learning

https://teachingforprowess.wordpress.com

PROWESS is an acronym for Proficiency, Ownership, Engagement, and Student Success which are the pillars introduced in AMATYC’s “Improving Mathematical PROWESS and College Teaching” (IMPACT) document.

Project Goals

- **Researcher-Practitioner Partnership**
  - Systemic Transformation
  - Transforming Department and Institutional Culture
  - DBIR

- **Propagate Knowledge**
  - IMPACT Colleges
  - Active Learning Principles
  - Equitable and Inclusive Practices
  - Student Success and Retention

- **Content Development and Pedagogical Knowledge**
  - Mathematics Instructional Practices

- **Building Community Engagement Activities**
  - myAMATYC
  - Community of Transformation

- **STEM Pathways**

PROWESS and the Principles of Active Learning

**Student**

- **Proficiency**
  - Deep engagement in mathematical thinking

- **Engagement**
  - Student-to-student interaction

**Instructor**

- **Ownership**
  - Interest in and use of student thinking

- **Student Success**
  - Attention to equitable and inclusive practices

---

Clackamas Community College

- Updated College Algebra through Calculus II Curriculum

Chandler-Gilbert Community College

- Advancing the teaching and learning of Calculus that emphasizes conceptual understanding, procedural fluency, and problem solving skills through...

- An innovative online course design

---

An NSF-funded collaborative project between the following organizations:
**For Your Information**

**Professional Networking/Hospitality Area**
Come spend some time in the Encanto Foyer Professional Networking/Hospitality Area. We are located on the second floor near many of the session rooms and the Exhibit Hall. We offer a charming spot to sit and chat with other conference attendees, find a great place for lunch or dinner, explore information about local attractions, sign up for short excursions, play some games, learn about the community project and sign the donation card, and grab some quick refreshment.

**Professional Networking/Hospitality Area Hours**
- **Wednesday** 4:00 pm - 8:00 pm
- **Thursday** 9:30 am - 2:30 pm
- **Friday** 11:00 am - 5:00 pm
- **Saturday** 11:00 am - 2:00 pm

**Email/Communications**
Complimentary WiFi is available in each guest room booked within the AMATYC block at the Sheraton Phoenix Downtown. Additionally, all meeting space will also be equipped with WiFi! Bring your tablet/smart phone and take notes in the sessions, then fill out the evaluation on the conference app. At the hotel there is a business center with computers and printer available for your use.

**Sightseeing/Local Transportation**
Visit the Professional Networking/Hospitality Area for information about local attractions and getting around Phoenix.

**Presentation and Conference Evaluations**
Please use the Whova conference app to evaluate each session you attend. Click the Surveys button, then Session Feedback, and select the desired session.

The evaluation for the conference should be completed immediately after the conclusion of the conference in one of three ways:
- use the conference app
- use the link on the AMATYC website
- use the link you will receive via email

Your opinions are valued and are used in planning future conferences.

**Conference Handouts**
Attendees will be able to pick up any extra copies of speakers’ handouts on the table near the AMATYC Registration Desk. Presenters have been encouraged to upload handouts to the Whova conference app. Uploaded documents will be available after the conference in the app or on the AMATYC website.

**Program Grid**
The program grid is a handy tool to help you maximize your conference experience and reflects program changes made after this conference program was printed.

**Program Key**
To assist you in quickly identifying the general category of each session and workshop, a key code follows each session or workshop number. The first code listed indicates the primary area of focus. Check the Program Key box on the next page and just before each day's schedule for this year's featured categories. Many sessions fall within multiple categories, and therefore have more than one code. Please understand there are many more possible strands than those noted, so the IG Key containing "general interest" topics may be very diverse.

**Policy on a Welcoming Environment**

It is the policy of the American Mathematical Association of Two-Year Colleges (AMATYC) that all participants in AMATYC activities will enjoy a welcoming environment free from all forms of discrimination, harassment, and retaliation. As a professional society, AMATYC is committed to providing an atmosphere that encourages the free expression and exchange of ideas. In pursuit of that ideal, AMATYC is dedicated to the philosophy of equality of opportunity and treatment for all members, regardless of gender, gender identity or expression, race, color, national or ethnic origin, religion or religious belief, age, marital status, sexual orientation, disabilities, veteran status, or any other reason not related to scientific merit. Harassment, sexual or otherwise, is a form of misconduct that undermines the integrity of AMATYC meetings.

This policy applies to all attendees at AMATYC activities, including mathematicians, students, guests, staff, contractors and exhibitors, participants in scientific sessions, tours, and social events of any AMATYC meeting or other activity. All individuals participating in AMATYC activities are asked to agree to behavior consistent with these standards. Violations of this policy should be reported to the President of AMATYC. Individuals violating these standards may be asked to leave the activity without refund of registration fees and may have their behavior reported to their employer. Repeat offenders may be banned from future AMATYC activities. Retaliation against individuals who file a complaint will not be tolerated and will be treated in a manner similar to harassment.

*This policy, in its entirety, can be found at www.amatyc.org/PolicyWelcomingEnv.

**Guest Policy**

**General Policy**
AMATYC is a professional organization for mathematics educators, and AMATYC events must serve these members. AMATYC welcomes family members of its event attendees, as registered guests, at these events, and recognizes that these events may be a positive experience for them.

To ensure that AMATYC events meet attendee expectations that include a pleasant and productive professional development activity, attendees are responsible for their guests’ behavior.

In particular, guests who are minors must be accompanied by the responsible attendee parent or guardian at all times. Attendee parents and guardians should take appropriate steps to ensure that their child's behavior does not disrupt other attendees, or infringe on their rights to the quality professional development activity they expect and for which they have paid.

Any guest should never prevent access to a session for a professional attendee – in particular, in a case of limited seating availability, materials availability, etc., professional attendees have priority. Children should not normally be in sessions. Exceptions might include when the child is related to the presenter and the child might benefit by being present.

Event officials are empowered and instructed to enforce these rules by taking all actions necessary to control disruptive or nuisance behavior.

**Photo/Video Release**
Photographs and video will be shot during this event. These photographs and video may be used on the web or in printed materials as deemed appropriate by the organizers of the event. If you do not wish to have your image published, please notify the AMATYC Office in writing no later than a week after the end of the 2021 AMATYC Annual Conference in Phoenix.

**Disclaimer:** The views and opinions expressed by speakers or others who have provided materials to and for this conference are not necessarily those of AMATYC. AMATYC assumes no responsibility for, nor endorses, any of the comments, recommendations, or materials that are provided.
<table>
<thead>
<tr>
<th>EQ</th>
<th>Equity and Inclusivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Equity, diversity, and social justice in providing mathematics education to all students</td>
</tr>
<tr>
<td>•</td>
<td>Collaboration with AMATYC leadership, committees and ANets, and Project ACCCESS to increase awareness about diversity</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>IG</th>
<th>International, Cultural and General Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Best practices regarding the teaching and learning of mathematics around the world</td>
</tr>
<tr>
<td>•</td>
<td>Professional development opportunities to infuse global perspective in teaching</td>
</tr>
<tr>
<td>•</td>
<td>Mathematics or the teaching of mathematics relative to history or any culture or people</td>
</tr>
<tr>
<td>•</td>
<td>Topics of general interest</td>
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<thead>
<tr>
<th>MI</th>
<th>Math Intensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>STEM courses: Precalculus, Calculus, and beyond</td>
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<tr>
<th>MN</th>
<th>Math for Non-STEM</th>
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<tbody>
<tr>
<td>•</td>
<td>Courses such as Quantitative Literacy or Reasoning, Liberal Arts Math, or Finite Math</td>
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<tr>
<td>•</td>
<td>Topics such as probability, statistics, or finance which might be used in a QR course</td>
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<thead>
<tr>
<th>PD</th>
<th>Professional Development and Department/Division Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Strategies for helping college faculty improve or evaluate their teaching while discovering and implementing best practices</td>
</tr>
<tr>
<td>•</td>
<td>Suggestions to address needs, preparation, and inclusion of adjunct faculty</td>
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<tr>
<td>•</td>
<td>Ideas for fostering collaboration and community within or between departments and institutions while providing for student success</td>
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</tbody>
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<thead>
<tr>
<th>PS</th>
<th>Pathways for Student Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Any sequence of courses, including developmental mathematics, that most efficiently leads to the student's final college-level mathematics course in the field of study</td>
</tr>
<tr>
<td>•</td>
<td>Student placement into the correct mathematics course, program, or pathway using various advising tools or multiple measures</td>
</tr>
<tr>
<td>•</td>
<td>Assessment of student proficiency, courses, or programs</td>
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<thead>
<tr>
<th>SM</th>
<th>Strategies and Mindset for Student Success</th>
</tr>
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<tbody>
<tr>
<td>•</td>
<td>Improvement of the quality of develop-mental mathematics programs to better prepare students for success</td>
</tr>
<tr>
<td>•</td>
<td>Strategies for enabling students to take ownership for learning, deal with math anxiety, and gain confidence to succeed by developing a mathematical mindset</td>
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<thead>
<tr>
<th>ST</th>
<th>Statistics</th>
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<td>Statistics</td>
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<td>•</td>
<td>Statistical literacy</td>
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<td>•</td>
<td>Data science</td>
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<tr>
<th>TC</th>
<th>Teaching in Grades K-12 and Applying Math to Other Careers</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Courses to prepare education majors to teach mathematics in K-12</td>
</tr>
<tr>
<td>•</td>
<td>Mathematics courses for career and technical programs, both terminal and transfer</td>
</tr>
<tr>
<td>•</td>
<td>Courses such as business statistics or business calculus</td>
</tr>
<tr>
<td>•</td>
<td>Courses with emphasis on applications and technical communication</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>TL</th>
<th>Technology and E-Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Use of technology in course delivery, engagement of students, or collaboration of students and/or faculty</td>
</tr>
<tr>
<td>•</td>
<td>Hybrid, blended, or online courses</td>
</tr>
</tbody>
</table>

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**Technology Welcome:** Attendees are encouraged to bring smart phones, tablets, or laptops to fully participate in portions of these presentations: S007, S011, S014B, S029, S036, S037, S044, S046, S053, S069, S078, S080, S083, S084, S085, S091, S099, S106, S108, S109, S115, S123, and S124. Watch for the icon to identify these presentations.

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SPECIAL CONTRIBUTIONS

GateWay CC and Phoenix College – for receiving, storing, and delivering conference items

Hawkes Learning – for providing the conference attendee bags

Wiley – for providing the conference badge holders, sponsoring the badge printing, and sponsoring the Saturday Awards Breakfast

ArizMATYC – for local planning and support

AMATYC Southwest Region – for local support

PROFESSIONAL NETWORKING/HOSPITALITY AREA SPONSORS

Alabama Mathematical Association of Two-Year Colleges (AlaMATYC)
Arizona Mathematical Association of Two-Year Colleges (ArizMATYC)
Florida Two-Year College Mathematics Association (FTYCMA)
Georgia Mathematical Association of Two-Year Colleges (GMATYC)
Iowa Mathematical Association of Two-Year Colleges (IMATYC)
Kansas Mathematical Association of Two-Year Colleges (KAMATYC)
Kentucky Mathematical Association of Two-Year Colleges (KYMATYC)
Michigan Mathematical Association of Two-Year Colleges (MichMATYC)
New England Mathematical Association of Two-Year Colleges (NEMATYC)
New York State Mathematics Association of Two-Year Colleges (NYSMATYC)
North Carolina Mathematical Association of Two-Year Colleges (NCMATYC)
Ohio Mathematical Association of Two-Year Colleges (OhioMATYC)
Texas Mathematical Association of Two-Year Colleges (TEXMATYC)
Wisconsin Mathematical Association of Two-Year Colleges (WisMATYC)
Wyoming Mathematical Association of Two-Year Colleges (WYMATYC)

The Impromptu Room

What: A breakout room for conversations among colleagues.
Why: To continue discussing ideas presented in a session or to initiate a new topic of conversation.
Where: Ahwatukee A
When: Thursday, October 28, 9:00 am – 2:40 pm
Friday, October 29, 10:15 am – 4:45 pm
Saturday, October 30, 10:45 am – 3:05 pm
How: Use the signs on the easel outside of Ahwatukee A starting Wednesday night. The room is close to the Encanto Foyer and the Hospitality/Networking Area, not far from the Registration Area.
Your Foundation Contributions Are Used to Support

- AMATYC Project ACCCESS
- Mini Grants to Members
- Student Mathematics Competitions
  - Student Mathematics League
  - Student Research League
- Awards and Scholarships
  - Leila & Simon Peskoff Award
  - Margie Hobbs Award
  - Wanda Garner Presidential Student Scholarship
- AMATYC IMPACT and Standards initiatives
- Traveling Workshops
- National Mathematics Summits

How You Can Help

- Participate in the Dot Campaign or Day of Giving
- Make a contribution to the Endowment Fund or to a fund of your choice
- Recognize someone special
- Initiate Sustained Giving
- Shop at AmazonSmile
- Consider Estate Giving

The Leila and Simon Peskoff Award

Matthew Pragel
Harrisburg Area CC (PA)

Laurie Beth Keatts
Catawba Valley CC (NC)

The Margie Hobbs Award

Grace Pai
Guttman CC CUNY (NY)

Guillermo Alvarez Pardo
Cuesta College (CA)

The Wanda Garner Presidential Student Scholarship recipient will be announced at the Thursday Keynote Session.
AMATYC welcomes the ACCCESS and SLOPE Fellows to the 47th AMATYC Annual Conference in Phoenix:

2019-2021 ACCCESS Cohort

Lara Bauman, Chabot College, Hayward, CA  
Gary Bolduc, Dutchess CC, Poughkeepsie, NY  
Farrah Chmilnitzky, Seminole State College of Florida, Sanford, FL  
Katelynn Ellis, Western Wyoming CC, Rock Springs, WY  
Jeffrey Feuer, Anne Arundel CC, Arnold, MD  
Susan Ficken, Anne Arundel CC, Arnold, MD  
Joshua Gross, Dutchess CC, Poughkeepsie, NY  
Violeta Kovacev-Nikolic, College of the Canyons, Santa Clarita, CA  
Mark Lydon, Yuba College, Marysville, CA  
Melissa Menning, Johnson County CC, Overland Park, KS  
Sohely Perven, Southwest Tennessee CC, Memphis, TN  
Ashley Pratt, Dabney S. Lancaster CC, Clifton Forge, VA  
Manisha Ranade, Santa Fe College, Gainesville, FL  
Ivan Retamoso, Borough of Manhattan CC, New York, NY  
Jennifer Rice, Collin College, Frisco, TX  
Bhuvaneswari Sambandham, Dixie State University, Saint George, UT

2020-2022 ACCCESS Cohort

Joseph Bowling, College of Southern Maryland, La Plata, MD  
James Chadic, Asnuntuck CC, Enfield, CT  
Taylor Darwin, Midland College, Midland, TX  
Amanda Davis, Forsyth Technical CC, Winston-Salem, NC  
Justin Davis, Santa Rosa Junior College, Santa Rosa, CA  
Teresa Jennings, Arkansas State University Beebe, Beebe, AR  
Colby Keslar, Johnson County CC, Overland Park, KS  
Lengchivon Kou, Middlesex CC, Bedford, MA  
Lori Lewis, Santa Rosa Junior College, Santa Rosa, CA  
Madilyn Marshall, Coconino CC, Flagstaff AZ  
Dylan Noack, Yuba College, Marysville, CA  
Chamila Ranaweera, Southeast Technical College, Sioux Falls, SD  
Basanti Sharma Poudyal, Tarrant County College-Northeast Campus, Hurst, TX  
Mayra Sierra, Glendale CC, Glendale, CA  
Andrew Taylor, University of New Mexico-Valencia Campus, Los Lunas, NM  
Whitney Turner, Johnson County CC, Overland Park, KS  
Nancy Elizabeth Wentzel, Northeast State CC, Blountville, TN  
Emily Whittington, Pima CC, Tucson, AZ  
Tawanna Wilson, Pima CC, Tucson, AZ  
Katrina Wono, Pierce College, Woodland Hills, CA

Project ACCCESS Coordinator: Lisa Feinman

Project SLOPE Fellows

Rheannin Becke, Clark College, Vancouver, WA  
Vinodh Kumar Chellamuthu, Dixie State University, Saint George, UT  
Luke Walsh, Catawba Valley CC, Hickory, NC  
Brooks Ziegler, Pellissippi State CC, Maryville, TN

Project SLOPE Coordinator: Megan Breit-Goodwin
**2020 Mathematics Excellence Award Recipient**

Rikki Blair  
Lakeland CC (Emeritus)  
Kirtland, OH

**2021 Teaching Excellence Award Recipients**

Jessica Bernards  
Portland CC  
Portland, OR

Fan Chen  
El Paso CC  
El Paso, TX

Jennifer Travis  
Lone Star College–North Harris  
Houston, TX

**2021 Herb Gross Presidential Award Recipients**

George Hurlburt  
Corning CC  
Corning, NY

Judy Williams  
Tidewater CC (Retired)  
Portsmouth, VA
INSTITUTIONAL MEMBERSHIP

103
number of current institutional members in the U.S. & Canada

44
number of AMATYC affiliate organizations in the U.S. & Canada

1102
number of individual & lifetime members

81%
of members attend the AMATYC Annual Conference

45%
of public community colleges are represented by individual members

200
number of adjunct, retiree, and student members

Benefits of Institutional Membership

✓ One complimentary discount member conference registration
✓ One complimentary AMATYC Adjunct Membership
✓ Subscriptions to the AMATYC News and MathAMATYC Educator, a peer-reviewed journal
✓ Student Mathematics League participation fee waiver and one complimentary Student Research League team registration
✓ 50% discount on a one-year, individual AMATYC membership for first-time members
✓ Two complimentary job listings posted on the AMATYC website job board

$555
annual cost for institutional membership

“The benefits of the Institutional Membership definitely outweigh its annual cost. In addition to covering the registration fee for the annual conference and providing an opportunity for our students to compete in the Student Math League, the Institutional Membership allows the Math Department to post faculty openings nationally at no additional cost.”

