Develop 2020 Mathematical Vision in Spokane!

by Pete Wildman, Spokane Local Events Coordinator

In 1983, the romantic drama Vision Quest was filmed in Spokane, WA. This film featured the first on-screen performance of Madonna premiering her hit song “Crazy for You.” In November, mathematics enthusiasts from all over the country will set out on their own mathematical Vision Quest in Spokane, by attending the 46th AMATYC Annual Conference, November 12-15, 2020. With dynamic keynote speakers Linda Braddy and Ted Coe, along with great sessions, workshops, and poster session, you are certain to return home energized and ready to craft a vision for the future of mathematics education in the first two years of college.

While the conference is reason enough to come to Spokane, there are many other aspects of Spokane to enjoy while you are here. The fabulous Spokane Convention Center is conveniently located downtown and connected to both conference hotels via skywalk. Just steps outside the Convention Center is the beautiful Centennial Trail, which will take you in a few blocks to the 100-acre Riverfront Park, site of the 1974 World’s Fair and home to numerous unique attractions. Take a ride on the beautifully restored Looff Carousel of 1909, see an outdoor lightshow at the U.S. Pavilion, and visit the second largest urban waterfall in the United States. You can walk on a suspended bridge over the upper falls (you won’t get wet in November) or take a skyride over the lower falls. Also don’t forget to say hello to our infinitely Instagramable garbage goat, Spokane’s interactive outdoor sculpture. You may also want to try some sweet jumps at the outdoor ice skating ribbon or ride the Big Red Wagon slide.

Among the highlights of every AMATYC Annual Conference are the networking encounters among conference attendees, and the opportunities to meet others who share your passions for mathematics and education. The Local Events Committee has planned an amazing hospitality room to aid you in your networking. At the hospitality room you can relax, play some games, and perhaps even catch a glimpse of that elusive northwest Sasquatch!

Networking is hungry and thirsty work, so you and your new friends will want to visit one of the 80 restaurants that are within 10 blocks of the convention center. Many of our award-winning restaurants, such as Wild Sage, Mizuna, The Wondering Table, Park Lodge, and Italia Trattoria, feature unique dishes with locally sourced ingredients. If locally-crafted beer is to your taste, try one of our many local downtown breweries such as No Li Brewhouse, Mountain Lakes Brewing, or Iron Goat. Is wine more your style? Then check out one of twelve downtown tasting rooms such as Barrister Winery, Townsend Cellars, and Maryhill Winery.

Spokane also features numerous local entertainment options. Catch a concert or show at the art deco Fox Theatre, First Interstate Center, Bing Crosby Theatre (yes he was from here), or the beautiful new Myrtle Woldsen Theatre at Gonzaga University. Attend a sports event at the Spokane Arena (ice hockey) or catch a local college game at Gonzaga or Eastern Washington University. All these attractions, restaurants, and shops are within one to two miles of the convention center, so you can easily walk or ride our fantastic Spokane Transit Authority buses to any of them. The Local Events Committee can’t wait to see you in our wonderful city and region this fall. Explore www.visitspokane.com/amaty2020 for more information.
President’s Message

THE LAUNCH YEARS: A NEW NATIONAL EFFORT TO REFOCUS HIGH SCHOOL MATHEMATICS EDUCATION

Kathryn (Kate) Kozak
Coconino CC • Flagstaff, AZ

Why has the assumption been that all students need to be prepared for calculus? Where did this idea come from? And is this in the best interest of students?

I have been thinking about these questions lately, and after talking with others, I believe the historic reasons behind the “calculus for all” philosophy can be traced to the scientific needs of the Cold War and the space race. The space race was a valuable undertaking of this country that resulted in many important advancements in science and technology which continue to impact society today. However, the idea that every student needs to go on to calculus has become a barrier for some students in their quest to obtain a college degree. All students need mathematics, but many students are better served by taking a mathematics course such as quantitative reasoning, data science, or statistics, and don’t need calculus to be successful in their degree plan and chosen career. This mismatch causes resources of time and effort to be wasted on courses not needed and causes students to have a negative impression of mathematics.

So what can be done to change the focus of the mathematics that is needed to prepare students for today’s careers? The path to calculus requires a course such as Algebra II in high school or Intermediate Algebra in college. AMATYC has the following position statement: “The Appropriate Use of Intermediate Algebra as a Prerequisite Course” which states the prerequisites for a particular mathematics course should be those appropriate to providing a foundation for student success in that course. With the development of quantitative reasoning courses and data science careers, it is clear that other mathematical skills besides algebra are needed. These include modeling, working with data, and experience with computers.

The Common Core helped to refocus the mathematical thinking needed for K-8 students, but the typical high school curriculum still focused on getting students through Algebra II. Modeling and data analysis are not a focus of the high school curriculum. To help broaden the focus of K-12 mathematics education, the Dana Center has started an initiative called Launch Years. Launch Years is a program to provide directions through recommendations to educators in K-12 institutions and beyond, including colleges, universities, trade schools, and military programs. These recommendations describe what needs to change, how to bring the changes to scale, and how to measure the impact of that change.

These are some of the recommended changes:

Recommendation 1: Secondary and postsecondary institutions offer multiple effective and aligned mathematics pathways.
Recommendation 2: Postsecondary institutions and other providers prepare preservice and in-service teachers to teach multiple mathematics pathways.
Recommendation 3: Education institutions offer robust supports to help students navigate mathematics pathways, maximize learning, and access broader postsecondary options.
Recommendation 4: Business and industry partners actively inform the design of education opportunities that support students’ goals.

Recommendation 5: State agencies and education systems develop policies that enable smooth student transitions from secondary to postsecondary mathematics.
Recommendation 6: State agencies and education systems, institutions, and schools build a strong shared understanding of – and commitment to – goals among their constituents.

And finally, a recommendation to ensure that we measure impact and improvement:
Recommendation 7: State agencies, systems, and institutions use data and research results to measure impact and to inform continuous improvement of mathematics pathways.