—Mathematics Department Chair, Glendale Community College, AZ
AMATYC Is Making a Positive IMPACT on Student Success

**Themed Session**

**AMATYC Is Making a Positive IMPACT on Student Success**

**Moderator:**

Julie Phelps – Valencia College, Orlando, FL

Have you been wondering how to apply the IMPACT Standards and the pillars of PROWESS into your practice? Implementation has occurred and now it is time to share!

- **8:00 am - 8:15 am** T1A SM, PD, TL
  Taking Action and Making a Positive IMPACT on Student Success
  **Presenter:**
  Julie Phelps – Valencia College, Orlando, FL

What activities are being implemented to support Student Success in mathematics during the first two years of college? Do the activities promote PROWESS: mathematical proficiency, student and faculty ownership and student and faculty engagement? How do you know?

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**Phoenix Program Keys**

- **EQ** Equity and Inclusivity
  - Equity, diversity, and social justice in providing mathematics education to all students
  - Collaboration with AMATYC leadership, committees and ANets, and Project ACCCESS to increase awareness about diversity

- **IG** International, Cultural and General Interest
  - Best practices regarding the teaching and learning of mathematics around the world
  - Professional development opportunities to infuse global perspective in teaching
  - Mathematics or the teaching of mathematics relative to history or any culture or people
  - Topics of general interest

- **MI** Math Intensive
  - STEM courses: Precalculus, Calculus, and beyond

- **MN** Math for Non-STEM
  - Courses such as Quantitative Literacy or Reasoning, Liberal Arts Math, or Finite Math
  - Topics such as probability, statistics, or finance which might be used in a QR course

- **PS** Pathways for Student Success
  - Any sequence of courses, including developmental mathematics, that most efficiently leads to the student’s final college-level mathematics course in the field of study
  - Student placement into the correct mathematics course, program, or pathway using various advising tools or multiple measures
  - Assessment of student proficiency, courses, or programs

- **RG** Research and Grants
  - Reports on research results and practices, at both classroom and institutional level
  - Reports on grant-supported or grant-related activities
  - Strategies to obtain funding to undertake research

- **SM** Strategies and Mindset for Student Success
  - Improvement of the quality of developmental mathematics programs to better prepare students for success
  - Strategies for enabling students to take ownership for learning, deal with math anxiety, and gain confidence to succeed by developing a mathematical mindset.

- **ST** Statistics
  - Statistics
  - Statistical literacy
  - Data science

- **TC** Teaching in Grades K-12 and Applying Math to Other Careers
  - Courses to prepare education majors to teach mathematics in K-12
  - Mathematics courses for career and technical programs, both terminal and transfer
  - Courses such as business statistics or business calculus
  - Courses with emphasis on applications and technical communication

- **TL** Technology and E-Learning
  - Use of technology in course delivery, engagement of students, or collaboration of students and/or faculty
  - Hybrid, blended, or online courses

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8:00 AM

**8:20 am - 8:35 am** T1B SM, PD, TL
Using Metacognitive Prompts to Facilitate a Transition to Proficiency

**Presenter:**

Sidra Van De Car – Valencia College, Orlando, FL

How do you know when students have transitioned from competence to proficiency? Students’ self-awareness of the learning process plays a critical role in creating students who move beyond rote memorization and competence into the realm of true proficiency by fostering self-correction. This interplay of metacognition and proficiency will be discussed.

**8:40 am - 8:55 am** T1C SM, PD
Ownership Isn’t Just About Cars and Houses!

**Presenter:**

Karen Gaines – St. Louis CC (Emeritus), Kirkwood, MO

What does ownership mean to you? As one of the pillars of PROWESS, Ownership has many layers. Ideas about facilitating students’ ownership of learning as well as faculty ownership of teaching will be presented in an interactive format.
Thursday, October 28

- 9:00 am - 9:15 am  T1D  SM, PS, PD
  Exploring the Elements of an Engaging Learning Environment
  
  Presenter:  
  Charity Jones – Weber State University, Ogden, UT
  
  How do you intellectually engage students in the process of learning mathematics? An engaging learning environment enables students' development of a rigorous understanding of mathematics. Come explore the elements of such an environment.

- 9:20 am - 9:35 am  T1E  EQ, SM
  Inclusive Teaching Practices that Promote Equity and Inclusion
  
  Presenter:
  Nancy Sattler – Terra State CC, Fremont, OH
  
  Research has shown that students from underrepresented groups often face additional challenges. Learn about inclusive teaching practices that can immediately be put to use in your classroom to benefit both you and your students. These practices can be used in both an online environment and in a physical classroom.

- 9:40 am - 9:55 am  T1F  PD, TL
  IMPACT Live!
  
  Presenter:
  Evan Evans (2007 Project ACCCESS Fellow) – Frederick CC, Frederick, MD
  
  Where can you discuss and share thoughts on emerging themes with other like-minded colleagues? How can you stay abreast of the principles of IMPACT? What are some new innovations and research going on in this profession? Now sit right back and hear a tale, a tale of an IMPACTful site.

8:00 am - 9:55 am  T2
Room: Encanto A

**Themed Session**

Active Learning in the Introductory Statistics Classroom

Moderator:
Carol Howald – Howard CC, Columbia, MD

In this themed session, presenters will share ideas for engaging introductory statistics students in active learning. Participants will learn about activities involving sampling designs, probability, data mining, confidence intervals, and hypothesis testing.

- 8:00 am - 8:15 am  T2A  ST, SM
  Rental vs. Professional Frogs – What Does Significantly Different Mean?
  
  Presenter:
  Roxy Peck – Cal Poly - San Luis Obispo, San Luis Obispo, CA
  
  This session introduces an activity based on the Calaveras County Frog Jumping Jubilee. The activity can be used to introduce two-sample hypothesis testing and develops understanding of what significantly different does and does not mean.

- 8:20 am - 8:35 am  T2B  ST, SM
  Sampling Techniques with the Class Roster – An Ice-Breaker Activity
  
  Presenter:
  Matthew Watts (2009 Project ACCCESS Fellow) – Red Rocks CC, Lakewood, CO
  
  An early topic in most introductory statistics courses is sampling methods. This activity uses the class roster as a context for creating samples with different methods, and also functions as an ice-breaker activity early in the semester.

8:40 am - 8:55 am  T2C  ST, SM
Estimating with Bootstrapping

Presenter:
Michael Sullivan – Joliet Junior College, Joliet, IL

The bootstrap method for estimating a parameter was first developed by Bradley Efron in 1979. This presentation demonstrates an activity that may be used to introduce the logic and methodology behind constructing confidence intervals for a population mean using bootstrapping.

- 9:00 am - 9:15 am  T2D  ST, SM
  Make a Sampling Distribution from Scratch!
  
  Presenter:
  Luanne Benson-Lender – University of Indianapolis, Indianapolis, IN
  
  The presenter and audience will collaborate to construct an entire sampling distribution for a small population and examine its properties. This activity serves as a concrete foundation for teaching sampling distributions in an introductory statistics course.

- 9:20 am - 9:35 am  T2E  ST, SM
  Engaging Students in Hypothesis Testing Using Bean Sorting
  
  Presenter:
  Laurie B. Keatts (2014 Project ACCCESS Fellow) – Catawba Valley CC, Hickory, NC
  
  This presentation describes a class activity that involves sorting beans with and without gloves. Students use hypothesis testing to check for a significant difference in the time it takes students to sort the same amount of beans with gloves as opposed to without gloves.

- 9:40 am - 9:55 am  T2F  ST, SM
  Random Rendezvous
  
  Presenter:
  Allan Rossman – Cal Poly-San Luis Obispo, San Luis Obispo, CA
  
  This activity poses a classic probability problem (“How likely are two people to meet?”) to introduce students to basic concepts of randomness. The activity makes use of an interactive simulation, coding, geometry, and algebra to solve a probability problem and some extensions.

8:00 am - 9:55 am  T3
Room: Encanto B

**Themed Session**

Equity: From the Personal to the Institutional Level

Moderator:
AJ Stachelek – Hostos CC, Bronx, NY

Are you looking for a space to talk about equity in mathematics education? Does the idea of purposefully unpacking systemic racism in education appeal to you? Want to know how to integrate equity into your classroom? Please join this Equity Themed Session!

- 8:00 am - 8:15 am  T3A  EQ
  Rising Through the Ranks – A Minority Perspective
  
  Presenter:
  Tiane Ellis – Jefferson CTC, Louisville, KY
  
  Whether you are in a male-dominant profession or a race minority in a predominantly white setting, you deserve to be treated equally. If you’ve ever been a minority or part of the majority, this talk is for you! Join this interactive session to learn how everyone can move forward!
Thursday, October 28

- **8:20 am - 8:35 am** T3B  EQ, PS, SM
  **Promote Racial Equity in Math with Structural & Relational Practices**
  **Presenter:**
  Helen Burn – Highline College, Des Moines, WA
  Achieving racial equity in mathematics requires attention to multiple domains, including placement, course offerings, student support, and instruction. This session unpacks these domains and highlights practices that can mitigate structural racism and, alternatively, relational practices that can enhance student persistence and engagement.

- **8:40 am - 8:55 am** T3C  EQ, RG
  **Equity in STEM at HSIs: Adaptive Case Studies as Catalysts for Change**
  **Presenter:**
  Guadalupe Lozano – University of Arizona, Tucson, AZ
  In 2017, the University of Arizona led the first national conference to inform NSF's Hispanic Serving Institutions (HSI) program. Hear how three case studies, two at community colleges, enabled moving from recommendations (Lozano, Franco, Subbian, 2018) to actionable change in two areas: equity and assessment, and equity and access.

- **9:00 am - 9:15 am** T3D  EQ
  **Data, Decision Making, and Antiracism**
  **Presenter:**
  Ralf Youtz – Portland CC, Portland, OR
  Math student outcomes data when disaggregated by race provide a racial equity-based argument for changing curricular practices. Responding to so-called "gaps" in success rates, math educators can take antiracist action by developing curricular materials that are culturally responsive to students who are Black, Indigenous, and People of Color.

- **9:20 am - 9:35 am** T3E  EQ, ST
  **Statistics for Social Justice: A New OER Workbook**
  **Presenter:**
  Daniel Judge – East Los Angeles College, Los Angeles, CA
  How can statistics classes be recentered on equity issues, while acknowledging racism in the history of statistics? Sample OER “Statistics for Social Justice” lessons will use data on police shootings, COVID-19, and wage inequality to integrate structured student discussions of social issues with practice on using fundamental statistical methods.

- **9:40 am - 9:55 am** T3F  EQ, MN
  **Math for Liberal Arts: A Social Justice Focus**
  **Presenter:**
  Bonnie Blustein – West Los Angeles College, Culver City, CA
  An equity approach to Liberal Arts Math (or Math and Society) helps to engage students who may be uncomfortable with traditional math. An antiracism and social-justice lens focuses students’ attention on the place of mathematics in their lived experience. Successful strategies and examples, including students’ responses, and resources will be shared.

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**Themed Session**

**Innovative Assessments to Help Your Students Rise from the Ashes**

**Moderator:**
Jennifer Ackerman – Jefferson CTC, Louisville, KY
Assessment: one of the biggest challenges instructors face. From worries about cheating to equity issues, faculty are looking for answers to difficult questions about ensuring academic integrity. Learn about assessments that transcend skill/drill tests and ways to improve online assessment. Explore authentic assessment to support faculty and student learning.

- **8:00 am - 8:15 am** T4A  PD, SM, TL
  **Busting Open Assessment**
  **Presenter:**
  Fred Feldon – Coastline College, Fountain Valley, CA
  The pandemic accelerated innovation in remote teaching and learning. It provided an opportunity for change, to stop emphasizing facts and procedures. What, exactly, is success in math and a mathematical mindset? Do exam questions show that the building of what Francis Su calls "mathematical virtues" is actually valued?

- **8:20 am - 8:35 am** T4B  TL, MI, PD
  **Use the Desmos “Play Sounds” to Assess with Non-Searchable Questions**
  **Presenter:**
  Rob Eby (2005 Project ACCCESS Fellow) – Blinn College-Bryan Campus, Bryan, TX
  Desmos can turn your graph into sounds. Hear how the presenter used this feature to reinforce lessons, and also assess students with questions that do not yield to Internet searches. Precalculus and Calculus examples will be demonstrated, including transformations and derivative ideas.

- **9:00 am - 9:15 am** T4D  PD, SM, TL
  **Who in the Self-Cares About Assessment?**
  **Presenter:**
  Carrie Muir – Whatcom CC, Bellingham, WA
  How do assessments promote self-care in the classroom, self-care in students, self-care in experiencing mathematics? Come see how a framework of equity by Rochelle Gutierrez can guide educators in weaving self-care as a thread of positive experiences among the spectrum of assessments.

- **9:20 am - 9:35 am** T4C  EQ, PD, SM
  **The TILT Approach: Transparency in Learning & Teaching**
  **Presenter:**
  Carrie Muir – Whatcom CC, Bellingham, WA
  How do assessments promote self-care in the classroom, self-care in students, self-care in experiencing mathematics? Come see how a framework of equity by Rochelle Gutierrez can guide educators in weaving self-care as a thread of positive experiences among the spectrum of assessments.

- **9:40 am - 9:55 am** T4F  PD, TL, EQ
  **Writing Non-Googleable Problems**
  **Presenter:**
  Kathleen Almy – Rock Valley College, Rockford, IL
  With online search engines and programs like Photomath, traditional problems have never been easier to cheat on. The key to this issue is to recreate your assessments and the problems included. This session will share multiple techniques for rewriting assessments so that they measure the student’s understanding, not their tech prowess.
Thursday, October 28

8:00 am - 9:35 am  T5
Room: Paradise Valley

**Themed Session**

Lighting the Fire of Success with Pathways and Corequisites

**Moderator:**
Kathryn Van Wagoner – Weber State University, Ogden, UT

Mathematics faculty are being asked to align, modernize, and contextualize college mathematics courses to make mathematics more relevant to student learning and expedite graduation. Presenters in this session will share their experiences with implementing Pathways and Corequisites in various models, sharing best practices and lessons learned.

8:00 am - 8:15 am  T5A  PS, EQ, SM
Kindling Student Success with Relevant Math Pathways

**Presenter:**
Joan Zoellner – The Dana Center at the University of Texas at Austin, Austin, TX

Explore ways in which you can ensure math pathways kindle student success. Provide students with experiences in mathematical concepts and contexts that are authentic and relevant to their career aspirations and personal lives. A large collection of openly available contextualized resources will be provided.

8:20 am - 8:35 am  T5B  PS, MN
Finding the Right Math Path for Success

**Presenter:**
Kathryn Van Wagoner – Weber State University, Ogden, UT

One of the main deterrents to completing a college degree is the requirement of mathematics literacy or proficiency. See a math course sequence which provides students with the optimum math experience necessary to be successful in their major field and satisfy their math graduation requirement.

8:40 am - 8:55 am  T5C  PS, MN
Opening Doors with Corequisite Opportunities

**Presenter:**
Kim Granger – St. Louis CC-Wildwood Campus, Wildwood, MO

How have corequisites improved student success? This presentation will present best and promising practices gleaned from the perspective of both statewide and institutional implementations of corequisite models.

9:00 am - 9:15 am  T5D  SM, PS, EQ
Incorporating Study Skills into Corequisite Classes

**Presenter:**
Jessica Bernards (2012 Project ACCCESS Fellow) – Portland CC, Portland, OR

Many students are unaware of the expectations and workload required to succeed in a math class. Bringing in math specific study skills can help substantially increase success and retention. Examples of short, engaging animated videos that teach math specific study skills will be shared as well as reflective student prompts.

9:20 am - 9:35 am  T5E  PS
Implementing Corequisites: Challenges to Consider

**Presenter:**
Jeff Thies – Pima CC, Tucson, AZ

Corequisites have become a common student success initiative across the country. What’s not so commonly shared are the details to implementation. State mandates, national programs, external organizational support, and local policies all can play a role in design, implementation, and continuous improvement models.

8:20 am - 9:55 am  T6
Room: Camelback A

**Themed Session**

Imparting Global Competencies for Student Success

**Moderator:**
Barbara Leitherer – CC of Baltimore County, Baltimore, MD

In this themed session, presenters will share ideas for engaging students in global learning — looking at pedagogy, virtual exchange with foreign institutions, and examples of a globalized curriculum.

9:00 am - 9:15 am  T6D  IG, TL
Creating Global Citizens in Mathematics Courses Through COIL

**Presenter:**
Barbara Leitherer – CC of Baltimore County, Baltimore, MD

Meeting non-mathematical learning outcomes such as teaching students to become global citizens can be challenging in mathematics courses. This presentation shares an example of how to do so through Collaborative Online International Learning (COIL) – a high impact strategy of connecting classes in different countries or cultures through virtual exchange.
Thursday, October 28

- 9:20 am - 9:35 am  T6E  IG, ST
  A Statistical COIL Embracing Global Perspectives
  **Presenter:**
  Irene Duranczyk – University of Minnesota, St. Paul, MN
  This presentation will demonstrate key components and tasks necessary to incorporate a Collaborative Online International Learning (COIL) unit within an introductory statistics course. Integration with Russia and Mainland China were the focus of this course so time zone considerations will be explored and discussed.

- 9:40 am - 9:55 am  T6F  IG
  Creating and Implementing a Global Project in a Precalculus Course
  **Presenter:**
  Entela Xhane (2017 Project ACCCESS Fellow) – CC of Baltimore County, Baltimore, MD
  Math helps in understanding the world and global issues can be used to understand math. Learn how you can create and incorporate a global project into a math course to enrich students' learning and better prepare them for a rapidly changing world.

8:00 am - 9:10 am  S001  PD
Room: Ahwatukee A

**AMATYC 101 – Walk and Learn!**

**Tours:**

- **S001A**  Tour #1 (8:00 am – 8:50 am)
  Led by April Ström

- **S001B**  Tour #2 (8:20 am – 9:10 am)
  Led by Sophia Georgiakaki

Have some fun and go on a relaxing walking tour of the Conference Center! Along the way, you will learn about AMATYC, ways to get involved and share great ideas with others beyond the annual conference, and get to know some of the AMATYC leadership!

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9:10 AM

9:10 am - 10:00 am  S002  SM
Room: Phoenix A

A Simple Activity that Spans Multiple Mathematical Levels

**Presenter:**
Paul McCombs – Rock Valley College, Rockford, IL
**Presider:**
Tami Tacker – Purdue University Global, Indianapolis, IN

This presentation will illustrate a simple hands-on activity that may be used in your classroom and adapted to different levels of mathematics from basic arithmetic through the calculus sequence. It will serve as an example of how simple hands-on activities can be enriched and extended to incorporate various mathematical concepts.

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9:10 am - 10:00 am  S003  MI
Room: Phoenix B

What Are Hyperbolic Functions?

**Presenter:**
Doug Runge – St. Louis CC, St. Louis, MO
**Presider:**
George Soliman – Raritan Valley CC, Branchburg, NJ

The hyperbolic functions are often introduced as formulas with respect to the natural exponential function. The presenter will derive these formulas, and then discuss what motivates the definition of the functions based on the unit hyperbola, with historical perspective mixed in.

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10:20 AM

10:20 am - 11:10 am  M01  •Committee Meeting•
Room: Cave Creek

**Research in Mathematics Education for Two-Year Colleges Committee Meeting**

**Meeting Leader:**
Frank Marfai – Phoenix College, Phoenix, AZ

**AMATYC’s Journey to Mars Program**

**Presenters:**
Karen Gaines – St. Louis CC - Emeritus, St. Louis, MO
Kendall Jacobs – Casper College, Casper, WY

**Presider:**
Sean Saunders – Sheridan College, Oakville, ON, Canada

Take “AMATYC’s Journey to Mars Program (Earth, Moon, Mars and Beyond - Then, Now and Tomorrow)” with classroom-ready snapshots of NASA and PASAs (Private Aeronautics and Space Administrations) human and non-human activities. These activities are suitable for a variety of mathematics courses or as enrichment for clubs or seminars.

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10:20 am - 11:10 am  S004  IG, TC, SM
Room: Maryvale A

Flip Your Class (or Even ONE Session) Without Flipping Out

**Presenter:**
Kim Granger – St. Louis CC Wildwood Campus, Wildwood, MO
**Presider:**
Jennifer Ackerman – Jefferson, CTC. Louisville, KY

Learning science supports the effectiveness of flipped teaching. The presenters will share basics of flipped teaching and what was learned from an NSF iFlip grant. Most of the presentation will focus on easy steps you can take to flip a course. The presenters flipped STEM and non-STEM courses ... without flipping out!

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10:20 am - 11:10 am  S006  EQ
Room: Encanto B

**••Presidential Exchange Series Speaker••**

Implicit Bias and Unconscious Bias in the Mathematics Classroom

**Presenter:**
Gloria Brown Brooks – Board Member, TODOS: Mathematics for All, Hollister, CA
**Presider:**
Maurice LeVell Wilson – Georgia Highlands College, Cartersville, GA

We have biases that are part of our everyday life. Some of these are carried over into our classrooms and on our school site. We will watch a presentation and discuss our bias affects us daily.

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As a courtesy to conference participants, attendees are asked to silence all devices while attending presentations.
Thursday, October 28

10:20 am - 11:10 am  S007  TL, SM
Room: Deer Valley

Value and Logistics of Collecting Written Work In Online Math Courses

**Presenter:**
Amy Barnsley (2009 Project ACCCESS Fellow) – Northern Michigan University, Marquette, MI

**Presider:**
Martha Chalhoub – Collin College, Frisco, TX

Mathematical processes are more important than mathematical answers. Teaching online presents the challenge of collecting and grading written work that demonstrates the students’ understanding. Presentation will review the rationale for emphasizing written work and will present logistics of collecting and scoring written work in online courses.

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10:20 am - 11:10 am  S008  IG, MI
Room: Paradise Valley

The British Mathematical Impact: Newton, Cayley, and Beyond

**Presenters:**
David Price – Tarrant County College (Retired), Arlington, TX
Elise Price – Tarrant County College (Retired), Arlington, TX
Keith Nabb – Piedmont Valley CC, Charlottesville, VA

From Robert Recorde in the sixteenth century to Newton in the seventeenth, Maclaurin in the eighteenth, Cayley in the nineteenth, and Wiles in the twentieth, Britain has made fundamental contributions to mathematics. This presentation will discuss a variety of these achievements and their effect on the two-year college curriculum.

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10:20 am - 11:10 am  S009  SM, PD, PS
Room: Camelback A

Math Mentoring During the COVID-19 Era

**Presenters:**
Ben Moulton – Utah Valley University, Orem, UT
Serena Buss – Utah Valley University, Orem, UT
Quetzal Martinez – Utah Valley University, Orem, UT
Jake Reed – Utah Valley University, Orem, UT
Dan Fahringer – Harrisburg Area CC, Harrisburg, PA

Math mentoring at this institution has become an integral contributing part of student success in developmental mathematics. Come listen as program directors and student math mentors discuss how the program has evolved over time, including how it has addressed student learning during the COVID-19 era.

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10:20 am - 11:10 am  S010  PD, IG
Room: Camelback B

Grass Roots Movement: Creating a Local Math Mini-Conference

**Presenters:**
Caroline Sampson (2014 Project ACCCESS Fellow) – Florida State College at Jacksonville, Jacksonville, FL
Matthew Simmons – Florida State College at Jacksonville, Jacksonville, FL

President:
Laura Schueller – Washington State Board CTC, Olympia, WA

The presenters will share the process they used to create an annual math mini-conference for local and regional K-20 educators. This conference is entirely educator-led and driven, free to attend, with zero net venue costs, and provides attendees with breakfast, lunch, and snacks.

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10:20 am - 11:10 am  S011  MI, SM, TL
Room: Phoenix A

Using an Actual Escape Room in Calculus 1 (Some Will Play Also!)

**Presenter:**
Rob Eby (2016 Project ACCCESS Fellow) – Blinn College-Bryan Campus, Bryan, TX

**Presider:**
Bob Cappetta – Florida Southwestern State College, Fort Myers, FL

Inspired by the 2019 AMATYC conference, the presenter used an escape room as reviews with a bonus based on the order of finishing. Discuss the background, how it was built and implemented, then actually play a short game. Adapting it to online will be discussed also.

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11:20 AM

11:20 am - 12:35 pm  C1
Room: Ahwatukee B

Commercial Presentation—Gradescope by Turnitin

Throw Your Red Pen in the Fire: A Streamlined Approach to Grading

**Presenters:**
Lyn Riverstone – Gradescope by Turnitin, Oakland, CA
Sara Clark – Oregon State University, Corvallis, OR

Math instructors struggle to give students detailed, targeted feedback on their handwritten work, while maintaining consistency during the grading process. In this session hear from a fellow instructor who's fired up to tell you how Gradescope helped overcome these struggles, saved time, and improved student learning outcomes.

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11:30 AM

11:30 am - 12:20 pm  M02  ● Committee Meeting ●
Room: Cave Creek

Data Science Subcommittee Meeting

**Meeting Leader:**
Crystal Wiggins – Northwestern Connecticut CC, Winstead, CT
**Mini Session**

*Let's Talk About Transition!*

**Presenter:**
Rhea Beke – Clark College, Vancouver, WA

**Presider:**
Barbara Illowsky – De Anza College, Cupertino, CA

This session focuses on design decisions in setting up a corequisite developmental math literacy and introduction to statistics offering to accelerate student completion. A summary of the structure of the course will be presented followed by a discussion of mapping competencies from the college-level course back to the developmental corequisite.

**Mini Session**

*Competency Tests for Teacher Prep Students?*

**Presenters:**
Valerie Cope – Sinclair CC, Dayton, OH
Kinga Oliver – Sinclair CC, Dayton, OH

**Mini Session**

*The Case for Better Technology in Introductory Statistics*

**Presenter:**
Roxy Peck – Cal Poly - San Luis Obispo, San Luis Obispo, CA

**Presider:**
Rebecca Williams – State College of Florida-Manatee-Sarasota, Bradenton, FL

Data-based statistics courses engage students using real data and meaningful contexts. Current recommendations include providing experiences exploring multivariable relationships and data visualizations, which is not possible without technology. This session will make a case for moving away from sole reliance on graphing calculators.

**Mini Session**

*Classroom Stats: The Fun, Fast, Free Way to Engage Students*

**Presenters:**
David Taylor – Roanoke College, Salem, VA
Adam Childers – Roanoke College, Salem, VA

**Presider:**
Rebecca Williams – State College of Florida-Manatee-Sarasota, Bradenton, FL

Classroom Stats is a free statistics data collection and analysis platform designed to engage students and promote learning using real, relevant data. It is composed of a web-based portal for instructors and a smartphone app for students. In five minutes, instructors can collect and analyze data for randomized comparative experiments.

**Mini Session**

*What is the Collatz Conjecture and Why Is It so Interesting?*

**Presenter:**
Alexander Atwood – Suffolk County CC, Selden, NY

**Presider:**
Ahmed Rashed – Dallas College–Richland Campus, Dallas, TX

Proposed by Lothar Collatz in the 1930’s, the Collatz Conjecture is one of the most difficult open problems in mathematics. The presenter will describe the conjecture, demonstrate how it works, talk about why proving it is so difficult, and describe recent significant work by mathematician Terence Tao on this subject.

**Mini Session**

*Is Your Foot a Foot?*

**Presenter:**
Natalya Vinogradova – Plymouth State University, Plymouth, NH

**Presider:**
Bukurie Gjoci – CUNY, New York, NY

You know the answer, but would you like to tell your students a story that leads to this question? Attendees will discuss stories that can help your students see mathematics in a different light – not as rules and procedures to be memorized, but rather as questions posed by everyday life.

**Mini Session**

*Using Eisenstein Integers to Generate Eisenstein Triples*

**Presenter:**
Eric Hutchinson – College of Southern Nevada, Las Vegas, NV

**Presider:**
Ahmed Rashed – Dallas College–Richland Campus, Dallas, TX

An Eisenstein Triple of natural numbers occurs when $c^2 = a^2 + b^2 + ab$. This presentation will use Eisenstein integers (special complex numbers) to derive the formulas needed to generate Eisenstein Triples which are useful to provide integer sides for a triangle when working with the Law of Cosines.
Thursday, October 28

11:30 am - 11:55 am  S017A  CANCELLED

**Mini Session**
Factoring Trinomials – Can It Be Done This Way?

**Presenter:**
Christopher Riola – Moraine Valley CC, Palos Hills, IL

12:00 pm - 12:25 pm  S017B  IT, IS, AM
Room: Paradise Valley

Factoring Quartics (Really!)

**Presenter:**
Russell Penner – Mohawk Valley CC, Utica, NY
**Presider:**
Doug Runge – St. Louis CC, St. Louis, MO

The presenter and participants in the room will demonstrate and illustrate a method for factoring quartics that can factor into two quadratics over the rationals. This technique begins to scratch the surface of factoring beyond what's taught in algebra and precalculus.

11:30 am - 11:55 am  S018A  CANCELLED

**Mini Session**
More Equitable Grading in Calculus with Second Chance Grading

**Presenter:**
Peter Keep – Moraine Valley CC, Palos Hills, IL

12:00 pm - 12:25 pm  S018B  SM, MI
Room: Camelback A

Validating Solutions to One-Variable Equations

**Presenter:**
Matthew Watts (2009 Project ACCCESS Fellow) – Red Rocks CC, Lakewood, CO
**Presider:**
John Bennett – Robeson CC, Lumberton, NC

This presentation will discuss what to do when the proposed solution does not satisfy its equation, how to find the mistakes that were made, and how to minimize future occurrences of the mistake. Types of equations shown include linear, absolute value, quadratic, rational, radical, and logarithmic.

11:30 am - 11:55 am  S019A  TL, SM, PD
Room: Camelback B

**Mini Session**
Evaluating Online Homework Using the Depth of Knowledge Framework

**Presenters:**
Jesse Friedman – Covenant High School, Tacoma, WA
Zack Conner – Denver Street School, Denver, CO
**Presider:**
Scott Adamson – Chandler-Gilbert CC, Chandler, AZ

There's no doubt computer-graded homework is efficient for both students and professors, but how well does it truly assess student understanding? We used the Depth of Knowledge framework to evaluate the level of understanding of solving quadratic equations assessed by several mainstream online homework systems. Come to hear the findings!

12:00 pm - 12:25 pm  S019B  TL, SM
Room: Camelback B

Assessing Student Knowledge in the Era of Smart Phone Apps

**Presenter:**
Zeynep Akcay Ozkan – Queensborough CC, Bayside, NY
**Presider:**
Scott Adamson – Chandler-Gilbert CC, Chandler, AZ

Smart phone applications can solve mathematical problems and provide explanations of steps. Instructors should consider this when assessing student knowledge online. Hear tips on writing problems not solvable by smart phone apps and creating assessments which maximize students’ learning of concepts in the existence of these applications.

11:30 am - 12:20 pm  S020  PS
Room: Phoenix A

Developmental Math Post-COVID-19: What's Next?

**Presenter:**
Kathleen Almy – Rock Valley College, Rockford, IL
**Presider:**
James Tanton – Mathematical Association of America, Washington, DC

The COVID-19 pandemic disrupted developmental education. From placement through instruction and assessment, every aspect of developmental math was affected. This session will look at specific components to developmental math that have been affected, what is likely to stay, and how faculty can participate in the process going forward.

11:30 am - 12:20 pm  S021  SM, TL
Room: Phoenix B

Discussion Forum Triumphs and Tragedies: Online to Remote to F2F

**Presenter:**
Johanna Debrecht – Red Rocks CC, Golden, CO
**Presider:**
Barbara Leitherer – CC of Baltimore County-Essex, Baltimore, MD

Math discussion forums can work, but without proper strategies and guidelines, triumph can become tragedy. Discuss approaches previously used, hear which worked and which didn't, examine rubrics and student guidelines. Talk about making forums effective in all three formats and how students reap the benefits.

12:40 PM

11:30 am - 12:20 pm  M03  •ANet Meeting•
Room: Cave Creek

Division/Department Leadership ANet Meeting

**Leader:**
Christine Mirbaha – CC of Baltimore County, Baltimore, MD

Scan here to make a donation to the AMATYC Foundation.
Thursday, October 28

12:40 pm - 1:30 pm  S022  PS, PD  
Room: Maryvale A

Developmental Pathways 1.02+

Presenters:
Dan Fahringer – Harrisburg Area CC, Harrisburg, PA
Mallary DeSantis (2014 Project ACCEESS Fellow) – Harrisburg Area CC, Harrisburg, PA

Presider:
Nancy Sattler – Terra State CC, Freemont, OH

The Provost set the challenge: Create and implement Pathways for the Developmental Math courses – and do it in 15 months. Challenge accepted! The department got ‘Fired Up’ and made it work, resulting in two self-paced classes and a shorter pathway to Calculus – even during the pandemic.

12:40 pm - 1:30 pm  S023  CANCELLED

K-12 Statistics and Data Science: The Influence of Two-Year Colleges

Presenter:
Christine Franklin – University of Georgia (Emeritus), Athens, GA

12:40 pm - 1:30 pm  S024  SM, TL  
Room: Encanto B

Yes ... You Have Time To Cover That

Presenter:
Pat Riley – Hopkinsville CC, Hopkinsville, KY
Presider:
Sharon North – St. Louis CC, St. Louis, MO

Whenever change happens, one of the common responses is along the lines of "there's not enough time to cover everything." This presentation will highlight several techniques the presenter has used over the years in order to be able to not only cover the required material but add other interesting topics.

12:40 pm - 1:30 pm  S025  CANCELLED

Developing Statistical Thinking in a Social Justice Context

Presenter:
Mark Earley – Columbus State CC, Columbus, OH

12:40 pm - 1:30 pm  S026  RG, PD, SM  
Room: Paradise Valley

Project SLOPE: Blazing New Paths with SoTL

Presenters:
Rhea Becke (Project SLOPE Fellow) – Clark College, Vancouver, WA
Luke Walsh (Project SLOPE Fellow) – Catawba Valley CC, Hickory, NC

Presider:
John Smith – Pellissippi State CC, Knoxville, TN

Join three AMATYC Project Slope Fellows as they discuss how a framework of Scholarship of Teaching and Learning (SoTL) can blaze new opportunities centered in researching ways to purposefully care for students from elementary algebra to calculus while becoming aware of how those students experience mathematics.

12:40 pm - 1:30 pm  S027  IG  
Room: Camelback A

Rebel Women of Mathematics

Presenter:
Janet Teegarden – Ivy Tech CC (Retired), Indianapolis, IN

Presider:
Susan Howard – Pitt CC, Greenville, NC

Famous mathematicians are not usually household names ... famous female mathematicians, even less so. For centuries women were made to believe that women couldn’t/shouldn’t do math. Come hear stories of some rebel women in the last 2000 years who went on to become highly successful mathematicians. Related activities will be included.

12:40 pm - 1:30 pm  S028  SM, TC  
Room: Camelback B

•• Presidential Exchange Series Speaker ••

Making an IMPACT in Mathematics Education Using the AMTE Standards

Presenter:
Megan Burton – Auburn University, Auburn, AL; President, Association of Mathematics Teacher Educators (AMTE)

Presider:
Jeff Herrin – Bluegrass CTC, Lexington, KY

This session will explore ways to effectively engage students in mathematics using foundational teaching principles. Participants will experience and discuss concrete examples for connecting the AMTE Standards for the Preparing Teachers of Mathematics, NCTM’s Mathematics Teaching Practices, and the AMATYC IMPACT document.