You can learn more about these recommendations at https://utdanacenter.org/launchyears.

Notice that postsecondary institutions, including community colleges, figure into several of these recommendations. It is important that teachers of mathematics in the first two years of college understand these recommendations and evaluate their courses for the students who will be impacted by the changes. The Dana Center is working with states to develop course frameworks and curriculum to support the pathways work in Launch Years. Currently there are schools in the states of Georgia, Washington, and Texas that are implementing the Dana Center Transition to College Math Course that prepares students for multiple pathways. These students will be coming to colleges and universities and we need to be prepared with courses that build on what they are learning in high school.

Launch Years aims to ensure all students have access to and success in the mathematics they need for their chosen pathway, including students from traditionally underserved populations. The Dana Center aims to create new pathways that ensure all students have access to the mathematics they need, and ensure that the educational system provides each student the supports they need to be successful in any pathway chosen. This is aligned with increasing equity for all students. AMATYC has an equity committee whose focus is to increase mathematics achievement for diverse learners.

Launch Years’ focus is to increase the mathematics achievement for diverse learners also, and AMATYC is involved in Launch Years to support the work of both the AMATYC Equity Committee and the Launch Years initiative. As President of AMATYC, I attended a convening for Launch Years, and will continue to be a conduit between the work of the Dana Center on this initiative and AMATYC.

Honor a Great Teacher — the AMATYC Teaching Excellence Award

by Laura Watkins, President-Elect

Every two years, AMATYC honors teachers who excel in the teaching of mathematics in the first two years of college. You probably know a great teacher who deserves recognition via the AMATYC Teaching Excellence Award — it could be you!

Do you or your colleague exemplify teaching excellence by providing enriching classroom experiences for students? By continuously striving to improve in the craft of teaching? By serving your department, your college, and your discipline? If so, please consider nominating yourself or your colleague for AMATYC’s Teaching Excellence (TE) Award.

Nominees are evaluated on four criteria:

• Instructional effectiveness and support of students, including innovative teaching strategies, alternative assessment methods, curriculum development, creating a learning environment for all students, and accessibility to students in and out of the classroom.

• Professional involvement and development, including active participation in professional organizations, speeches, articles, and conferences.

• Interaction with colleagues, including sharing and discussing ideas with other colleagues.

• Service to your department, division, and college, actively contributing to the college community.

TE award nominees must be AMATYC members whose primary duties are the delivery of instruction and who have made outstanding contributions to mathematics, statistics, or mathematics education. Nominees must have the equivalent of at least five years of full-time teaching experience and can receive the award only once.

The number of TE awards given is based upon the total number of nominations received and the strength of the applicant pool. The number of awards can range from 0 to 8. To give 8 awards, we need at least 23 nominations. The desire of the 2021 AMATYC TE Award Committee is to award the maximum of 8 awards. So, start thinking now, and don't wait until the last minute. It takes time for a nominee to assemble a competitive nomination packet.

The names of the AMATYC Teaching Excellence awardees will be announced at the 2021 AMATYC Annual Conference in Phoenix. More information, including the names of the committee members from each region, is available at www.amatyc.org/TeachExAward.

Deadline for nominations is December 10, 2020.

My Experience as a Project SLOPE Fellow

by Rhea Becke, Project SLOPE Fellow

I am excited to be part of the first cohort of AMATYC’s Project SLOPE program (Scholarly Leaders Originating as Practicing Educators in Two-Year Colleges). I am a full-time Transitional Studies (Adult Basic Education) Mathematics instructor at Clark College in Vancouver, WA. Students take my classes to earn their high school diploma, to earn their GED, or to review mathematics concepts before taking college courses. For the last few years I have asked my students for weekly reflections on their learning. They answer questions about barriers they encounter, how well they are keeping up with the class, and what they need to change in order to be successful. Their responses serve as a weekly check-in with themselves and with me. I value these reflections because I learn so much about my students.

Most of my students are learning how to be college students and many have had negative experiences with math in the past. They often resist higher level thinking skills, preferring to be “shown the formula” in hopes they can pass the test. Many do not know how to take ownership of their learning and their success, especially in mathematics. Over the years, I have tried different strategies to encourage the development of ownership and important learning skills. However, prior to Project SLOPE, I relied only on instincts and my own observations to evaluate whether my strategies were bearing fruit. I desired a more systematic approach to evaluating my teaching and my students’ learning, and this led me to Project SLOPE.

With the support of my Project SLOPE cohort and mentors, I thought deeply about potential research questions and developed a classroom research project that explores how structured practice and reflection help students take ownership of the learning process. The project is guided by four focal questions:

• What support structures help students to develop skills they need to be successful in college?

• What type of information do the student reflections give the instructor and what does the instructor learn from this?

• How does reflection on classroom activities targeted to help students be successful as college students impact their ownership of learning?

• How do practice and supported reflection affect retention and ownership, especially in systemically non-dominant students?

Visit www.amatyc.org/ProjectSlope to learn more.

An Opportunity to Join the AMATYC Executive Board

by Jim Ham, Past President

Although the 2020–2021 AMATYC Executive Board has just started its term, the process has begun to select AMATYC officers for the 2022–2023 board. At the 2019 Delegate Assembly, the names of the Nominating Committee members were announced. The Nominating Committee includes twelve AMATYC members who represent a cross-section of AMATYC’s delegates, members, and leadership, with at least one member from each region. One year from now, the committee will recommend a slate of nominees to the current Executive Board. The committee will meet in Spokane in November to discuss possible nominees. This is the first of a series of articles prior to the 2021 election, when the new President-Elect, Secretary and eight Regional Vice Presidents will be elected.

To learn more about the nomination process or the open positions, visit www.amatyc.org/ExecutiveBoardNomin. You may also contact any member of the Nominating Committee:

• Jim Ham (jimham@amatyc.org), Chair

• Behnaz Rouhani (brouhani@gsu.edu), Member-at-Large

• Rochelle Beatty (rbeatty@kckcc.edu), Member-at-Large

• Julie Gunkelman (jagunkel@oaklandcc.edu), Member-at-Large

• Donna Boccio (dboccio@qcc.cuny.edu), Northeast Region

• Christine Mirbaha (cmirbaha@ccbcmd.edu), Mid-Atlantic Region

• Penny Morris (pmorris@polk.edu), Southeast Region

• Florian Haiduc (fhaiduc@starkstate.edu), Midwest Region

• Nicole Lang (nlang@nichc.edu), Central Region

• Paula Wilhite (pwilhite@ntcc.edu), Southwest Region

• Luke Audette (lkaudette@gmail.com), Northwest Region

• Shane Tang (Shane.Tang@slcc.edu), West Region

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AMATYC News

Student Mathematics League
by Steve Hundert, Coordinator

In the fall semester about 4,900 students from 144 colleges participated in Round 1 of the AMATYC Student Mathematics League competition. The Round 2 testing window closes on April 30. If you missed this year's Student Mathematics League competition, please register your college for the 2020/2021 academic year. Here are highlights of the Round 1 results.

Top Teams in the Nation
1. Ohlone College (CA) 154.0
2. Diablo Valley College (CA) 142.5
3. De Anza College (CA) 139.5
   Laney College (CA) 139.5
   Schoolcraft College (MI) 139.5
4. Los Angeles City College (CA) 137.5
5. Foothill College (CA) 136.0
6. East Los Angeles College (CA) 126.5
7. College of Lake County (IL) 126.0
8. Brookdale CC (NJ) 117.5

Top Teams by Region
Northeast – Middlesex CC (MA)
Mid-Atlantic – Brookdale CC (NJ)
Southeast – Pellissippi State CC (TN)
Midwest – Schoolcraft College (MI)
Central – Normandale CC (MN)
Southwest – Tarrant County College - Northeast (TX)
Northwest – Seattle Central College (WA)
West – Ohlone College (CA)

Top Individuals
1. Seth Thomason – College of Lake County (IL) 40.0
   Yufan Liu – Ohlone College (CA) 40.0
2. Emma Kee – Montgomery College (MD) 38.0
3. Srirani Ganesen – Schoolcraft College (MI) 37.5
   Yizhuo Miao – Diablo Valley College (CA) 37.5
4. Mingshi Song – Laney College (CA) 35.5
   Timothy Alexander – Rochester CTC (MN) 35.5
   Zico Shangguan – Foothill College (CA) 35.5
5. Shaobo Hu – Ohlone College (CA) 33.0

Correction:
The January 2020 issue of the AMATYC News incorrectly identified the winner of the Charles Miller Memorial Scholarship. The correct winner of the 2018/2019 Charles Miller Memorial Scholarship, awarded to an outstanding participant in the AMATYC Student Mathematics League competition, is Robert Shi of Pasadena City College in Pasadena, CA. AMATYC extends its congratulations to Robert, and sincerely apologizes for the error.

Search for AMATYC’s Next Program Coordinator to Begin Soon
by Nancy Rivers, Secretary and Search Committee Chair

Are you a detail-oriented person with strong written and oral communication skills? Do you work well with others and enjoy developing a high quality product? Have you had experience putting together a professional conference? Do you love the AMATYC Annual Conference and all that it offers? Would you like to join an energetic AMATYC conference leadership team? Or do you know someone who possesses these qualities?

Early this summer, AMATYC will be seeking such an individual to take the role of Program Coordinator on January 1, 2022. The Program Coordinator is responsible for all aspects of the planning of the program for the AMATYC Annual Conference and works closely with the Conference Committee. The Program Coordinator is responsible for putting together the conference program with the aid of the Assistant Program Coordinator and the Assistant Conference Coordinator, and contributes to conference publications. AMATYC’s goal is to identify the next Program Coordinator before this year’s AMATYC Annual Conference, so that a year of shadowing and training will be possible.

After the Search Committee completes its preliminary work, an announcement will be sent out by email and also posted on the AMATYC website. The announcement will provide a detailed description of the duties of the Program Coordinator and instructions concerning the application process. Please, be looking for this announcement soon!

Mu Alpha Theta
by Rita Ralph, Coordinator

Mu Alpha Theta is a national mathematics honor society for two-year college and high school students. With over 124,000 student members, the organization is dedicated to inspiring excellence in mathematics and promoting students’ enjoyment of mathematics. A Mu Alpha Theta chapter at your college can provide recognition for talented mathematics students, honor cords for graduation ceremonies, scholarships, grants, mathematics competitions, and the opportunity to attend the Mu Alpha Theta national convention. Colleges sending students to the Mu Alpha Theta national convention for the first time are eligible for a $4,000 grant for travel expenses, and may also apply for need-based travel scholarships. If four or more colleges attend, there will be a separate community college division for the mathematics competition, with dedicated testing rooms and prizes. The 2020 convention will be this July in Myrtle Beach, SC. Three colleges currently plan to attend. Your college is invited to be the fourth!

During 2019, seven two-year colleges chartered new Mu Alpha Theta chapters. Welcome to El Paso CC (TX), Kilgore College (TX), Florida State College (FL), Miami Dade College - Padrón (FL), Pearl River CC (MS), Manchester CC (NH), and Southwest Tennessee CC (TN).

Mu Alpha Theta is striving to increase the number of active chapters at two-year colleges. If you are interested in starting a chapter, visit http://mualphatheta.org and contact Rita Ralph at rralph@cscc.edu. If your AMATYC region or state affiliate is hosting a conference, please allow Mu Alpha Theta to provide informational flyers and small giveaways for attendees. Email your conference date and address to info@mualphatheta.org with the subject line “AMATYC Conference.”