12:40 pm - 1:30 pm  S029  TL, SM  
Room: Phoenix A

The Phoenix-Word-Problem: A New Life for Online Discussion Prompts

Presenters:
Kirsten Meymaris – Purdue University Global, Indianapolis, IN
Tami Tacker – Purdue University Global, Indianapolis, IN

Presider:
Amy Barnsley – Northern Michigan University, Marquette, MI

The dreaded "word problem" notoriously brings about anxiety for students, and yet, is routinely seen as an online discussion prompt. Hear strategies to transform traditional word problems into authentic, real-world tasks that purposefully motivate students into an engaging math conversation online. Watch the "Phoenix Word Problem" arise!

12:40 pm - 1:30 pm  S030  MN  
Room: Phoenix B

QR FAQ

Presenters:
Dave Sobacki – Miami University Hamilton (Retired), Hamilton, OH
Brian Mercer – Parkland College, Champaign, IL

Presider:
Larry Blaine – Plymouth State University, Plymouth, NH

While traveling extensively to present and consult on Quantitative Reasoning courses, the presenters have compiled a list of common issues and questions regarding design and implementation. After giving an overview of QR, the presenters will facilitate a discussion of the collected list as well as any new issues and questions.
1:40 pm - 2:55 pm  C4
Room: Ahwatukee B

**Commercial Presentation—Derivita**
Derivita | From 0-60: Turbocharge Your Math Class in Any LMS

**Presenters:**
Devlin Daley – Derivita, Salt Lake City, UT
Mallory Dyer – Derivita, Coolidge, AZ
Charles Ward – Derivita, Fort Collins, CO

Created by the cofounder of Canvas, Derivita is a first-of-its-kind math platform with 35,000+ questions from Algebra to Calculus III. This session offers a preview of Derivita’s latest capabilities, including question authoring, assignment creation, capturing students’ handwritten work, and engaging students in real-time using Derivita’s Spotcheck.

1:40 pm - 2:55 pm  C5
Room: Laveen A

**Commercial Presentation—Lumen Learning**
What Differentiates Lumen Learning’s Calculus Courses from Others?

**Presenter:**
Paul Golisch – Lumen Learning, Phoenix, AZ

Lumen’s new Calculus courses include integrated prerequisite material, application assignments, an interactive textbook, and a capstone project. Lumen’s partnership with Desmos enables OHM to seamlessly integrate interactives and three types of calculators (basic/scientific/graphing). Join this session to learn how to easily customize courses to meet your students’ needs.

1:50 PM

1:50 pm - 2:40 pm  S032  PD
Room: Maryvale A

**Chairs’ Sharing Session**

**Presenter:**
Christine Mirbaha – CC of Baltimore County, Baltimore, MD

**Presider:**
Jesse Hicks – Dixie State University, St. George, UT

This session is designed for department or division chairs and those in similar leadership positions to discuss issues related to them, such as hiring, adjunct faculty, mentoring, administrative duties, and more. Please come prepared to network and share with your fellow colleagues in this round table format!

1:50 pm - 2:40 pm  S033  SM, MI, TL
Room: Encanto A

**But … There Is Already Such a Great Lab for That!**

**Presenters:**
Cindy Moore – Asheville-Buncombe Technical CC, Asheville, NC
Tammy Sullivan – Asheville-Buncombe Technical CC, Asheville, NC

**Presider:**
David Taylor – Roanoke College, Salem, VA

Have you built up a library of engaging labs involving puzzles, manipulatives, group work, or hands-on activities? Presenters will share resources used to convert traditional, hard-copy labs to a virtual format while maintaining their integrity. Instructions and sample activities will be provided for all levels of math courses.

1:50 pm - 2:40 pm  S034  MI, SM
Room: Encanto B

**Have a Fantastic First Day!**

**Presenters:**
Holly Ashton – Pikes Peak CC, Colorado Springs, CO
David Lawton – Pikes Peak CC, Colorado Springs, CO

**Presider:**
Johanna Debrecht – Red Rocks CC, Golden, CO

Launch your classes with plans for the best first day ever. Come see how to engage students in the three big ideas of Calculus I. Also discuss the essential elements of a good first day.

1:50 pm - 2:40 pm  S035  RG, MI
Room: Deer Valley

**Undergraduate Research at 2-Year Colleges: Why and How to Make It Work**

**Presenter:**
Guillermo Alvarez Pardo – Cuesta College, San Luis Obispo, CA

**Presider:**
Keith Nabb – Piedmont Virginia CC, Charlottesville, VA

Compare two ways of creating undergraduate research opportunities for your students in Mathematics and Statistics. Both methods were conceived during 2019-2020 as part of a National Science Foundation awarded project. In spring 2021 they were offered for the first time.
accommodating virtual students in a face-to-face world!

**Presenters:**
Marcia Corby – Phoenix College, Phoenix, AZ
Krysten Pampel – Glendale CC, Glendale, AZ

**Presider:**
Alexander Atwood – Suffolk County CC, Selden, NY

Looking for creative ways to engage both face-to-face and ‘live online’ students? This presentation is for you! The presenters share their experiences as they embarked on this new modality. Tips, tricks, challenges, and ideas on how to build community in this setting will all be covered in this adventurous ride!

### A FREE Corequisite College-Ready Math System – The Consortium Grows!

**Presenters:**
Barbara Illowsky – De Anza College, Cupertino, CA
Richard Rasiej – Santa Monica College, Santa Monica, CA

**Presider:**
Cindy Shively – Phoenix College, Phoenix, AZ

Last year, attendees were introduced to and invited to join a consortium to test and improve Precision Math, a free, individualized math platform ideally suited for corequisite support and formative assessment. Many instructors from around the country have done so. Learn about progress, lessons learned, and open participation opportunities.

### Validating Measures of Quality Instruction for CC Algebra Instruction

**Presenters:**
Vilma Mesa – University of Michigan, Ann Arbor, MI
Mary Beisiegel – Oregon State University, Corvallis, OR
Irene Duranczyk – University of Minnesota, Minneapolis, MN
Patrick Kimani – Glendale CC, Glendale, AZ

**Presider:**
AJ Stachelek – Hostos CC, Bronx, NY

The Validating Measures of Quality Instruction (AI@CC:2.0:VMQI) project will develop an instrument to measure mathematical knowledge for teaching community college algebra and modify an instrument that assesses quality of instruction to address diversity, equity and inclusion in classrooms and choosing appropriate problems for the study.

### Self-Efficacy and Anxiety Solutions: Research and Classroom Strategies

**Presenters:**
Linda Zientek – Sam Houston State University, Huntsville, TX
Paula Wilhite – North Texas CC, Mt. Pleasant, TX

**Presider:**
Davidson Pierre – State College of Florida, Bradenton, FL

Mathematics students exhibit low confidence and high anxiety. This session discusses anxiety, self-efficacy, and study skills along with classroom, corequisite and virtual strategies designed to increase learning through mastery, social, physiological, vicarious areas of self-efficacy. Strategies for various classroom formats will be introduced.

#### Thursday Keynote Session

Welcome/Introductions — Kathryn (Kate) Kozak
AMATYC President

Presentation of:
The Leila and Simon Peskoff Award
The Margie Hobbs Award
The Wanda Garner Presidential Student Scholarship
2020 Mathematic Excellence Award
2021 Teaching Excellence Awards

Keynote Speaker — Lindy Elkins-Tanton
The NASA Psyche Mission: Journey to a Metallic World
Thursday, October 28

7:00 PM

AMATYC FORUMS
7:00 pm – 8:00 pm
Room: Deer Valley

Forums are an opportunity to provide feedback on the work currently being done by AMATYC committees and task forces. All members are welcome. AMATYC delegates are encouraged to attend. Most forums are now virtual and met during the month of August.

7:00 pm – 7:30 pm
Bylaws Amendment: Membership Types
Moderator: Eddie Tchertchian, West Regional VP

This forum seeks input from members regarding a proposed change to the AMATYC Bylaws. In particular, AMATYC seeks to adjust the Regular membership type to include Individual, Life, Adjunct, and Retiree memberships.

7:30 pm – 8:00 pm
Bylaws Amendment: Virtual Hearings of Proposed Amendments
Moderator: Nancy Rivers, Secretary

This forum seeks input from members regarding proposed changes to AMATYC Bylaws. In particular, AMATYC seeks to allow hearings for proposed bylaws changes to be held virtually.

RESEARCH SESSION 2021
7:00 pm - 9:30 pm
Room: Camelback A – R1, R2, and R4
Room: Camelback B – R3 and R5

Moderator:
April Ström – Chandler-Gilbert CC, Chandler, AZ

Join colleagues to learn about current research on the teaching and learning of mathematics in the first two years of college. The evening begins with a keynote address by Naneh Apkarian from Arizona State University, followed by two concurrent sessions focused on findings from exciting research projects.

7:00 pm - 7:50 pm R1
Room: Camelback A
Culture, Change, and Instruction in Postsecondary Mathematics (RG, PD)

Presenter:
Naneh Apkarian – Arizona State University, Tempe, AZ

Presider:
April Ström – Chandler-Gilbert CC, Chandler, AZ

Efforts to shift postsecondary mathematics instruction to incorporate evidence-based teaching practices have struggled to make significant inroads. Instructional practices (pre-COVID) across institution types, cultural (social and structural) factors related to uptake in different contexts, and what is known about how to enact systemic and sustainable changes will be discussed.

8:00 pm - 8:40 pm R2
Room: Camelback A
Mathematics Persistence Through Inquiry and Equity at a Two-Year HSI (RG, PD)

Presenters:
Amelia Stone-Johnstone – California State University Fullerton, Fullerton, CA
Mary Pilgrim – San Diego State University, San Diego, CA

Presider:
Irene Duranczyk – University of Minnesota, St. Paul, MN

This preliminary report will share findings from the first year of a five-year, collaborative research project that will analyze trends in student success, develop classroom-based interventions and professional development for instructors of gateway mathematics courses, study the impacts of the interventions, and examine the sustainability of change efforts.

8:00 pm - 8:40 pm R3
Room: Camelback B
An Analysis of Substitution Across the 9-13 Curriculum (RG, MI)

Presenter:
Aladar Horvath – Missouri Southern State University, Joplin, MO

Presider:
Megan Breit-Goodwin – Anoka-Ramsey CC, Coon Rapids, MN

Composition is frequently described as a substitution operation. This presentation reports on the ways that written curricula defined and used substitution across curricula from beginning algebra to single-variable calculus. Applying the study’s results to help students successfully transition into college mathematics will also be discussed.

8:50 pm - 9:30 pm R4
Room: Camelback A
Creating and Applying a Research Reporting Framework for Corequisites (RG, PS)

Presenter:
Jacqueline Coomes – Eastern Washington University, Cheney, WA

Presider:
Irene Duranczyk – University of Minnesota, St. Paul, MN

Corequisites have been described as a betterment to remedial mathematics but peer-reviewed research has not yet offered much support in ways that are helpful to decision-makers. This session presents a framework for reporting research on corequisites and results of a three-year project to design and implement two different mathematics corequisites.

8:50 pm - 9:30 pm R5
Room: Camelback B
Gateway Mathematics in the Time of AB 705 (and COVID-19) (RG, PS)

Presenters:
Brinley Stringer – San Diego State University, San Diego, CA
William Zahner – San Diego State University, San Diego, CA
Ernesto Daniel Calleros – San Diego State University, San Diego, CA

Presider:
Megan Breit-Goodwin – Anoka-Ramsey CC, Coon Rapids, MN

Come learn about results from the first year of a collaborative research and professional development project focused on transforming gateway mathematics courses in the wake of a policy change related to student placement and remediation. Presenters will share themes from their research (including remote learning impacts), and discuss lessons learned.
All conference attendees are encouraged to attend the appropriate AMATYC Regional Meeting. The agenda for each meeting will include a review of issues for the Delegate Assembly, reports from states/affiliates in the region, a summary of the Executive Board meeting, and other items of concern.

**Regional Meetings & Breakfast**

Breakfast* available: 7:30 am – 8:00 am (*ticket required)

Regional Meetings: 8:15 am – 9:15 am

*Pick up your food in the Phoenix Front Foyer (Third Level). You may return to your hotel room to eat. Or, vaccinated attendees who feel comfortable may eat in the designated Phoenix ballroom.

Then join your colleagues at your region’s meeting in the room listed below.

1. **NORTHEAST**  
   SOPHIA GEORGIAKAKI, Vice President  
   Room: Camelback B  
   Connecticut • Maine • Massachusetts • New Hampshire • New York  
   Rhode Island • Vermont • New Brunswick • Newfoundland • Nova Scotia  
   Ontario • Prince Edward Island • Quebec

2. **MID-ATLANTIC**  
   DENNIS EBERSOLE, Vice President  
   Room: Camelback A  
   Delaware • District of Columbia • Maryland • New Jersey • Pennsylvania  
   Virginia • West Virginia

3. **SOUTHEAST**  
   ALVINA ATKINSON, Vice President  
   Room: Paradise Valley  
   Alabama • Florida • Georgia • Louisiana • Mississippi • North Carolina  
   South Carolina • Tennessee • Puerto Rico • Virgin Islands  
   Other Caribbean Islands

4. **MIDWEST**  
   NANCY SATTLER, Past President  
   Room: Encanto B  
   Illinois • Indiana • Kentucky • Michigan • Ohio • Wisconsin

5. **CENTRAL**  
   DALE JOHANSON, Vice President  
   Room: Maryvale A  
   Colorado • Iowa • Kansas • Minnesota • Missouri • Nebraska  
   North Dakota • South Dakota • Manitoba • Saskatchewan

6. **SOUTHWEST**  
   APRIL STRÖM, Vice President  
   Room: Encanto A  
   Arizona • Arkansas • New Mexico • Oklahoma • Texas • Mexico

7. **NORTHWEST**  
   SARAH PAULEY, Vice President  
   Room: Cave Creek  
   Alaska • Idaho • Montana • Oregon • Washington • Wyoming  
   Alberta • British Columbia • Northwest Territory • Yukon Territory  
   Other International Locations

8. **WEST**  
   EDDIE TCHERTCHIAN, Vice President  
   Room: Deer Valley  
   California • Hawaii • Nevada • Utah • Guam
Friday, October 29

**Phoenix Program Keys**

- Attendees can filter by program key using the Whova conference app.

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<thead>
<tr>
<th>EQ</th>
<th>Equity and Inclusivity</th>
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<tr>
<td></td>
<td>• Equity, diversity, and social justice in providing mathematics education to all students</td>
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<td>• Collaboration with AMATYC leadership, committees and ANets, and Project ACCCESS to increase awareness about diversity</td>
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<th>IG</th>
<th>International, Cultural and General Interest</th>
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<td>• Best practices regarding the teaching and learning of mathematics around the world</td>
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<td>• Professional development opportunities to infuse global perspective in teaching</td>
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<td>• Mathematics or the teaching of mathematics relative to history or any culture or people</td>
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<td>• Topics of general interest</td>
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<td>• STEM courses: Precalculus, Calculus, and beyond</td>
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<th>MN</th>
<th>Math for Non-STEM</th>
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<td>• Courses such as Quantitative Literacy or Reasoning, Liberal Arts Math, or Finite Math</td>
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<td>• Topics such as probability, statistics, or finance which might be used in a QR course</td>
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<th>PD</th>
<th>Professional Development and Department/Division Interests</th>
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<td>• Strategies for helping college faculty improve or evaluate their teaching while discovering and implementing best practices</td>
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<td>• Suggestions to address needs, preparation, and inclusion of adjunct faculty</td>
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<td>• Ideas for fostering collaboration and community within or between departments and institutions while providing for student success</td>
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<th>Pathways for Student Success</th>
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<td>• Any sequence of courses, including developmental mathematics, that most efficiently leads to the student’s final college-level mathematics course in the field of study</td>
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<td>• Student placement into the correct mathematics course, program, or pathway using various advising tools or multiple measures</td>
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<td>• Assessment of student proficiency, courses, or programs</td>
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<th>Strategies and Mindset for Student Success</th>
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<td>• Improvement of the quality of developmental mathematics programs to better prepare students for success</td>
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<td>• Strategies for enabling students to take ownership for learning, deal with math anxiety, and gain confidence to succeed by developing a mathematical mindset.</td>
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<td>• Data science</td>
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<th>Teaching in Grades K-12 and Applying Math to Other Careers</th>
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<td>• Courses to prepare education majors to teach mathematics in K-12</td>
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<td>• Mathematics courses for career and technical programs, both terminal and transfer</td>
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<td>• Courses such as business statistics or business calculus</td>
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<td>• Courses with emphasis on applications and technical communication</td>
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<td>• Use of technology in course delivery, engagement of students, or collaboration of students and/or faculty</td>
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<td>• Hybrid, blended, or online courses</td>
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**Technology Welcome:** Attendees are encouraged to bring smart phones, tablets, or laptops to fully participate in portions of these presentations: S007, S011, S014B, S029, S036, S037, S044, S046, S053, S069, S078, S080, S083, S084, S085, S091, S099, S106, S108, S109, S115, S123, and S124. **Watch for the icon to identify these presentations.**

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As a courtesy to conference participants, attendees are asked to silence all devices while attending presentations.

**AMATYC values your feedback!** Please use the Whova conference app to evaluate each session you attend. Click the Surveys button, then Session Feedback, and select the desired session. Thank you!

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**Regional Meetings & Breakfast**

Breakfast available: 7:30 am - 8:00 am (*ticket required*)

Regional Meeting: 8:15 am - 9:15 am

Learn what is new in your region and discuss Delegate Assembly issues with your delegates. Everyone is encouraged to attend. See page 35 for details and locations.

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**Dedicated Exhibit Time**

Visit the publishers and other exhibitors—talk to sales representatives, authors, and editors!
Friday, October 29

10:00 AM

10:00 am - 11:15 am C7 CANCELLLED

Commercial Presentation—Edfinity
Find Out Why 300+ Colleges Have Moved to Edfinity for Online Homework

10:00 am - 11:15 am C8 CANCELLLED

Commercial Presentation—Maplesoft
Discover Maple Learn

10:00 am - 11:15 am C9
Room Laveen A

Commercial Presentation—Hawkes Learning
Elements for Successful Courses in the Digital-Age

Presenter:
Kathryn Schaefer – Hawkes Learning, Mt. Pleasant, SC

With an increasing mix of online, hybrid & in-person course offerings, students are learning differently than ever before and require a unique set of resources to succeed. Learn about the nine elements that instructors should implement in their classes to support their students as they learn and ensure positive outcomes in any course structure.

10:15 AM

10:15 am - 11:05 am M05 •Committee Meeting•
Room: Cave Creek

Developmental Mathematics Committee Meeting

Chair:
Kathryn Van Wagoner – Weber State University, Ogden, UT

10:15 am - 11:05 am S041
Room: Maryvale A

A Guide to Commonly-Used Scales in Research on Math Student Success

Presenter:
Kristen Amman – Rutgers University, New Brunswick, NJ
Guillermo Alvarez Pardo – Cuesta College, San Luis Obispo, CA

Learn about the pros and cons of the most commonly used scales for measuring four constructs considered critical for success in college mathematics courses: goal orientations, self-efficacy, use of self-handicapping strategies, and math self-concept. Interview data from developmental mathematics students will be used to explore the scales in depth.

10:15 am - 11:05 am S042
Room: Encanto A

What's Really in Your Backpack: Unpacking Privilege

Presenters:
Benjamin Aschenbrenner – Ivy Tech CC, Chicago, IL
Kristina Flores – Texas Success Center at the Texas Association of Community Colleges, Austin, TX
Ralf Youtz – Portland CC, Portland, OR

Presider:
Holly Dickin – Ball State University, Muncie, IN

This presentation explores privilege's impact on faculty and students. Left unrecognized and unchecked, privilege can negatively impact relationships with students, reducing opportunities to engage in learning. Participants will gain understanding of their own privilege and privilege from the student perspective to improve interactions in class.

10:15 am - 11:05 am S043
Room: Maryvale A

All Math Students Are Mathematicians: Active Learning in CUNY Start

Presenter:
Gregory Fein – CUNY, New York, NY

Presider:
Caroline Sampson – Florida State College at Jacksonville, Jacksonville, FL

How can you help your students see themselves as mathematicians? This interactive session will explore activities and teaching strategies that promote student voice and conceptual understanding at widely varying levels of math learning. The presenters will also discuss CUNY Start's process for building a curriculum based on these values.

10:15 am - 11:05 am S044
Room: Deer Valley

Small Teaching Online and in the Classroom: "Small Changes, Big Impact"

Presenter:
Lindsay Good – Pennsylvania College of Health Sciences, Lancaster, PA

Presider:
Kirsten Meymaris – Purdue University Global, Indianapolis, IN

Small changes in teaching strategies can have a big impact on student success, according to James Lang's book. In this interactive session, participants will engage in activities utilizing small teaching concepts which can be extended to both the in-person and online classroom. Bring a tablet, smartphone, or laptop to participate!
Friday, October 29

10:15 am - 11:05 am  S045  RG, PD
Room: Paradise Valley

Investigating Student Mathematical Reasoning and Sense-Making

Presenters:
Dexter Lim – University of Minnesota, Minneapolis, MN
Patrick Kimani – Glendale CC, Glendale, AZ
Bismark Akoto – University of Minnesota, Minneapolis, MN
Nicole Lang – North Hennepin CC, Brooklyn Park, MN

Presider:
Rhea Becke – Clark College, Vancouver, WA

Participants will examine 3-5 items used to capture community college instructors’ Mathematical Knowledge for Teaching (MKT), with a focus to highlight instructors’ knowledge of students’ mathematical proficiency with covariational relationships and their knowledge of students’ mathematical reasoning and sense-making.

10:15 am - 11:05 am  S046  MI, TL
Room: Camelback A

Using Desmos to Find the Centroid of a Region Bounded by Two Functions

Presenter:
Matthew Coignet – Glendale CC, Glendale, AZ
Anne Vance – Austin CC, Austin, TX

One of the applications of integration introduced in a second-semester calculus course is finding the centroid of a region bounded by two functions. See how Desmos can be used to supplement the teaching and learning of this topic and also use your device to try this and other calculus applications.

10:15 am - 11:05 am  S047  EQ, IG, SM
Room: Phoenix A

Closing Opportunity Gaps Through Ethnomathematics

Presenter:
Dusty Wilson – Highline College, Des Moines, WA

Presider:
Tirtha Prasad Timsina – Perimeter College of GSU, Atlanta, GA

Answer the question “How is mathematics relevant to me?” when asked by a student from an Under Represented Minority (URM) by using contextualization through ethnomathematics. See how the examples in this presentation are relevant to your teaching, easy to incorporate into your courses, and can increase student retention.

10:15 am - 12:15 pm  W01  CANCELLED
Future Educators Fired Up For Math

Presenters:
Valerie Cope – Sinclair CC, Dayton, OH
Kinga Oliver – Sinclair CC, Dayton, OH

11:25 AM

11:25 am - 12:15 pm  M06  •Committee Meeting•
Room: Cave Creek

Equity Committee Meeting

Chair:
AJ Stachelek – Hostos CC, Bronx, NY

11:25 am - 12:15 pm  S048  SM, TL
Room: Maryvale A

Mathematics Growth Mindset in the Tutor Center

Presenter:
Barbara Johnson – IUPUI, Indianapolis, IN
Presider:
Jessica Bernard – Portland CC, Portland, OR

Tutors provide essential instruction in mathematics concepts, but can a mathematics tutor center also help develop a growth mindset? This session describes a year-long initiative exploring that question in a mostly online environment, including training of tutors and measures of both tutor and student changes in mindset.

11:25 am - 12:15 pm  S049  MI
Room: Encanto A

Throw the Baby Out WITH the Bathwater: A Debate on Precalculus Topics

Presenters:
John McColgan – Roxbury CC, Roxbury Crossing, MA
Joanna DelMonaco – Middlesex CC, Bedford, MA
Aisha Arroyo – Middlesex CC, Bedford, MA

Presider:
Russell Penner – Mohawk Valley CC, Utica, NY

The Precalculus topic list seems to keep growing. Come hear – and participate in – a vigorous debate on which topics could be eliminated and which should be kept.

11:25 am - 12:15 pm  S050  PS, TL
Room: Encanto B

Corequisite College Algebra Using Just-In-Time Personalized Modules

Presenter:
Jeremiah Hower – Florida International University, Miami, FL

Presider:
Shawn Firouzian – MiraCosta College, Oceanside, CA

During 2018 FIU designed and implemented a college algebra three-credit corequisite course, eliminating a prerequisite course, shortening the students’ pathway to Calculus. All students in the corequisite course receive weekly, just-in-time, personalized free Internet Mathematics Assessment System (iMathAS) assignments exploring the remedial content needed for the given week.
Friday, October 29

11:25 am - 12:15 pm S051  RG, PD, MI
Room: Deer Valley
Project SLOPE: SoTL for Innovations in Student Learning
Presenters:
Brooks Ziegler (2017 Project ACCCESS Fellow/Project SLOPE Fellow) – Pellissippi State CC, Knoxville, TN
Vinodh Chellamuthu (Project SLOPE Fellow) – Dixie State University, St. George, UT
Presider:
John Smith – Pellissippi State CC, Knoxville, TN
Join three AMATYC Project SLOPE Fellows for a conversation about how Scholarship of Teaching and Learning (SoTL) can be used to innovate teaching practices in a changing educational landscape. Studies conducted in Introductory Statistics, Precalculus, and Differential Equations illustrate how SoTL can help to research a student-focused way forward into the future of education.

11:25 am - 12:15 pm S052  MI, IG
Room: Paradise Valley
The Riemann Hypothesis for Fun and Profit
Presenter:
Marvin Bittinger – IUPUI (Retired), Indianapolis, IN
Presider:
Piotr Runge – Salt Lake CC, Salt Lake City, UT
The Riemann Hypothesis is the most famous unproven statement in mathematics. Its proof earns $1 million. Developed in 1859 by Bernhard Riemann, its use may reveal the mysteries of the primes and enhance understanding of number theory, quantum physics, and string theory. No proof will be attempted, just lighthearted insight.

11:25 am - 12:15 pm S053  PD, TL
Room: Camelback A
IMPACT Live! – The Inside Scoop
Presenters:
Evan Evans (2007 Project ACCCESS Fellow) – Frederick CC, Frederick, MD
Julie Phelps – Valencia College, Orlando, FL
Karen Gaines – St. Louis CC (Emeritus), St. Louis, MO
Nancy Sattler – Terra State CC, Fremont, OH
Presider:
Nancy Sattler – Terra State CC, Fremont, OH
This session will discuss how IMPACT Live!, located at my.amatyc.org, is used to promote our Communities and further discussions involving mathematics faculty. By attending this session participants will have a better perspective of the vast resources available to them through my.amatyc.org.

11:25 am - 12:15 pm S054  IG, MN, SM
Room: Phoenix A
AppQuest: One Dude’s Search for Math Problems While Blundering About
Presenter:
Dave Sobecki – Miami University Hamilton (Retired), Hamilton, OH
Brandon Elmes – Jefferson CTC, Louisville, KY
Math instructors are required to write lots of problems. Math authors are required to write TONS of problems. What if one developed a semi-annoying habit of seeing potential application problems all around, and decided to spend 6 months documenting all of those instances? Come hear how it went!

11:25 am - 12:15 pm S055  CANCELLED
Elementary Statistics – Insights and Partial Credit
Presenter:
Travis Thompson – Harding University, Searcy, AR

12:25 PM

12:25 pm - 1:40 pm C10
Room: Ahwatukee B
Commercial Presentation—McGraw-Hill
Superpower your Math Course with your Sidekick, ALEKS
Presenters:
Tuan Dean – Triton College, River Grove, IL
Dayna Ford – Grayson College, Denison, TX
Listen in on a panel of your peers for a Q&A style session as they discuss their top tips and tricks for how to get the most out of using ALEKS.

12:25 pm - 1:40 pm C11  CANCELLED
Commercial Presentation—Pearson
Visual & Conceptual Understanding in Statistics, Precalc & Calculus

12:25 pm - 1:40 pm C12
Room: Laveen A
Commercial Presentation—Hawkes Learning
Customizing Hawkes Courses to Engage Students in Any Environments
Presenter:
Laura Shevlin – Hawkes Learning, Mt. Pleasant, SC
Learn how to tailor the Hawkes automated homework system to create a more focused, interactive, and engaging learning experience for your students. Discover how to edit pre-built instructional content to engage students, design assessments with personalized settings, build your own questions, and more in Hawkes. Win a giftcard!

12:35 PM

12:35 pm - 1:00 pm M07  Committee Meeting
Room: Cave Creek
Placement and Assessment Committee Meeting
Meeting Leader:
Christine Mirbaha – CC Baltimore County, Baltimore, MD
Friday, October 29

12:35 pm - 1:00 pm  S056A  IG, TL
Room: Maryvale A

**Mini Session**

Trial by Fire: COVID-19's Silver Linings for Instructors and Students

**Presenters:**
Tami Tacker – Purdue University Global, Indianapolis, IN
Lea Rosenberry – Penn State, University Park, PA

**Presider:**
Natalya Vinogradova – Plymouth State University, Plymouth, NH

In March of 2020, the whole world moved online. While this “forced online teaching and learning” was stressful and challenging, there were silver linings. This session will outline the abilities newly-online instructors are developing and the surprising skills online students are mastering, which may even help with their future employment.

1:05 pm - 1:30 pm  S056B  PD, SM
Room: Maryvale A

Incorporating Humor into the Mathematics Classroom

**Presenter:**
Aaron Harris – College of Southern Nevada, Las Vegas, NV
Natalya Vinogradova – Plymouth State Univ, Plymouth, NH

Why do you remember moments that make you laugh? Can humor help students learn? This presentation will explore the body of research surrounding humor in the classroom, benefits for students, and strategies for practitioners.

12:35 pm - 1:00 pm  S057A  TL
Room: Encanto A

**Mini Session**

Technologies for Sharing Written Work

**Presenter:**
Mike Miller – Aims CC, Greeley, CO
Lori Holdren – American College of Healthcare Sciences, Portland, OR

It is important to see students' written work. The presenter will demonstrate the technologies used by students and instructor to communicate written work and notes. These technologies are suitable for face-to-face, remote, or online courses.

1:05 pm - 1:30 pm  S057B  TL, SM
Room: Encanto A

How Do You Spice Up Discussion Boards?

**Presenter:**
Mari Menard – Lone Star College-Kingwood, Kingwood, TX
Lori Holdren – American College of Healthcare Sciences, Portland, OR

What is the subject matter of an online math course discussion board? Share your ideas about how to incorporate course content into discussion boards. The goal is to create discussion boards that include math mindset, a mathematically thought-provoking question, and syllabus content for good measure.

12:35 pm - 1:00 pm  S058A  CANCELLED

**Mini Session**

Relevant to Whom? Designing a Culturally Responsive Assignment

**Presenter:**
Grace Pai – Guttman CC, New York, NY

1:05 pm - 1:30 pm  S058B  EQ, ST
Room: Encanto B

Racism and the Development of Inferential Statistics

**Presenter:**
Helen Burn – Highline College, Des Moines, WA
Sharon Sledge – San Jacinto College, Pasadena, CA

The field of statistics was recently shook with the publication of Aubrey Clayton's 2020 article that exposed the ways in which eugenicists shaped the development of the standard techniques that we currently teach in inferential statistics. This session explains the historical account and implication for us and our students.

12:35 pm - 1:00 pm  S059A  CANCELLED

Mastering Prerequisite Skills for Precalculus Algebra

**Presenters:**
Stacey Auman – Wake Technical CC, Raleigh, NC
Sarah Horstman – Wake Technical CC, Raleigh, NC

1:05 pm - 1:30 pm  S059B  CANCELLED

Redesigning Gen Ed Math Classes with Classroom-Embedded Peer Tutors

**Presenter:**
Cheng Chang – Mercy College, Dobbs Ferry, NY

12:35 pm - 1:00 pm  S060A  MI, ST
Room: Paradise Valley

**Mini Session**

Using Expected Values When Examining Goldbach's Conjecture

**Presenter:**
Michael Heeren – Purdue University Global, Indianapolis, IN

1:05 pm - 1:30 pm  S060B  ST, MN
Room: Paradise Valley

Perplexing Percentages and Relative Risks

**Presenter:**
Allan Rossman – Cal Poly-San Luis Obispo, San Luis Obispo, CA
Kendall Jacobs – Casper College, Casper, WY

Working with percentage change/difference can be tricky for many students. But this is a very practical and important quantitative skill to become comfortable with. See many examples, based on real data that involve comparing groups. Also discuss a connection to the statistical concept of relative risk.
Friday, October 29

12:35 pm - 1:00 pm  S061A  ST, TL
Room: Camelback A

**Mini Session**
Teaching Statistics with The Islands

**Presenter:**
Bridget Dart – Suffolk County CC, Selden, NY

**Presider:**
Kaiwen Amrein – Portland CC, Portland, OR

In this session the presenter will share how The Islands website was used to create projects for engaging students of Statistics. The Islands is a fictional world where students can safely conduct all kinds of statistical research.

1:05 pm - 1:30 pm  S061B  MN, SM
Room: Camelback A

Using James Bond as a Central Theme in a Quantitative Literacy Course

**Presenter:**
Ben Moulton – Utah Valley University, Orem, UT

**Presider:**
Kaiwen Amrein – Portland CC, Portland, OR

The James Bond movie franchise is rich with information to be used in a quantitative literacy course, from probability to exponential growth. Activities and application problems will be shared, as well as equity and inclusivity issues that must be addressed so that students will not be shaken ... nor stirred.

1:45 PM

1:45 pm - 2:35 pm  M08  *Subcommittee Meeting*
Room: Cave Creek

Pathways Joint Subcommittee Meeting

**Chair:**
Helen Burn – Highline College, Des Moines, WA

Share Your Classroom Ideas for Teacher Preparation Courses

**Presenter:**
Mark Kuhlman – Casper College, Casper, WY

**Presider:**
Barbara Johnson – IUPUI, Indianapolis, IN

Are you new to teaching mathematics courses for prospective teachers? Are you looking for fresh ideas to include in your existing curriculum? Join members of AMATYC’s Teacher Preparation Committee to share successful resources for these courses. Bring your own ideas and walk away with access to practical lessons and activities.

1:45 pm - 2:35 pm  S065  CANCELLED
Room: Encanto B

How to Incorporate Growth Mindset with Inclusion and Equity in Mind

**Presenters:**
Wendy Fresh – Portland CC, Portland, OR
Jessica Bernards (2012 Project ACCCESS Fellow) – Portland CC, Portland, OR

**Presider:**
John McColgan – Roxbury CC, Roxbury Crossing, MA

Growth Mindset has become a familiar buzz word over the last few years. How does it relate specifically to math? Discuss what growth mindset looks like in a math class, the importance of it, and how you can foster this trait in your students with equity and inclusion in mind.
Friday, October 29

1:45 pm - 2:35 pm S067 IG, ST
Room: Deer Valley

**Project-Based Statistics: Addressing Global Issues**

**Presenter:**
- Shawn Firouzian – MiraCosta College, Oceanside, CA
- Sarah Davenport – East Central College, Union, MO

Through a project-based statistics course, students have been able to address global issues that concern them. In this presentation, participants will review four such works: Election Fraud in Armenia, Ethnicity, and Crime in Los Angeles, Price of Organic Versus Non-Organic Food, and Water Crisis in Flint, MI.

1:45 pm - 2:35 pm S068 IG, SM
Room: Paradise Valley

**The Art of Mathematics – Connecting the Disciplines**

**Presenter:**
- Sharon North – St. Louis CC, St. Louis, MO
- Dexter Lim – North Hennepin CC, Brooklyn Park, MN

Students love to see connections between their discipline studies! “The Art of Mathematics” investigates connecting principles between art, architecture, and mathematics, and includes a “Math Lovers Guide to Mid-Century Modern Architecture”. Works from the cities of Phoenix, St. Louis, and Washington DC will be highlighted on the tour.