Each year, Mu Alpha Theta offers scholarships to outstanding two-year college students majoring in mathematics or a mathematics-related field who are active in their local chapter. Start planning now to help your students improve their lives by earning a $4,000 scholarship.
Get Your REAL ID Soon
by Judy Williams, Program Coordinator

October 1 is the day the new Real ID law will be enforced. Starting on that day, you must show either a valid passport or a security-enhanced ID to pass through airport checkpoints. An approved Real ID has all federally-required information encoded. To learn more about the documents needed to obtain a Real ID, check both the Department of Homeland Security (www.dhs.gov/real-id-frequently-asked-questions) and your state motor vehicle department websites today. Do not spoil your 2020 Vision by being refused access to the airplane scheduled to carry you to Spokane for the AMATYC Annual Conference.

Volunteer to be a Presider in Spokane
by Michael Pemberton, Assistant Program Coordinator

Serving as a presider is a great way to participate in a session that interests you and also to support your colleagues who are presenting at the 2020 AMATYC Annual Conference. Watch the video at www.amatyc.org/Preside. You can also volunteer to be a presider by completing the Session Presider Form.

Register Early for Spokane!
by Turi Suski, Conference Coordinator

Are you looking forward to the next AMATYC Annual Conference? Will you be there? Make plans now to attend the 2020 AMATYC Annual Conference in Spokane, WA. If you or your college prefer to pay your registration fee from the current year’s budget, instead of waiting until fall, that can be done. Please email Beverly Vance at amatyc@amatyc.org and put “Conference Registration Now” in the subject line. Beverly will send you the necessary information so that conference registration can be paid now.

Now is also a great time to book your hotel room for Spokane. Hotel information is available on the conference website at www.amatyc.org/2020ConfHome. You can also find links to information about things to do and see while in Spokane. Additional details about the conference will continue to be added in the coming months, so watch this space for updates.

Sharing your room at the conference hotel is a great way to reduce your costs for the AMATYC Annual Conference. Ask a colleague to be your roommate or complete the roommate request form at www.amatyc.org/2020ConfHome. Sarah Miller, Roommate Network Director, will endeavor to help pair you with another conference attendee who would like to share a room. While AMATYC does not guarantee a roommate pairing, this process has often been very successful.

We look forward to seeing you this fall in Spokane and hope you are ready for a renewed Vision for the Future!
Introducing New Committee Chairs

Developmental Mathematics Committee
Kathryn Van Wagoner
Kathryn Van Wagoner, the new chair of the Developmental Mathematics Committee (DMC), is the Director of Developmental Mathematics at Weber State University in Ogden, UT. Kathryn has served on the DMC for many years, contributing to two position statements and serving as a state delegate. She is also the current President of UMATYC, the Utah affiliate of AMATYC. In recent years, her passion has been developing and teaching Intermediate Algebra curricula to help students think and reason conceptually, contextually, and procedurally about mathematics. Kathryn loves adventure and spending time outdoors.

Equity Committee
AJ Stachelek
As the new chair of the Equity Committee, AJ Stachelek is grateful for the opportunity to continue the committee’s important work. He recognizes the enormous impact educators can have if they view mathematics education through an equity lens. Since 2012, AJ has worked as an assistant professor in the South Bronx at Hostos CC, part of the City University of New York. Throughout his eighteen-year teaching career, with experiences spanning middle school through community college, AJ has continually promoted the need for equity, because of the positive benefits it affords the students he is lucky to work with every day.

Innovative Teaching and Learning Committee
Jennifer Ackerman
Jennifer Ackerman, the new chair of the Innovative Teaching and Learning Committee (ITLC), has taught for eleven years at Jefferson Community and Technical College in Louisville, KY. Recently, she worked with colleagues to redesign the College Algebra course at her college, and also develop a corequisite course model for Contemporary College Mathematics. For several years, Jennifer has been an avid participant in the AMATYC Ignite event and the local KyMATYC Ignite. Please welcome Jennifer and feel free to contact her through the ITLC community on https://my.amatyc.org or at jackerman0006@kctcs.edu.

Mathematics and its Applications for Careers
Carol Hannahs
The Mathematics and its Applications for Careers (MAC) Committee is pleased to announce a new chair, Carol Hannahs. Carol has been teaching mathematics for over 37 years. Since 2010, she has taught exclusively online. In 2018, she accepted a Visiting Instructor of Mathematics position at Embry Riddle Aeronautical University Worldwide, headquartered in Daytona Beach, FL. Carol resides in Kentucky, in the Midwest region. She has attended, presided, and presented at several AMATYC Annual Conferences. Carol has been an active member of the MAC committee since joining in 2016.

Prime Time for Webinars
by Pat Riley, Webinar Coordinator

As the 2019–2020 academic year winds down, many of you are probably either already thinking of summer break or (as many teachers do) considering how to improve your classes for the fall semester. There are many sources of inspiration for making those changes. Whenever I attend a conference, I almost always go home with more great ideas and information than I can possibly implement. On the rare occasions I don’t get a new idea, it is inspiring to surround myself with other mathematics educators.

A great way to get this inspiration during the upcoming summer months is by attending an AMATYC Webinar. Webinars are scheduled about every three or four weeks throughout the year – yes, even during the summer! These webinars are free of charge. All you need is a computer to watch them. If you cannot commit to a specific time for watching the webinar, never fear! Shortly after each webinar, the recording is posted on the AMATYC website. You can watch all the AMATYC past webinars at your convenience.

Even better than attending a webinar is serving as a panelist and presenting the webinar. Some webinars have had one main presenter; other webinars feature a team of presenters. Do you have an idea or strategy that you’ve used in your class that has worked well? Has your department made innovative changes, producing results that should be shared? Have you used a new technology tool that enhances mathematics education? Any or all of these would be great webinar topics.

Be on the lookout for emails from AMATYC with information about upcoming webinars throughout the summer. If you have ideas or suggestions, or if you would like help defining a topic for a webinar you could present, contact Pat Riley at patrick.riley@kctcs.edu.