1:45 pm - 2:35 pm S069 TL, SM, ST
Room: Camelback A

**Developing Data Analysis Proficiency with Apps and Applets**

**Presenter:**
- Chris Oehrlein – Oklahoma City CC, Oklahoma City, OK
- Luke Walsh – Catawba Valley CC, Hickory, NC

Students in Introductory Statistics and Applied Calculus courses can easily be trapped into thinking that calculation procedures, by hand or with technology, are the focus of the course. The presenter will guide attendees in using applet websites and smartphone/tablet apps to lead students in developing investigative data analysis proficiency.

1:45 pm - 2:35 pm CANCELLED
Room: Phoenix Front Foyer

**AMATYC Poster Session – Fired Up for Posters!**

The poster session will highlight innovative and practical ideas from your colleagues as well as reports on their latest research. Get ideas for the classroom, techniques to improve student performance, and suggestions for professional development.

**P01 CANCELLED**

Increasing Student Success Using RStudio in Introductory Stats Classes (MN, ST)

**Presenter:**
- Lara Bauman – Chabot College, Hayward, CA

**P02**

Integrating Science and Technology into Calculus (MI, TL)

**Presenter:**
- Gary Bolduc (2019 Project ACCCESS Fellow) – SUNY Dutchess CC, Poughkeepsie, NY

The presenter will discuss pilot projects for a differential equations unit in Calculus 2. These projects have subject-specific questions from the sciences and will require the use of technology. Outcomes that include proficiency with technology and the calculus material will be shared.

**P03**

Time Management Through Peer Support Network (SM)

**Presenter:**
- Farrah Chmilynitzky (2019 Project ACCCESS Fellow) – Seminole State College of Florida, Sanford, FL

Student teams form peer support networks to conduct weekly communications regarding class reminders and progress updates. Students develop time management and managerial skills through providing peer support and accomplishing tasks on time, further increasing their success in the class.

**P05**

Creating Meaningful Connections Using Discussion Boards at All Levels (SM, TL)

**Presenter:**
- Katelynn Ellis (2019 Project ACCCESS Fellow) – Aims CC, Greeley, CO

A challenge of online classes is developing student engagement because of the lack of interaction with them or each other. By using discussion boards at all levels, it can be possible to engage these students as well as allow rapport to be built with and among the students.

**P06**

Asynchronous Online vs. Face-to-Face Instruction (TL)

**Presenter:**
- Jeff Feuer (2019 Project ACCCESS Fellow) – Anne Arundel CC, Arnold, MD

There has been a period of adjustment from teaching face-to-face classes (whether fully or mostly face-to-face) to fully online. The presenter chose to teach asynchronously with Zoom for office hours. This poster will show how the presenter conducted asynchronous classes, along with observations comparing results between face-to-face and asynchronous classes.

**P07**

Integration of Growth Activities into Developmental Algebra Courses (SM, TL)

**Presenter:**
- Susan Ficken (2019 Project ACCCESS Fellow) – Anne Arundel CC, Arnold, MD

Students in developmental classes often struggle with fear of math and math anxiety. Short video assignments were integrated into the online homework system, covering topics such as anxiety reduction, test preparation, and growth mindset. They were also assigned problems that coached them through correct steps, notation, and terminology.
P10 Collaborating with Colleagues using myAMATYC (PD, TL)
Presenter:
Karen Gaines – St. Louis CC - Emeritus, St. Louis, MO
Evan Evans (2007 Project ACCCESS Fellow) –
Frederick CC, Frederick, MD

The myAMATYC website provides multiple ways to engage and collaborate with colleagues. Join a Community, check out fresh content each month on IMPACT Live!, or simply share your knowledge with others through discussion posts or library entries. Help build an invaluable resource for AMATYC members.

P11 Are Exams Necessary for Students to Master the Material?
Presenter:
Josh Gross – Dutchess CC, Poughkeepsie, NY

CANCELLED

P12 Pre-Classwork to Improve Student Success: Intro to Statistics
Presenter:
Peter Gyedu

P13 Strategies for Engaging Students and Supporting Their Success
Presenter:
Violeta Kovacev-Nikolic – College of the Canyons, Santa Clarita, CA

P14 The Correlation Between Arithmetic Fluency and Student Outcomes (SM)
Presenter:
Thomas Leszczynski (2019 Project ACCCESS Fellow) –
Naugatuck Valley CC, Waterbury, CT

P15 Using Singly-Focused Daily Quizzes to Enhance Material Retention (SM)
Presenter:
Mark Lydon (2019 Project ACCCESS Fellow) –
Yuba College, Marysville, CA

To cultivate a learning environment that encourages students not to cram for exams, the presenter implemented daily quizzes to assist students in mastering individual topics. Surveys were administered before and after exams to assess students’ feeling of preparedness and information retention using these daily quizzes.

P16 Readin' and Writin' to Learn 'Rithmetic (MI, SM)
Presenter:
Melissa Menning (2019 Project ACCCESS Fellow) –
Johnson County CC, Overland Park, KS

Reading math textbooks is a skill not easily learned. Students in three consecutive semesters of Calculus II were given reading assignments before the material was covered in class and asked to summarize the reading in a writing assignment. A qualitative discussion of the results will be presented.

P17 How the Exchange of Knowledge Through Peers Can Improve Grades (SM)
Presenter:
Soheyl Perven (2019 Project ACCCESS Fellow) –
Southwest Tennessee CC, Memphis, TN

This presentation discusses the benefits of sharing information with peers to improve prior grades and socializing for professional development. In the context of learning the course syllabus, two classes were compared: one group did not allow students to discuss and the other utilized discussion. Results will be shared.

P18 The Corequisite Challenge: Supporting Mathematics and Beyond (SM, PS)
Presenter:
Ashley Pratt (2019 Project ACCCESS Fellow) –
Dabney S. Lancaster CC, Clifton Forge, VA

As many colleges are transitioning to a corequisite model for the developmental needs of students, new challenges and opportunities arise to help students receive proper support. This poster will share ways to make the course meaningful and effective while exploring the resources beyond mathematics that support student success.

P19 E-learning Approach
Presenter:
Radhika Ramjee – Columbia State CC, Franklin, TN

P20 Mindfulness in the Classroom to Relieve Math Anxiety (SM)
Presenter:
Manisha Ranade (2019 Project ACCCESS Fellow) –
Santa Fe College, Gainesville, FL

Using mindfulness techniques, it is possible to alleviate math or test anxiety. By modeling and explicitly teaching mindfulness within the math classroom, it is proposed that students will benefit academically. The impact of the intervention is measured using an Abbreviated Math Anxiety Survey before and after mindfulness training.

P22 Confronting Underachievement in Introductory Math Classes (SM, RG)
Presenter:
Jane Reed – University of Phoenix, Seneca, SC

Thirty Precalculus Students were randomly assigned to experiment or control groups. The experimental group took the Meta-cognitive Awareness Inventory three times during a semester, reflecting on their learning practices and cognitions in their Precalculus course. The experimental group significantly outperformed the control group academically.

P24 Teaching Mathematics Using OER, ZTC, and Technology (TL)
Presenter:
Ivan Retamoso (2019 Project ACCCESS Fellow) –
Borough of Manhattan CC, New York, NY

The presenter will share experiences teaching Precalculus, Calculus, and Algebra at BMCC using a variety of open-source materials such as DESMOS, WebWorK, helpyoumath.com, Zero Cost Textbooks, and various technology and internet applications.
Friday, October 29

P25 Concept Exploration Through Discussion Board in College Algebra (TL)

Presenter:
Jennifer Rice (2019 Project ACCCESS Fellow) – Collin College, Little Elm, TX

The purpose of this project was to teach students how to learn mathematics. Many college algebra students have only basic, surface-level knowledge of concepts like domain and intercepts, generally memorizing algorithms without understanding the underlying concept. The goal is to require substantive discussion board posts to expand student thinking.

P26 Active Learning Activities in a Virtual Calculus Class (MI, SM)

Presenter:
Bhuvaneswari Sambandham (2019 Project ACCCESS Fellow) – Dixie State University, Saint George, UT

This presentation will focus on strategies to promote active learners and problem solvers through hands-on activities in a virtual format Calculus class. The primary objective is to foster students’ thinking by creating an experience, choosing a real-world problem from the community, and solving the concepts learned in the classroom.

P27 Teaching for PROWESS: An NSF-Funded AMATYC Project (PD, PS, RG)

Presenter:
Julie Phelps – Valencia College, Orlando, FL

Teaching for PROWESS is a five-year NSF grant whose goal is to increase student success in mathematics on the STEM pathway through active learning and department-level change. Learn about our current work, future plans, and how to get involved by applying to be a future IMPACT College.

P28 Student Understanding of Domain and Range in Calculus I (MI)

Presenters:
Cory Wilson – University of Oklahoma, Norman, OK
Deborah Moore-Russo – University of Oklahoma, Norman, OK

The differences in calculus students’ early-class performance on tasks that: a) were expressed graphically vs. symbolically or b) involved specific types of functions will be presented. The presenters will also report whether students’ understanding of domain/range early in a Calculus I course correlated with their performance in the course.

P29 CANCELLED

Encouraging Spaced Practice for Increased Student Success

Presenter:
Christel Wohlafka – Howard CC, Columbia, MD

P30 New to Full-Time College Teaching? Check Out Project ACCCESS! (PD)

Presenter:
Lisa Feinman (2012 Project ACCCESS Fellow) – CC of Baltimore County, Catonsville, MD

AMATYC Project ACCCESS is a mentoring and professional development initiative for two-year college mathematics faculty. The project’s goal is to provide experiences and networking that will help new faculty become more effective teachers and active members of the broader mathematical community.

2:45 PM

2:45 pm - 4:00 pm C13
Room: Ahwatukee B

Commercial Presentation—Wiley
Data-Driven Instruction with Mastery-Based Adaptive Technology

Presenters:
Becky Moening – Wiley, Hoboken, NJ
Sharon North – St. Louis CC, St. Louis, MO

Students enter the classroom with different levels of academic ability, which can be a challenge for both students and instructors. Knewton Alta, a mastery-based adaptive technology, provides students a personalized learning experience complete with just-in-time instruction and refreshers. The end result? Learning that lasts.

2:45 pm - 4:00 pm C14
Room: Laveen A

Commercial Presentation—DigitalEd
Möbius: The Most Interactive Math Teaching Platform

Presenter:
Steve Kristman – DigitalEd, Waterloo, ON, Canada

Möbius’ innovative complete platform for creating and deploying online STEM courses includes lessons, learning activities, exercises, and assessments. With an unparalleled ability to utilize mathematical content, students explore topics using engaging, interactive applications, visualizing problems and solutions. Discover what Möbius is and how to transform your course development and delivery.

2:55 PM

2:55 pm - 3:45 pm M09 •Committee Meeting*
Room: Cave Creek

Mathematics Intensive Committee Meeting

Chair:
Bob Cappetta – Florida SouthWestern State College, Fort Myers, FL

2:55 pm - 3:45 pm M10 •ANet Meeting*
Room: Desert Sky

Adjunct Faculty Issues ANet Meeting

Leader:
Patricia Barrientos – El Paso CC, El Paso, TX

2:55 pm - 3:45 pm S072 CANCELLED

AMATYC Grant Series: NSF Funding Opportunities 2YC Math Faculty

Presenters:
Sandra Richardson – National Science Foundation, Alexandria, VA
Michael Davis – National Science Foundation, Alexandria, VA
Michael Ferrara – National Science Foundation, Alexandria, VA
Friday, October 29

2:55 pm - 3:45 pm  S073  CANCELLED
Intentionality of Corequisite Courses: A Look at Variability
Presenters:
Vanessa Hernandez – University of California–Riverside, Riverside, CA
Anne Cawley – Cal Poly–Pomona, Pomona, CA

2:55 pm - 3:45 pm  S074  SM
Get Students Fired Up for Math with Collaborative Learning Activities
Presenter:
Kim Granger – St. Louis CC–Wildwood, Wildwood, MO
Presider:
Cathryn Kaltenmeyer – Cochise College, Douglas, AZ
The use of Collaborative Learning Activities makes class fun and promotes deeper learning. The presenter has been using collaborative learning for over 25 years (including virtually) and will share an easy process that you can implement as early as next week to create and facilitate effective collaborative activities.

2:55 pm - 3:45 pm  S075  CANCELLED
A Counterintuitive Probability Problem: From Simulation to Theory
Presenters:
Christopher Riola – Moraine Valley CC, Palos Hills, IL
Peter Keep – Moraine Valley CC, Palos Hills, IL

2:55 pm - 3:45 pm  S076  PD
Light the Fire – Rallying Faculty Around a Common Goal
Presenters:
Tami Tacker – Purdue University Global, Indianapolis, IN
Michael Heeren – Purdue University Global, Indianapolis, IN
Kirsten Meymaris – Purdue University Global, Indianapolis, IN
Presider:
Christine Mirbaha – CC of Baltimore County, Baltimore, MD
An integral part of the structure at most institutions is the role of the course lead. Course leads foster engagement among faculty members and ensure quality across their course(s). This session will focus on creating a culture of sharing in fulfilling the common goal of excellence for students.

2:55 pm - 3:45 pm  S077  IG, ST
Room: Camelback A
Undergraduate Research During COVID-19: Analyzing Real-World Data
Presenters:
Barbara Leitherer – CC of Baltimore County–Essex, Baltimore, MD
Jignasa Rami – CC of Baltimore County–Catonsville, Baltimore, MD
Entela Xhane (2017 Project ACCCESS Fellow) – CC of Baltimore County–Essex, Baltimore, MD
Roy Dwarka – CC of Baltimore County–Catonsville, Baltimore, MD
Presider:
Irene Duranczyk – University of Minnesota, St. Paul, MN
Over three semesters mathematics faculty guided honors students through independent work analyzing real-world global climate change data supplied by the World Wildlife Fund (WWF). This panel will reflect on individual student success stories and on strategies used to support both collaborative and independent learning in the remote environment.

2:55 pm - 3:45 pm  S078  TC, PD
Room: Camelback B
Fire Up Mathematics via Chemistry: The Mathematics of CO2 Production
Presenters:
Alvina Atkinson – Georgia Gwinnett College, Lawrenceville, GA
Sharron Jenkins – Georgia Gwinnett College, Lawrenceville, GA
Presider:
Bridget Dart – Suffolk CC, Seldon, NY
The presenters are colleagues, a mathematician and a biophysical chemist, who collaborate to teach basic principles of mathematics through chemistry experiments. In this workshop, you will make, capture, and analyze the production of carbon dioxide; and use essential concepts of mathematics to prove the existence of a gas.

2:55 pm - 3:45 pm  S079  IG
Room: Phoenix A
Let’s Rise Together from the Ashes of the Disinformation Era
Presenter:
Maria Andersen – Westminster College, Salt Lake City, UT
Presider:
Jeff Thies – Pima CC, Tucson, AZ
The role of disinformation and the challenge of moderating it became significant in 2020. Distinguishing between true or false statements is a distinct skillset that requires practice. Mathematicians can help by providing authentic experiences for students to improve their ability to judge information and safely challenge it.
Friday, October 29

4:05 pm - 4:55 pm  M11  Committee Meeting
Room: Cave Creek

Statistics Committee Meeting
Meeting Leader:
Shawn Firouzian – MiraCosta College, Oceanside, CA

4:05 pm - 4:55 pm  M12  ANet Meeting
Room: Desert Sky

Mathematics for Liberal Arts ANet Meeting
Meeting Leader:
Christine Mirbaha – CC Baltimore County, Baltimore, MD

4:05 pm - 4:55 pm  S080  EQ, PD
Room: Maryvale A
Developing Culturally Relevant Math Contexts Through Collaboration
Presenter:
AJ Stachelek – Hostos CC, Bronx, NY
Presider:
Helen Burn – Highline College, Des Moines, WA

Mathematics is viewed as objective; however, mathematics is subjective and context in mathematics does matter! Is there a problem you’ve used for years, but want it to better respect diversity, equity, and inclusion? Is there a problem you developed that has broadened student inclusion and participation? Join us in collaboration at this session!

4:05 pm - 4:55 pm  S081  PS, MI, SM
Room: Encanto A
STEMFIT: Mathematical Fitness for STEM Courses
Presenters:
Jayme Wheeler – Georgia Highlands College, Cartersville, GA
Sarah Coakley – Georgia Highlands College, Cartersville, GA
Presider:
Elizabeth Weaver – Roane State CC, Oak Ridge, TN

Are your students “STEM-ready”? Experience STEMFIT, a free of charge, virtual math mini-bootcamp designed to prepare eligible freshman for gateway mathematics course exemption exams by refreshing concepts and skills learned in high school. Students can shorten their time to graduation by starting in STEM-level mathematics courses.

4:05 pm - 4:55 pm  S082  SM
Room: Encanto B

Residential Exchange Series Speaker
The Importance of Faculty for Student Success
Presenter:
Glynis Mullins – Secretary, National Organization of Student Success (NOSS), Greenville, NC
Presider:
Ben VanDerLinden – Grand Canyon University, Phoenix, AZ

Nowhere does a teacher make more of a difference than when in the classroom teaching, and a great teacher can excite and encourage students to surpass expectations. Faculty make all the difference – join this discussion of the Importance of Faculty.

4:05 pm - 4:55 pm  S083  MI, MN, TL
Room: Deer Valley
GeoGebra: From Exploration to Creation
Presenter:
Piotr Runge – Salt Lake CC, Salt Lake City, UT
Presider:
Ben Moulton – Utah Valley University, Orem, UT
After eight years using GeoGebra in courses from developmental math to differential equations and linear algebra, the presenter will share some “favorite” examples showcasing non-standard or lesser known ideas such as 3D-visualizations, animations based on parameters, or the trace feature. Meet after this session to learn more with hands-on opportunities.