All StatPREP workshops for this summer are cancelled. See http://statprep.org for free online materials to use in your Intro Statistics course.

Interested in hosting a Traveling Workshop at your college or affiliate conference? Interested in being a facilitator for a Traveling Workshop?
Visit www.amatyc.org/TravelingWorkshops
Questions about Traveling Workshops?
Contact Mari Menard at tw@amatyc.org.
EQUITY COMMITTEE: WHY EQUITY?
by AJ Stachelek, Chair

In my interactions with mathematics faculty, questions often arise about the importance of equity issues in mathematics. After all, isn’t mathematics objective enough to transcend issues of society and context? I recently asked members of the Equity Committee, “Why equity in mathematics education?” The responses focused on access, inclusion, and opportunities to succeed in mathematics.

Some members pointed out the negative impact that systems often have on underrepresented students in mathematics. It was noted that disparate mathematics outcomes are strongly correlated to demographics, highlighting socioeconomic status and race. Such disparities in outcomes reduce the likelihood of academic success for underrepresented students, particularly in STEM-related fields. In general, mathematics courses remain gatekeepers rather than gateways for many students.

In examining the reasons for these disparities, Equity Committee members suggested that viewing mathematics education through an equity lens allows for recognition of how structural inequities inhibit access and opportunity. Issues of unrecognized privilege and exclusionary practices, whether intended or accidental, can alienate students from engagement in mathematics. Considering mathematics through an equity lens is important for addressing these issues and improving outcomes.

Once an equity lens is considered, the following questions might be raised. With current placement methods, are students enrolling in courses that best match their needs? Have course sequences been designed to enable all students to succeed? What words or phrases are used to describe students based on their behaviors in mathematics classes? Do these words or phrases change based on the demographics of the students? Are assessments really measuring what students know in mathematics, or are they inadvertently assessing something else?

A special thank you to Equity Committee members Curtis Mitchell, Dorota Zak, Micah Miller, Ralf Youtz, and Sidra Van De Car for their valuable insights. If you have comments or thoughts on equity in mathematics, please contact me at equityinmathed@gmail.com.

MATHEMATICS STANDARDS IN THE FIRST TWO YEARS OF COLLEGE (IMPACT) COMMITTEE
by Julie Phelps and Evan Evans

The Mathematics Standards in the First Two Years of College (IMPACT) Committee and IMPACT Live! are excited to announce the upcoming themes for the IMPACT Live! portion of the new https://my.amatyc.org community platform. The scheduled themes are:

- April – Equity
- May – Proficiency
- June – Ownership
- July – Engagement
- August – Student Success
- September – Who We Are

IMPACT Live! consists of four portals:

- IMPACT Chapters – The original published document
- IMPACT Plus – Extensions of the published document
- IMPACT in Action – Specific content within IMPACT
- IMPACTful Thoughts – Insights into improving college mathematics teaching

These portals will allow mathematics instructors to interact with each other, and also will serve as a repository for class activities, projects, videos, and other resources. Information is already being uploaded to the IMPACT Live! portals, and discussions around emerging topics have begun.

The goal of the IMPACT Committee and the IMPACT Live! team is to provide implementation specifics, such as teaching ideas, department suggestions, and help for promotion of IMPACT beyond the classroom. The committee’s work is ongoing and we greatly appreciate the support of the many volunteers and beta-testers who have helped implement the new https://my.amatyc.org community platform.

MATHEMATICS AND ITS APPLICATIONS FOR CAREERS COMMITTEE
by Carol Hannahs, Chair

The Mathematics and its Applications for Careers (MAC) committee provides AMATYC members with information, ideas and inspiration regarding mathematics applications for the classroom. The committee has a project underway to meet with industry leaders and collect examples of how mathematics is used on the job. The goal is to create a repository of ideas and tools for AMATYC members to use and share. Authentic, current examples of mathematics applications have the potential to improve student engagement and transform student learning. The committee is also moving forward with another project, the creation of an Open Educational Resources (OER) textbook for Technical Math. Since the 2019 AMATYC Annual Conference in Milwaukee, a small team of members has been crafting a grant proposal to acquire funding for this project. The proposal includes opportunities for interested MAC members to pilot contextualized problems and activities.

At the 2020 AMATYC Annual Conference in Spokane, the MAC committee will sponsor a themed session titled “Mathematics on the Job.” A wide range of topics will be presented including applications from nursing, welding, and business.

If you are already a member of the MAC Committee, don’t forget to rejoin the committee at https://my.amatyc.org. This community platform will replace the Google group the committee used in the past. If you are interested in joining the committee or helping with either of the projects, or if you have questions, contact Carol Hannahs at hannahsc@erau.edu.

AMATYC 2020 CALENDAR OF EVENTS

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

May 20–22: OCMA Conference, Fern Resort, Ramara, ON, Canada. www.theocma.org/annual-conference-2020

September 26: WisMATYC Conference, Univ of Wisconsin – Eau Claire, Eau Claire, WI. http://wis матyc.org


November 12-15: 46th AMATYC Annual Conference, Spokane, WA. www.amatyc.org/2020ConfiHome

December 11-12: CMC3 Fall Conference, Hyatt Regency Monterey Hotel and Spa, Monterey, CA. www.cmc3.org/conferences/fall/

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A form is available at www.amatyc.org/AffiliateConferences to update or add affiliate conference information.
Oceans of Data - Resources for Data Science and Statistics Classrooms
by Joyce Malyn-Smith and Sarah MacGillivray

Demand for data scientists, data developers, and data engineers is outstripping the capacity of colleges to produce qualified employees. In particular, there is a growing need across industry sectors for more data science workers at the middle skilled "data practitioner" level. This provides an opportunity for two-year colleges to develop programs that prepare students for careers on data teams.

The Oceans of Data Institute (ODI) at Education Development Center (EDC), through funding from the National Science Foundation's Advanced Technological Education (NSF ATE) program, is helping community colleges develop programs leading to data practitioner careers. The Creating Pathways for Big Data Careers project brought together industry leaders and partners from Sinclair CC (OH), Normandale CC (MN), Johnson County CC (KS) and Sinclair CC (OH) to create a toolkit for developing data practitioner programs.

This toolkit, titled Tools for Building a Big Data Career Pathway, includes a Profile of the Data Practitioner that describes the roles, skills, and duties of data workers. The profile articulates six major work duties and 64 specific work tasks commonly performed by members of data teams across industry sectors. The toolkit also includes a Gap Analysis Tool to help community colleges align their curriculum to specific work tasks prioritized by local companies. The Curriculum Analysis Matrix guides faculty in the assessment of specific skills and work tasks, and also helps program designers evaluate the learning trajectory across courses.

These tools enabled the four partner community colleges to develop data programs addressing local needs for middle-skill data workers. Building on the success of this initial project, ODI and EDC will distribute these free tools through a new NSF ATE-funded project, Mentoring New Data Pathways. In this project, partners Bunker Hill CC, Normandale CC, and Sinclair CC will mentor six new colleges as they design new data initiatives.

The AMATYC community is invited to utilize the free resources available at http://oceansofdata.org, and to join the ODI online community.

PreTeXt - Creating Accessible Mathematics Documents
by Matt Boelkins, Jennifer Firkins Nordstrom, Sally Koutsoliotas, and Bruce Yoshiwara

All instructors want their course materials to help all students learn. They want effective materials that meet accessibility guidelines, and that students can afford.

One option for course materials is PDF documents. These are readable on computers and mobile devices and can be printed to provide a visually pleasing paper copy. However, mathematical notation in PDF documents is not usefully interpreted by electronic document readers for the visually impaired. Also, the fixed line breaks in a PDF document require readers using a small screen to scroll both vertically and horizontally.

Another option is posting course materials as HTML webpages. This format allows adjustable line breaks for a better reading experience on small screen devices, and can include dynamic, interactive content. However, printing paper copies of webpages is rarely satisfactory, and machine-readable math notation in an HTML document is still a challenge.

A new typesetting language addresses these concerns. PreTeXt is a free authoring platform for creating the next generation of textbooks and other instructional materials. PreTeXt is funded in part by the NSF UTMOST grant, Undergraduate Teaching of Mathematics with Open Software and Textbooks (NSF DUE-1626455), in which AMATYC participates.

A PreTeXt author writes one document that can be converted into a variety of publishable platforms including HTML (with machine-readable math notation), LaTeX, PDF, Jupyter, and Braille. Numerous textbooks have already been published in PreTeXt, and we look forward to many more. The PreTeXt website provides a variety of mature exemplars in the PreTeXt Gallery, and additional examples in the PreTeXt Catalog.

If you write textbooks, course notes, or worksheets for your students, please consider using PreTeXt. PreTeXt neophytes have excellent support, from an engaged and supportive community of authors who are keen to see high-quality open educational resources flourish. Written by authors, for authors, PreTeXt is in ongoing development to offer additional and better features for everyone. For more information, visit http://pretextbook.org.
AMATYC ANets Change Leaders
by Christine Mirbaha

Three of the four ANets changed leadership in January. Thank you to outgoing ANet Leaders Judy King (Adjunct Issues ANet), Steve Krevisky (International Mathematics ANet) and Fary Sami (Mathematics for Liberal Arts ANet). During the past four years, they led the creation of these ANets, guiding members through the process of establishing mission statements, drafting position papers, and building a true network of AMATYC colleagues. Thank you for your tireless efforts and service to AMATYC and the ANets!

Welcome to the new ANet Leaders: Jonathan Benefiel (Adjunct Issues), Barbara Leitherer (International Mathematics) and Froozan Afiat (Mathematics for Liberal Arts).

Jonathan became an adjunct faculty member after earning his master's degree in 2012, and is currently an adjunct at Macomb CC in Warren and Clinton Township in Michigan. In addition to his interest in the history of mathematics, he enjoys video gaming and volunteering at his church.

Barbara is in her 20th year at the CC of Baltimore County (CCBC) in Maryland. Her interest in global education stems from her background, having taught in her native Germany and then the United States for over 25 years. She has led a webinar and given numerous presentations on global education at local, regional and national conferences. At CCBC, she designed and implemented the college's first globally oriented mathematics course, and chaired the Global Workforce Committee. An outdoor person, she is an avid hiker and likes to travel.

Froozan has taught mathematics for several years, most recently at the College of Southern Nevada. For the past ten years she has worked with a publisher to produce and update an algebra textbook and associated materials. She has been very active in the Math for Liberal Arts network, working closely with Fary Sami on writing the ANet's position paper that was approved during the 2019 AMATYC Delegate Assembly. She loves to travel, watch movies, try new foods, and spend time with her family.

AMATYC's ANets provide an excellent way to connect with colleagues. We look forward to networking with you!

International Mathematics ANet
by Barbara Leitherer, Leader

The International Mathematics ANet is pleased that the AMATYC Board approved the themed session entitled “Developing Global Competencies: Critical Thinking, Creativity, and Collaboration” for the 2020 AMATYC Annual Conference in Spokane. Speakers have been recruited for all six 15-minute time slots. On February 19, the International Mathematics ANet partnered with the Mathematics Intensive Committee to host the webinar titled “Give Your Classes a Global Perspective” with former AMATYC President Jim Roznowski. Thank you, Jim, for a fabulous and inspiring presentation connecting mathematics with architectural examples at home and abroad. Handouts for the webinar are available at www.amatyc.org/Webinars. Are you interested in joining us as we continue learning and educating our mathematics students in an ever more complex and interconnected world? Join the ANet online or contact ANet Leader Barbara Leitherer at bleitherer@ccbcmd.edu.