4:05 pm - 4:55 pm  S084  MI
Room: Paradise Valley
Faculty Math League
Presenters:
Steven Blasberg – West Valley College, Saratoga, CA
Matthew Pragel - Harrisburg Area CC, Harrisburg, PA

Participate in the 17th Annual Faculty Math League contest, based on AMATYC’s Student Math League competition. This 18-question multiple choice exam covering precalculus mathematics tests your problem-solving skills. Compete for individual prizes and the coveted Regional Championship Trophy. Bring a graphing calculator.

4:05 pm - 4:55 pm  S085  TC, SM, TL
Room: Camelback A
Teaching Math for Elementary Teachers in a Virtual Environment
Presenter:
Luanne Benson-Lender – University of Indianapolis, Indianapolis, IN
Presider:
Elizabeth Forde – Florida International University, Miami, FL

Math for Elementary Teachers engages students with familiar concepts (such as place value) at new and challenging depths (base five?!) Can the course be moved online without compromising on high expectations or active learning? The speaker will share successes and lessons learned over several semesters.

4:05 pm - 4:55 pm  S086  CANCELLED
How Many Points Is that Worth? Assessing Problem Solving with Rubrics
Presenter:
Dennis Runde – State College of Florida, Manatee and Sarasota, Bradenton, FL
Activate Your Classroom with the Five Practices

**Presenters:**
Xianwei Van Harpen – University of Wisconsin in Milwaukee, Milwaukee, WI
Keith Nabb – Piedmont Virginia CC, Charlottesville, VA

**Presider:**
Janet Teeguarden – Ivy Tech CC, Indianapolis, IN

This session provides an in-depth look into the Five Practices for Orchestrating Productive Mathematics Discussions. While the Five Practices were drafted with K-8 instructional settings in mind, this session highlights their use in a variety of college-level courses. No matter what you teach, there is something here for you.

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6:00 PM

**Ignite Session**

Room: Encanto A

6:00 pm - 8:00 pm

The Innovative Teaching and Learning Committee is sponsoring AMATYC's 7th Ignite. These events have become an international phenomenon. Twenty slides are automatically advanced every 15 seconds while the speakers have exactly five minutes to share their passion!
Saturday, October 30

**Phoenix Program Keys**

- EQ Equity and Inclusivity
  - Equity, diversity, and social justice in providing mathematics education to all students
  - Collaboration with AMATYC leadership, committees, and ANets, and Project ACCESS to increase awareness about diversity

- IG International, Cultural and General Interest
  - Best practices regarding the teaching and learning of mathematics around the world
  - Professional development opportunities to infuse global perspective in teaching
  - Mathematics or the teaching of mathematics relative to history or any culture or people
  - Topics of general interest

- MI Math Intensive
  - STEM courses: Precalculus, Calculus, and beyond

- MN Math for Non-STEM
  - Courses such as Quantitative Literacy or Reasoning, Liberal Arts Math, or Finite Math
  - Topics such as probability, statistics, or finance which might be used in a QR course

- PD Professional Development and Department/Division Interests
  - Strategies for helping college faculty improve or evaluate their teaching while discovering and implementing best practices
  - Suggestions to address needs, preparation, and inclusion of adjunct faculty
  - Ideas for fostering collaboration and community within or between departments and institutions while providing for student success

- PS Pathways for Student Success
  - Any sequence of courses, including developmental mathematics, that most efficiently leads to the student’s final college-level mathematics course in the field of study
  - Student placement into the correct mathematics course, program, or pathway using various advising tools or multiple measures
  - Assessment of student proficiency, courses, or programs

- RG Research and Grants
  - Reports on research results and practices, at both classroom and institutional level
  - Reports on grant-supported or grant-related activities
  - Strategies to obtain funding to undertake research

- SM Strategies and Mindset for Student Success
  - Improvement of the quality of developmental mathematics programs to better prepare students for success
  - Strategies for enabling students to take ownership for learning, deal with math anxiety, and gain confidence to succeed by developing a mathematical mindset.

- ST Statistics
  - Statistics
  - Statistical literacy
  - Data science

- TC Teaching in Grades K-12 and Applying Math to Other Careers
  - Courses to prepare education majors to teach mathematics in K-12
  - Mathematics courses for career and technical programs, both terminal and transfer
  - Courses such as business statistics or business calculus
  - Courses with emphasis on applications and technical communication

- TL Technology and E-Learning
  - Use of technology in course delivery, engagement of students, or collaboration of students and/or faculty
  - Hybrid, blended, or online courses

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**7:45 AM**

**Saturday Awards Breakfast Session**

Breakfast Available: 7:30 am - 8:00 am (*ticket required*)

*Room: Phoenix Front Foyer*

Pick up your food in the Phoenix Front Foyer (Third Level). You may return to your hotel room to eat. Or, vaccinated attendees who feel comfortable may eat in the designated Phoenix ballroom.

Then join your colleagues for the Awards Keynote Session in Phoenix C.

**Program:** 8:30 am - 10:00 am

*Room: Phoenix C*

**Remarks/Introductions — Kathryn (Kate) Kozak, AMATYC President**

**Presentation of:**
- The Herb Gross Presidential Award
- The AMATYC Student Research League Awards
- The AMATYC Faculty Mathematics League Awards

**Keynote Speaker — Talithia Williams**

*Power in Numbers: Unveiling Hidden Figures*
### Saturday, October 30

**10:00 AM**

**Dedicated Exhibit Time**

Visit the publishers and other exhibitors—talk to sales representatives, authors, and editors!

**10:45 AM**

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Session Title</th>
<th>Presenter(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>10:45 am - 11:35 am</td>
<td>M13</td>
<td>Committee Meeting</td>
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<td>Mathematics Standards in the First Two Years of College (IMPACT) Committee Meeting</td>
<td>Chair: Julie Phelps – Valencia College, Orlando, FL</td>
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<td>Leveraging Algebraic Structure to Support Sensemaking in Algebra</td>
<td>Presenters: Natalie McGathey (2013 Project ACCCESS Fellow) – Prairie State College, Chicago Heights, IL, Dave Feikes – Purdue University Northwest, Westville, IN, Bill Walker – Purdue University, West Lafayette, IN, Bir Kafle – Purdue University Northwest, Westville, IN</td>
<td>S088 RG, SM, PS</td>
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<td>National Recommendations to Improve Quantitative Education for Nurses</td>
<td>Presenters: Joan Zoeller – Charles A. Dana Center, The University of Texas at Austin, Austin, TX, Lindsay Good – Pennsylvania College of Health Sciences, Lancaster, PA</td>
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<td>Group Modeling Projects for Calculus</td>
<td>Presenters: Gary Simundza – Wentworth Institute of Technology, Boston, MA</td>
<td>S094 PS, SM</td>
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<td>Developmental Mathematics Sharing Session</td>
<td>Presenter: Kathryn Van Wagoner – Weber State University, Ogden, UT</td>
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**10:45 am - 11:35 am**

**Raising Success: Real Collaboration and Mindsets in Online Mathematics**

*Presenters:*
- Kelly Kohlmetz – University of Wisconsin-Milwaukee, Milwaukee, WI
- Lewis Hosie – Carnegie Math Pathways at WestEd, San Francisco, CA

**Utilize StatPREP’s Free Little Apps to Teach Data-Centric Statistics**

*Presenters:*
- Helen Burn – Highline College, Des Moines, WA
- Carol Howald – Howard CC, Columbia, MD
- Joe Roith – St. Olaf College, Northfield, MN
- Bir Kafle – Purdue University Northwest, Westville, IN

*Presider:*
- Christina Elliott – Pellissippi State CC, Knoxville, TN

Learn about free tools from StatPREP that can help your students learn fundamental concepts in Introductory Statistics. StatPREP is an NSF-supported project sponsored by the Mathematical Association of America (NSF DUE 1626337). Faculty leaders from five national StatPREP hubs will share their use of applets made with R markup language.

**Group Modeling Projects for Calculus**

*Presenters:*
- George Alexander – Madison Area Technical College, Madison, WI
- Johanna Debrecht – Red Rocks CC, Lakewood, CO
- Keith Nabb – Piedmont Virginia CC, Charlottesville, VA

*Presider:*
- Mickey Nakagome – Maricopa CC, Tempe, AZ

This session is intended for prospective authors or others thinking about submitting articles to the MathAMATYC Educator, a peer-reviewed publication of AMATYC. Topics for discussion will include publication guidelines, review process, suggested formats, and other details such as handling images and tables.

**Developmental Mathematics Sharing Session**

*Presenter:*
- Kathryn Van Wagoner – Weber State University, Ogden, UT

**Presider:***
- Rebecca Nugent – Carnegie Mellon University, Pittsburgh, PA

Bring your favorite lessons for STEM track algebra courses that get your students thinking and reasoning about mathematics and interacting with one another. Plan a 2-3 minute pitch to tell others about your lesson. A repository of all lessons will be created and shared.
Saturday, October 30

10:45 am - 11:35 am  S095  SM, PD, TL
Room: Phoenix A

**Featured Speaker**
Fired Up to Take Online Teaching Innovations Back to the Classroom!

**Presenter:**
Scott Adamson – Chandler-Gilbert CC, Chandler, AZ
Presider:
Matthew Coignet – Glendale CC, Glendale, AZ

After a year of transitioning to asynchronous, online instruction, it's time to think about how this work can be leveraged in the return to face-to-face instruction. This session will include discussion of the innovative, online pedagogical strategies that supported student learning that can also be effective in the face-to-face environment.

10:45 am - 12:45 pm  S096  PD
Room: Maryvale A

Adjunct Issues ANet Sharing Session

**Presenter:**
Patricia Barrientos – El Paso CC, El Paso, TX
Presider:
Sarah Davenport – East Central College, Union, MO

Whether you are an adjunct, department chair, adjunct coordinator, full-time faculty or anyone who works with adjunct faculty, consider attending this session and building a support network! Adjunct issues, needs, and concerns will be discussed with the purpose of endeavoring to seek solutions.

10:45 am - 12:45 pm  S097  TL, SM
Room: Encanto A

Ideas for Gamification in Online Classes

**Presenter:**
Kira Heater (2007 Project ACCCESS Fellow) – Laramie County CC, Cheyenne, WY
Presider:
Patrick Kimani – Glendale CC, Glendale, AZ

The presenter will explain the ideas of gamification: goals, rules, feedback systems, and voluntary participation. Then see how gamification has been used in online classes to increase engagement and generate excitement. Finally, participants will brainstorm about using these ideas in their classes.

10:45 am - 12:45 pm  M14  •Committee Meeting•
Room: Cave Creek

Mathematics and Its Application for Careers Committee Meeting

**Meeting Leader:**
Ralph Padgett – Westmoreland County CC, Youngwood, PA

10:45 am - 12:45 pm  S098  SM
Room: Encanto B

**President Exchange Series Speaker**
Developing and Supporting Positive Mathematical Identity: It Matters

**Presenter:**
Trena Willkerson – President, National Council of Teachers of Mathematics (NCTM), Waco, TX
Presider:
Joan Erickson – SUNY Delhi, Delhi, NY

How students engage in mathematics is inextricably linked to their belief in themselves as doers of mathematics and the types of opportunities they have in learning mathematics. Let's examine effective practices that support and encourage development of a positive mathematical identity as students move to post-secondary mathematics classrooms.

10:45 am - 12:45 pm  S099  TL, SM
Room: Deer Valley

Using "Get It Quick" Videos to Promote Online Student Learning

**Presenter:**
Lori Holdren – American College of Healthcare Sciences, Portland, OR
Presider:
Chris Oehrlein – Oklahoma City CC, Oklahoma City, OK

Are you frustrated by students not watching content video resources that you provide in your online classroom? If so, join us to learn the strategies the presenter used to revise her courses' videos in order to increase student viewing, understanding, and appreciation in her virtual classroom.

10:45 am - 12:45 pm  S100  IG
Room: Paradise Valley

Stoking the Creative Fire

**Presenter:**
Sean Saunders – Sheridan College, Oakville, ON, Canada
Presider:
David Price – Tarrant County College, Arlington, TX

Minds, inquisitive by nature, may have been dulled by tired and tedious “learning practices.” See ways to develop and foster curiosity, inspiration, and appreciation for mathematics and mathematical reasoning. Explore some grand mathematical results and their applications. Even think about how to present familiar ideas in a fresh way!

11:55 am - 12:45 pm  S098  SM
Room: Encanto B

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11:55 am - 12:45 pm  S101  CANCELLED
Room: Paradise Valley

The Work of Learning: Returning the Hard Tasks of Learning to Students

**Presenter:**
Trisha White – Ozarks Technical CC, Springfield, MO

As a courtesy to conference participants, attendees are asked to silence all devices while attending presentations.
### Saturday, October 30

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<thead>
<tr>
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<tbody>
<tr>
<td>11:55 am - 12:45 pm</td>
<td>S102</td>
<td>Phoenix A</td>
<td><strong>Data Science Sharing Session</strong>&lt;br&gt;Presenter: Crystal Wiggins – Northwestern Connecticut CC, Winstead, CT&lt;br&gt;Presider: Dale Hobbs – Columbia State CC, Columbia, TN&lt;br&gt;The Data Science Subcommittee of the Statistics Committee invites you to share experiences, resources, successes, and challenges in an informal discussion. Hear how others are creating data science degree programs and teaching data science courses. Bring your own questions and experiences to share.</td>
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<tr>
<td>11:55 am - 12:45 pm</td>
<td>S103</td>
<td>Phoenix A</td>
<td><strong>Placement &amp; Assessment During COVID-19</strong>&lt;br&gt;Presenters: Jeff Thies – Pima CC, Tucson, AZ&lt;br&gt;Kathleen Almy – Rock Valley College, Rockford, IL&lt;br&gt;Katie Louchart – Northern Arizona University, Flagstaff, AZ&lt;br&gt;Presider: Kristina Flores – Texas Success Center at the Texas Association of Community Colleges, Austin, TX&lt;br&gt;The pandemic brought several changes to colleges including how placement is determined. This session will look at the trends in placement policies. The three speakers will highlight placement and assessment practices during the COVID-19 pandemic.</td>
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<tr>
<td>1:05 pm - 1:55 pm</td>
<td>S105</td>
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<td><strong>CANCELLED</strong> Ten Ways to Get Students (Fired) Up and Moving for Active Learning&lt;br&gt;Presenters: Mark Colgan – Taylor University, Upland, IN</td>
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<tr>
<td>1:05 pm - 1:55 pm</td>
<td>S106</td>
<td>Encanto B</td>
<td><strong>Presidential Exchange Series Speaker</strong>&lt;br&gt;Collaborating for Equity&lt;br&gt;Presenter: Paul Gray – President, NCSM: Leadership in Mathematics Education, Dallas, TX&lt;br&gt;Presider: Tuyen Nguyen The – Monterey Peninsula College, Monterey, CA&lt;br&gt;Looking for ways to help all students succeed? Successful teacher teams study data together. Let’s use some tools you can use with your colleagues to collectively improve teaching and learning and sharpen your focus on equitable instruction.</td>
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<tr>
<td>1:05 pm - 1:55 pm</td>
<td>S107</td>
<td>Paradise Valley</td>
<td><strong>Engagement via Escape Room Puzzles in Math Class</strong>&lt;br&gt;Presenter: Vicky Mayfield (2018 Project ACCCESS Fellow) – Eastern Wyoming College, Torrington, WY&lt;br&gt;Sherri Warren (2015 Project ACCCESS Fellow) – Eastern Wyoming College, Douglas, WY&lt;br&gt;Presider: Brandon Elmes – Jefferson CTC, Louisville, KY&lt;br&gt;Experience an escape room puzzle to inspire you to include them in your classroom and elsewhere. Be prepared to work together in groups as you problem solve your way to the solutions that unlock the prize. Benefits, tips, tricks, and pitfalls of using them in the classroom will be discussed.</td>
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<tr>
<td>1:05 pm - 1:55 pm</td>
<td>S108</td>
<td>Camelback A</td>
<td><strong>Interactive Math &amp; Science Activities for the ABE Classroom</strong>&lt;br&gt;Presenter: Tyler Frank – Clark College, Vancouver, WA&lt;br&gt;Presider: Russell Penner – Mohawk Valley CC, Utica, NY&lt;br&gt;Discover new ways to engage your students in contextualized math and science learning in Adult Basic Education (ABE) and High School Equivalency classrooms. Add depth to your students’ math learning through rich science contexts and digital tools. Receive a digital OER book containing a range of additional activities.</td>
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</tbody>
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**AMATYC values your feedback!** Please use the Whova conference app to evaluate each session you attend. Click the Surveys button, then Session Feedback, and select the desired session. Thank you!
Incorporating Data Analysis and Writing in Introductory Statistics

Presenters:
- Rebecca Nugent – Carnegie Mellon University, Pittsburgh, PA
- Philipp Burckhardt – Carnegie Mellon University, Pittsburgh, PA
- Gordon Weinberg – Carnegie Mellon University, Pittsburgh, PA
- Edward Smith – Pima CC, Tucson, AZ

Incorporating student-driven inquiry and data analysis can increase student engagement and retention but also pose challenges. The presenters will describe their experiences and lessons learned from adapting their introductory statistics course to emphasize real-world problems and written communication using an e-learning platform that also supports remote learning.

Online Presence: Designing to Connect

Presenters:
- Sonia Petch – Collin College, McKinney, TX
- Kyle Kundomal – Collin College, Frisco, TX
- Martha Chalhoub – Collin College, Frisco, TX
- Jennifer Tracy – Asheville-Buncombe Technical CC, Asheville, NC

Research has demonstrated that students who feel connected to the instructor and other students in the course tend to persist and perform better in their online course. Learn how to establish teaching presence through course design and facilitation. Share what has worked well in your own online courses.