Two international conferences, the International Congress on Mathematical Education in Shanghai, China, and the Psychology of Mathematics Education conference in Khon Kaen, Thailand, have been postponed from 2020 to 2021 due to the COVID-19 pandemic. If you are interested in attending these conferences next year, see www.icme14.org and https://pme44.kku.ac.th for more details.

Adjunct Faculty Issues (AFI) Community
by Jonathan Benefiel, Leader

Thank you to everyone who has encouraged adjunct faculty to become members of AMATYC. AMATYC is very appreciative of your efforts, as is the AFI ANet. It is important to always be mindful that adjunct faculty make up the majority of instructors at community colleges.

Here are some ways you can support adjunct faculty at your college: Share great ideas gathered from presentations, workshops, or other events you have attended. Let adjunct faculty know about the many webinars AMATYC offers. Invite adjuncts – especially those in the Northwest region – to the AMATYC Annual Conference in Spokane. Invite adjunct faculty to your local affiliate’s conference. (For me, attending MichMATYC is how I got started in AMATYC)

Finally, I highly recommend that you and your colleagues check out the AFI ANet community page at https://my.amatyc.org/adjunctfacultyissuesnetwork/home. This site contains links to webinars, discussion boards, and other valuable resources that may be useful to adjunct faculty members.

Please contact me if you have any other suggestions or ideas: jbenefiel@amatyc.org.

Moving Classes Online?

Share strategies and resources with other AMATYC members at https://my.amatyc.org. All AMATYC members have access to the Moving Face-to-Face Classes Online community. Join it under My Communities.
**Collaboration Corner**
by Jon Oaks, AMATYC Midwest Vice President and Shiv Smith Karunakaran, RUME Organizational Director

The purpose of the Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education (SIGMAA on RUME) is to foster research on learning and teaching undergraduate mathematics, and to provide a support network for those who participate in this area of study. This SIGMAA also welcomes members who teach post-secondary mathematics or are interested in the findings of RUME; they provide critical assistance in the grounding of research efforts in the realities of the classroom.

The 23rd Annual SIGMAA on RUME Conference was held in Boston on February 27-29, 2020. For the past decade, including this year, members of RMETYC (the AMATYC Committee on Research in Mathematics Education for Two-Year Colleges) have held a working group session at the RUME conference. Other working groups have developed research projects and collaborations on topics of interest to AMATYC members. These topics include calculus instruction, tutoring centers, and strategies for promoting equity.

In addition to the Annual Conference, the SIGMAA on RUME routinely offers professional development opportunities for its members. Topics include obtaining NSF funding, publishing teaching and searching for academic jobs. The SIGMAA also helps connect new researchers with mentors who are experienced mathematics education researchers.

For more information on RUME, please visit http://sigmaa.maa.org/rume/Site/News.html. The website provides information on upcoming and past conferences, academic journals, and job opportunities. The RUME Google Group, at https://groups.google.com/forum/#!forum/rume_list, is open to all.

**Mathematics Pathways and Corequisite Courses**
by Helen Burn, Pathways Joint Subcommittee Chair

At the 2019 AMATYC Annual Conference in Milwaukee, several AMATYC committees discussed the need for a position statement on mathematics pathways and corequisite courses. Many AMATYC members are developing teaching or evaluating corequisite mathematics courses. Others are working to create statewide agreements around transfer and applicability of courses on mathematics pathways. A position statement would allow the AMATYC community to influence conversation and policy regarding mathematics pathways and corequisites.

The mathematics pathway movement began in approximately 2009, and focused on aligning college-level mathematics courses to students’ programs of study. The three mathematics pathways listed in IMPACT are Statistics, STEM, and Quantitative Reasoning. The pathway movement also focused on helping students complete their first college mathematics course more efficiently, typically within one year. This is often referred to as acceleration, with corequisite courses being one approach to acceleration.

On many campuses, the mathematics pathways movement intersects with a related idea called Guided Pathways, which was introduced in 2015 with the publication of Thomas Bailey’s *Redesigning America’s Community Colleges*. In the Guided Pathways approach, student advising is redesigned to provide students with more guidance and focus. This is achieved through metamajors and program maps that identify a student’s general pathway. Guided Pathways efforts are supported by several foundations and not-for-profit organizations, including the Bill and Melinda Gates Foundation, Lumina Foundation, Columbia University’s Community College Research Center, and Complete College America.

There is no doubt that mathematics pathways and corequisite mathematics courses represent a paradigm shift for mathematics education in the first two years of college. Departments must align, modernize, and contextualize college mathematics courses so that students learn mathematics that is meaningful to their program of study. Further, given rightful concerns about high student debt and low degree completion rates, they must also ensure that students can efficiently complete their mathematics pathway, and that transfer courses apply as intended to programs of study in baccalaureate institutions.

The position statement on mathematics pathways and corequisites will require input from several AMATYC committees. You can help with this effort by sharing your ideas at the committee meetings and themed sessions at the 2020 AMATYC Annual Conference in Spokane, and by joining the Pathways Joint Subcommittee Community on https://my.amatyc.org.

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**The CBMS Survey: Data on Two-Year College Faculty and Students**
by Ted Coe, Rikki Blair, Linda Zientek, and April Ström

Every five years, the Conference Board of the Mathematical Sciences (CBMS) conducts a national survey to track trends in course enrollments, faculty information, degree completion, and more, in two- and four-year colleges and universities. Data from the CBMS surveys can be very helpful to department chairs and faculty, informing them about peer colleges and helping them make informed decisions about course offerings.

Here are some tidbits from the most recent CBMS report. Between 2015 and 2010:
- Enrollment in precollege courses decreased by 32%.
- Enrollment in precalculus courses increased by 21%.
- Enrollment in Elementary Statistics and Probability in two-year colleges increased by 104%.
- The number of full-time permanent faculty in public two-year colleges decreased by 15%.

For more information and trends about two-year college mathematics courses, instruction, and faculty, read the CBMS Survey Reports, available at www.ams.org/profession/data/cbms-survey/cbms-survey.

The next round of data collection will take place during the Fall 2020 semester. Topics addressed by the upcoming survey include the implementation of mathematics pathways and the use of instructional strategies in courses below calculus. If your college is chosen as part of the 2020 random sample for the CBMS survey, please take the time to complete the questionnaire, and encourage your colleagues to do so as well. Your participation will help everyone in your profession learn what is happening in our institutions.

If you have questions about the CBMS survey project, please contact one of the members of the CBMS Two-Year College team: Rikki Blair (richelle.blair@sbcglobal.net), Ted Coe (ted.coe@gmail.com), April Ström (aprilstrom@cgc.edu), or Linda Zientek (lrzientek@yahoo.com).
AMATYC Foundation Grant Opportunity

The AMATYC Foundation invites individuals and organizations, working in the area of mathematics taught during the first two years of college, to submit proposals for funding. Proposals will be accepted throughout the year as long as funds are available. Grants are usually funded for less than $1,000; however grants for higher amounts may also be funded. Preference will be given to applicants who are or have been members of AMATYC for at least one of the past five years.

Information about the format for proposals and the submission process is available at www.amatyc.org/Grants.

Please contact the chair of the AMATYC Foundation (amatycfoundation@amatyc.org) for additional information.

The Leila and Simon Peskoff Award

The Leila and Simon Peskoff Award, made possible through a contribution to the AMATYC Foundation by Fred Peskoff, in memory of his parents, is given annually to an AMATYC Project ACCCESS fellow who has contributed to the education profession in the area of mathematics during the first two years of college. The award, which consists of a lifetime AMATYC membership, will be presented at the 2020 AMATYC Annual Conference in Spokane.

Information about the award is available at www.amatyc.org/PeskoffAward.

Nominations for the award are due by May 1, 2020.

The Margie Hobbs Award

The Margie Hobbs Award, made possible through contributions to the AMATYC Foundation, is given annually to an AMATYC member who has been selected to present at the AMATYC conference for the first time. The award winner will receive a check for $500 to offset conference expenses. The recipient will be featured in the conference program, and the award will be presented at a keynote session of the 2020 AMATYC Annual Conference in Spokane.

Information about the award, including the nomination form, is available at www.amatyc.org/Margie-HobbsAward.

Nominations for the award are due by June 1, 2020.

AMATYC Membership Dues to Increase
by Barbra Steinhurst, Treasurer

There's so much more to AMATYC membership than just the conference! When I can attend the conference, membership is a no-brainer. With the registration discount, the membership pays for itself. But even when I can't attend the conference, my AMATYC membership has proven to be a bargain. With membership, I've received plenty of high quality professional development, and had the opportunity to contribute to the profession. Here are just some of the ways in which you can use your AMATYC membership to make a positive impact on your students and colleagues:

- Watch and encourage others to watch the AMATYC Webinars, which provide great information about a wide variety of topics, and ideas you can use with your students the very next day.
- Bring quality professional development to your location, on your topic of interest, and focused on your goals, through AMATYC Traveling Workshops. You can choose a date and time that work best for faculty at your college.
- Keep up with the profession across the continent and continue your professional development on your own schedule with the AMATYC News and MathAMATYC Educator publications.
- Influence the profession and collectively build strength and voice to respond to policy decisions by joining AMATYC's Committees, using and contributing to AMATYC's Position Statements, and reading and sharing AMATYC's IMPACT document.
- Apply to the AMATYC Foundation for grants to support the projects and research ideas that have been percolating in your brain.
- Stay connected, seek collegial support and ideas, and gather resources with AMATYC's recently launched https://my.amatyc.org.
- Sponsor students and teams in AMATYC's annual competitions: the Student Mathematics League and Student Research League.

Member dues are scheduled for a slight increase on July 1, 2020, so why not seize this opportunity to renew or join AMATYC today? Until the increase, you can extend your membership over as many years as you wish at the current rate. Or, consider becoming a lifetime member so you never have to worry about dues increases again! For more information visit www.amatyc.org/Membership.

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Focus on Affiliates: MATYCNJ

by Kelly Fitzpatrick, President of MATYCNJ

The Mathematics Association of Two Year Colleges of New Jersey (MATYCNJ) represents nineteen community colleges across the Garden State and is part of the Mid-Atlantic region of AMATYC. Kelly Fitzpatrick, from the County College of Morris, recently began a two-year term as president of the organization. Other Executive Board members are: Past President Susan Monroe (Brookdale CC), Newsletter Historian Meimee Persau (County College of Morris), Webmaster Ashley Tasy (Brookdale CC), Treasurer Lenore Lerner (Bergen CC), VP North Daniela Kitanska (Passaic County CC), VP South Jonathan Weisbord (Rowan College at Burlington County) and Recording Secretary Palma Benko (Passaic County CC).

MATYCNJ hosts two conferences each year. The fall 2019 conference, hosted by Brookdale CC, featured keynote speaker Laura Overdeck, founder of the Bedtime Math foundation and author of several Bedtime Math books for young readers. Her presentation focused on the need for mathematics education and competency, and the importance of mathematics in our everyday lives.

The spring conferences have been a joint collaboration between MATYCNJ and the New Jersey Section of the Mathematics Association of America (MAA). This partnership with the MAA enhances our meetings, with a rich variety of mathematical presentations and opportunities for student involvement in the math competition, poster sessions and presentations. These joint spring meetings have been occurring for the past three years and have been well received by MATYCNJ members. The spring 2020 MAA-NJ/MATYCNJ Joint Meeting and Garden State Undergraduate Mathematics Conference was held at Rowan University.

The Fall 2020 MATYCNJ conference will be hosted by the County College of Morris on November 7, with the theme Data Science at Two-Year Institutions. For our biannual newsletter or more information about the upcoming conferences, please visit http://matycnj.matyc.org/.

Future AMATYC Conferences

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For additional information, contact the AMATYC Office at amatyc@amatyc.org or 901.333.5643.