Connecting Industry to Mathematics Instruction

Presenters:
- Jay Martin – Wake Technical CC, Raleigh, NC
- Julia Smith – Wake Technical CC, Raleigh, NC

Number Talks promote flexibility in mathematical thinking. They also blend computational fluency and conceptual understanding. In a recent section of Calculus, the Number Talk idea was applied to limits, differentiation, and integration. This session will share examples of student-led Math Talks and insights gained from implementation.

Designing Effective Professional Development During COVID-19 and Beyond

Presenters:
- Dan Ray – WestEd, Redwood City, CA
- Brenda White – SUNY Morrisville, Morrisville, NY

Students see statistics in daily life without recognizing them. Learn how to promote student engagement and ownership through course components that improve their understanding of statistical concepts and critical thinking skills. Explore specific methods that can be incorporated in any Statistics class that honor students’ diverse backgrounds.
What Manipulatable Factors Made a Difference in the Corequisites?

**Presenter:**
Joan Erickson – SUNY Delhi, Delhi, NY

**Presider:**
Matthew Watts – Red Rocks CC, Lakewood, CO

Math corequisites have increased student success. Has your institution examined what executable factors actually make the difference? See an examination of the effectiveness of various factors and the analysis of what extent these motivational and metacognitive oriented instructional practices impact student learning.

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2:15 pm - 3:05 pm  S116  MI
Room: Camelback B

Math Intensive Sharing Session

**Presenters:**
Bob Cappetta – Florida SouthWestern State College, Fort Myers, FL
Mike Caparula – Kankakee CC, Kankakee, IL
Eric Hutchinson – College of Southern Nevada, Las Vegas, NV

**Presider:**
Holly Ashton – Pikes Peak CC, Colorado Springs, CO

This is an opportunity to share effective strategies for teaching and learning in the precalculus, calculus, differential equations, and linear algebra courses. In addition, participants will be able to discuss the emerging challenges in these courses.

---

2:15 pm - 3:05 pm  S117  CANCELLED

Groups Work! Utilizing Group Work to Deepen Student Understanding

**Presenters:**
Mike Sieve – Ridgewater College, Hutchinson, MN
Heather Howington – University of North Georgia, Oakwood, GA
5:45 AM

8:15 AM

EQ  Equity and Inclusivity
• Equity, diversity, and social justice in providing mathematics education to all students
• Collaboration with AMATYC leadership, committees and ANets, and Project ACCCESS to increase awareness about diversity

IG  International, Cultural and General Interest
• Best practices regarding the teaching and learning of mathematics around the world
• Professional development opportunities to infuse global perspective in teaching
• Mathematics or the teaching of mathematics relative to history or any culture or people
• Topics of general interest

MI  Math Intensive
• STEM courses: Precalculus, Calculus, and beyond

MN  Math for Non-STEM
• Courses such as Quantitative Literacy or Reasoning, Liberal Arts Math, or Finite Math
• Topics such as probability, statistics, or finance which might be used in a QR course

PD  Professional Development and Department/Division Interests
• Strategies for helping college faculty improve or evaluate their teaching while discovering and implementing best practices
• Suggestions to address needs, preparation, and inclusion of adjunct faculty
• Ideas for fostering collaboration and community within or between departments and institutions while providing for student success

PS  Pathways for Student Success
• Any sequence of courses, including developmental mathematics, that most efficiently leads to the student’s final college-level mathematics course in the field of study
• Student placement into the correct mathematics course, program, or pathway using various advising tools or multiple measures
• Assessment of student proficiency, courses, or programs

RG  Research and Grants
• Reports on research results and practices, at both classroom and institutional level
• Reports on grant-supported or grant-related activities
• Strategies to obtain funding to undertake research

SM  Strategies and Mindset for Student Success
• Improvement of the quality of developmental mathematics programs to better prepare students for success
• Strategies for enabling students to take ownership for learning, deal with math anxiety, and gain confidence to succeed by developing a mathematical mindset

ST  Statistics
• Statistics
• Statistical literacy
• Data science

TC  Teaching in Grades K-12 and Applying Math to Other Careers
• Courses to prepare education majors to teach mathematics in K-12
• Mathematics courses for career and technical programs, both terminal and transfer
• Courses such as business statistics or business calculus
• Courses with emphasis on applications and technical communication

TL  Technology and E-Learning
• Use of technology in course delivery, engagement of students, or collaboration of students and/or faculty
• Hybrid, blended, or online courses

Phoenix Program Keys
➤ Attendees can filter by program key using the Whova conference app. ✪

Technology Welcome: Attendees are encouraged to bring smartphones, tablets, or laptops to fully participate in portions of these presentations: S007, S011, S014B, S029, S036, S037, S044, S046, S053, S065, S069, S078, S080, S083, S084, S085, S091, S099, S106, S108, S109, S115, S123, and S124. Watch for the icon to identify these presentations.

8:15 AM - 9:05 AM

S118  PS
Room: Encanto B

Cracks in the Mathematics Pipeline: The Transition Years

Presenter:
John Staley – Baltimore County Public Schools, Baltimore, MD
Jennifer Broatch – Arizona State University, Glendale, AZ

Hear how to ensure that every student, regardless of circumstances, background, or zip code, has access to high-quality mathematics education during the transitional years – the last two years of high school and first two years of higher education – that’s relevant to their future.

8:15 am - 9:05 am  S119  CANCELLED

When Will I Ever Use This?! – Applications for Today’s World

Presenters:
Ralph Padgett – Westmoreland County CC, Youngwood, PA
Jay Martin – Wake Technical CC, Raleigh, NC
Julia Smith – Wake Technical CC, Raleigh, NC

8:15 am - 9:05 am  S120  SM
Room: Deer Valley

Fostering Creativity in Developmental Mathematics Students

Presenter:
Demitrius Moore – St. Charles CC, Cottleville, MO
Karen Gaines – St. Louis CC (Emeritus), St. Louis, MO

Developmental mathematics courses at 2-year colleges often reinforce traditional methods of teaching basic concepts which may contribute to higher failure rates. This presentation explores creative methods of teaching developmental mathematics that may promote higher mathematical achievement and lower mathematical anxiety.

Technology Welcome: Attendees are encouraged to bring smartphones, tablets, or laptops to fully participate in portions of these presentations: S007, S011, S014B, S029, S036, S037, S044, S046, S053, S065, S069, S078, S080, S083, S084, S085, S091, S099, S106, S108, S109, S115, S123, and S124. Watch for the icon to identify these presentations.
8:15 am - 9:05 am  S121  EQ, RG, ST
Room: Paradise Valley

Promoting Equity With Course-Based Undergraduate Research Experiences

Presenter:
Frank Marfai – Phoenix College, Phoenix, AZ
Presider:
Shannon Ruth – GateWay CC, Phoenix, AZ

Lessons learned from course-based undergraduate research experiences (CUREs) in partnership with industry partners in multiple sections of an introductory statistics course will be shared. Equity-minded practices in the implementation of these CUREs will also be discussed.

9:25 AM

9:25 am - 10:15 am  S122  ST, EQ
Room: Encanto B

Designing Introductory Statistics Courses for a 21st Century Student

Presenters:
Jennifer Broatch – Arizona State University, Glendale, AZ
Frank Savina – Charles A. Dana Center, The University of Texas at Austin, Austin, TX
Presider:
Roxy Peck – Cal Poly - San Luis Obispo, San Luis Obispo, CA

The evolution of math pathways is transforming the student demographics of Introductory Statistics. Discuss a set of equity-minded curriculum design standards that support contemporary statistics learning outcomes, and examine how these standards can be applied to design inclusive Introductory Statistics courses for 21st century students.

9:25 am - 10:15 am  S123  PD, SM, PS
Room: Camelback A

**Presidental Exchange Series Speaker**

A Post Pandemic Proposal

Presenter:
Jennifer Quinn – University of Washington Tacoma, Tacoma, WA;
President, Mathematical Association of America

Presider:
Demitrius Moore – St. Charles CC, Cottleville, MO

The 2020 pandemic transformed education overnight. In the emergency transition to remote instruction, faculty grappled with new technologies, reducing content, providing flexibility, maintaining active engagement, and preserving academic integrity. Emerging from isolation is an opportunity to improve – instead of just returning to past practices.

9:25 am - 10:15 am  S124  SM, TL
Room: Deer Valley

Creating a Culture of Connection in the Classroom and Beyond

Presenter:
Shannon Ruth – GateWay CC, Phoenix, AZ
Presider:
Fat Riley – Hopkinsville CC, Hopkinsville, KY

No matter what formats you teach in, ensuring that students feel connected to you and their classmates can be an important factor in their persistence and success. Stop by, pick up a few new ideas to encourage a strong sense of community in class and beyond, and share your own!

10:30 AM

10:25 am - 11:15 am  S125  TC, IG
Room: Paradise Valley

Number Stories of Long Ago

Presenter:
Janet Teeguarden – Ivy Tech CC (Retired), Indianapolis, IN

Presider:
Frank Marfai – Phoenix College, Phoenix, AZ

This presentation provides a look at several numeration systems that preceded the familiar Roman numerals and the Hindu-Arabic numerals that are used worldwide today. This session will be interactive, with a variety of activities exploring ancient numeration systems. Fun for history, general knowledge, and preservice teacher education.

Phoenix Farewells

Encanto B * 10:30 am - 11:15 am

Kathryn (Kate) Kozak, AMATYC President

*Preview of the Delegate Assembly to be held virtually Saturday, November 6
*Opportunities to get more involved in AMATYC
*Preview of next year’s conference in Toronto
*Symbolic passing of the gavel
*Preview of Phoenix virtual conference days, November 5 and 6
*Phoenix Adjournment

As a courtesy to conference participants, attendees are asked to silence all devices while attending presentations.

AMATYC values your feedback! Please use the Whova conference app to evaluate each session you attend. Click the Surveys button, then Session Feedback, and select the desired session. Thank you!
American Mathematical Association of Two-Year Colleges

48th Annual Conference
Toronto, Ontario, Canada
November 17–20, 2022

Hosted by OCMA, OCMC, and the Northeast Region of AMATYC

www.amatyc.org
2022 AMATYC
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FUTURE CONFERENCES

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Presenters and Presiders Needed
48th AMATYC Annual Conference
Toronto 2022

Come to Toronto, Ontario, November 17-20, 2022, to explore exciting ideas and to embrace the outstanding presentations! We look forward to seeing your ideas beginning November 1, 2021. Traditional 50-minute Sessions, 25-minute Mini Sessions, 2-hour Workshops, and the Poster Session will be returning!

Proposals for any of these formats may be submitted from November 1, 2021 through February 1, 2022, at www.amatyc.org all with the same link!

Here's the exciting news: with the AMATYC Virtual Days to follow on December 2-3, 2022, you're welcome to also choose those days for your session or mini session proposal. This means you can now choose to present in-person, virtually, or both! Each presentation during the Virtual Days may have up to two presenters.

You may also volunteer to be a presider, either with your proposal submission, or separately at the same webpage. Being a presider is an easy way to be part of the program by introducing the speaker, ensuring the session starts and ends on time, confirming expected equipment is in the room, reminding attendees to complete session evaluations on the conference app, and returning a brief report to the Conference Committee for future planning.

For those submitting proposals, multiple formats are available. Each format must engage participants and meet the proposal's stated goals. Submission information should clearly outline the goals of the session, method in which those goals will be accomplished, and a breakdown of how the time in your presentation will be spent.

- **Sessions** and **workshops** may have up to four presenters and equipment may be requested for either of these formats. If choosing a workshop, specify why the two hours are needed and include a detailed description of how the time will be used.
- **Mini sessions** intended for one or two presenters, are 25-minutes each in the same room. Attendees may change rooms at the brief break, and a computer projector (presenter-supplied laptop) is available.
- **Poster submissions** may have up to two presenters and no equipment will be provided. The Poster Session provides a 2-hour discussion window with passers-by. Posters will also be available for browsing when speakers are not present.

Submissions requesting internet (for the presenter-only; for Mini Sessions, Sessions, and Workshops) must provide a detailed description justifying the request. A note may be included in the conference program stating that electronic devices for attendees are needed for maximum benefit during the presentation.

Please note the following regarding submissions and proposals:

- AMATYC reserves the right to modify the presentation format at any time.
- Correspondence for submissions with multiple presenters will be sent to the primary presenter, who becomes the official AMATYC contact and is expected to keep the co-presenter(s) informed.
- All speakers are expected to register for the conference and participate in the presentation. No honoraria or reduced registration fees are given to presenters.
- Presentations must not focus on, promote, or endorse a commercially available product.
- Each successfully submitted proposal is acknowledged by an email receipt. If an email receipt is not received within three business days of submission, please contact the AMATYC Office immediately. Letters of invitation to present at the conference are issued in April.
- Late or incomplete proposals will not be accepted.
- **All proposals must be submitted by February 1, 2022.**

Please do not hesitate to reach out if you have other questions.

Michael Pemberton
Program Coordinator
programcoordinator@amatyc.org
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<table>
<thead>
<tr>
<th>TIME</th>
<th>ACTIVITY</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, October 28th</td>
<td>Themed Sessions sponsored by the following committees and ANet: Developmental Mathematics, Equity, Innovative Teaching and Learning, International Mathematics, Mathematics Standards in the First Two Years of College (IMPACT), Statistics</td>
<td>See pages 23-27 for locations</td>
</tr>
<tr>
<td>8:00 am</td>
<td>AMATYC 101: Walk and Learn! (S001) Tour #1 8:00 am Tour #2 8:20 am</td>
<td>Ahwatukee A</td>
</tr>
<tr>
<td>10:20 am</td>
<td>Research in Mathematics Education for Two-Year Colleges Committee</td>
<td>Cave Creek</td>
</tr>
<tr>
<td>11:30 am</td>
<td>Data Science Subcommittee</td>
<td>Cave Creek</td>
</tr>
<tr>
<td>11:30 am</td>
<td>Mini Sessions Session A: 11:30 am - 11:55 am Session B: Noon - 12:25 pm</td>
<td></td>
</tr>
<tr>
<td>12:40 pm</td>
<td>Division/Department Leadership ANet</td>
<td>Cave Creek</td>
</tr>
<tr>
<td>1:50 pm</td>
<td>Teacher Preparation Committee</td>
<td>Cave Creek</td>
</tr>
<tr>
<td>1:50 pm</td>
<td>Featured Speaker: James Tanton (S040)</td>
<td>Phoenix B</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>Thursday Keynote Session Keynote Speaker: Lindy Elkins-Tanton</td>
<td>Phoenix CDE</td>
</tr>
<tr>
<td>4:30 pm</td>
<td>Grand Opening of Exhibits</td>
<td>Valley of the Sun</td>
</tr>
<tr>
<td>7:00 pm</td>
<td>Forum: Bylaws Amendment - Membership Types</td>
<td>Deer Valley</td>
</tr>
<tr>
<td>7:30 pm</td>
<td>Forum: Bylaws Amendment - Virtual Hearings of Proposed Amendments</td>
<td>Deer Valley</td>
</tr>
<tr>
<td>7:00 pm</td>
<td>Research Session</td>
<td>Camelback A</td>
</tr>
</tbody>
</table>

CONFERENCE HIGHLIGHTS

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<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
</table>
| 7:30 am | Regional Meetings & Breakfast  
Breakfast* Available: 7:30 am - 8:00 am  
*ticket required for breakfast portion  
Regional Meetings: 8:15 am - 9:15 am | See pages 35, 36          |
| 9:15 am | Visit with the Exhibitors                                               | Valley of the Sun         |
| 10:15 am | Developmental Mathematics Committee                                    | Cave Creek                |
| 11:25 am | Equity Committee                                                        | Cave Creek                |
| 12:35 pm | Mini Sessions  
Session A: 12:35 pm - 1:00 pm  
Session B: 1:05 pm - 1:30 pm | Cave Creek                |
<p>| 12:35 pm | Placement and Assessment Committee                                     | Cave Creek                |
| 1:45 pm | Pathways Joint Subcommittee                                              | Cave Creek                |
| 1:45 pm | AMATYC Poster Session                                                   | Phoenix Front Foyer       |
| 2:55 pm | Mathematics Intensive Committee                                         | Cave Creek                |
| 2:55 pm | Adjunct Faculty Issues ANet                                              | Desert Sky                |
| 4:05 pm | Statistics Committee                                                    | Cave Creek                |
| 4:05 pm | Mathematics for Liberal Arts ANet                                        | Desert Sky                |
| 4:05 pm | Faculty Math League Competition (S084)                                  | Paradise Valley           |
| 6:00 pm | Ignite                                                                  | Encanto A                 |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
</table>
| 7:45 am| **Awards Breakfast General Session**  
*Breakfast* Available: 7:30 am - 8:00 am  
*ticket required for breakfast*  
Program: 8:30 am - 10:00 am  
**Keynote Speaker: Talithia Williams** | Breakfast: Phoenix Front Foyer  
Program: Phoenix C |
| 10:00 am| Visit with the Exhibitors                                                                                                                                               | Valley of the Sun |
| 10:45 am| Featured Speaker: Scott Adamson (S095)                                                                                                                                  | Phoenix A |
| 10:45 am| Mathematics Standards in the First Two Years of College (IMPACT) Committee                                                                                          | Cave Creek |
| 10:45 am| Conference Planning Committee                                                                                                                                           | Alhambra |
| 11:55 am| Mathematics and Its Application for Careers Committee                                                                                                                  | Cave Creek |
| 1:05 pm | Innovative Teaching and Learning Committee                                                                                                                              | Cave Creek |
| 2:15 pm | International Mathematics ANet                                                                                                                                          | Cave Creek |

**Sunday, October 31st**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30 am</td>
<td>Phoenix Farewells</td>
<td>Encanto B</td>
</tr>
</tbody>
</table>
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Mission Statement

To provide high quality professional development, to advocate and collaborate at all levels, and to build communities of learners for all involved in mathematics education in the first two years of college.

Adopted by the Board on April 1, 2016

Core Values

These are the Core Values that guide AMATYC's internal and external interactions with each other and our community:

- Academic Excellence
- Access
- Collegiality
- Innovation
- Integrity
- Professional Development
- Teaching Excellence
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