

MichMATYC SUM-TIMES

Two Years College Mathematics in Michigan



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February 2017

Inside this issue: *Greetings from the president, Save the Date, Message from AMATYC Midwest VP, Teaching Excellent Awards, Campus News, Desmos Classroom Activities, News from RMETYC.*

Greetings from the President: Anna Cox, Kellogg CC

I would first like to express my appreciation to Doug Mace for his leadership in MichMATYC and his dedication to improving the teaching of mathematics in Michigan. Doug twice served our organization as President. As many of you know from my previous correspondence, Doug resigned as MichMATYC President due to health problems. In accordance with the MichMATYC By-Laws, the Executive Board appointed me to fill the remainder of his term. I am honored to serve this organization.

Delta College did a wonderful job hosting the 2016 MichMATYC Fall Conference. About 120 individuals attended the conference. Delta College, Henry Ford College, Kalamazoo Valley Community College and Oakland Community College all had ten or more people in attendance! The conference included an abundance of contributed talks and panels. For me, two of the highlights were the AMATYC workshop, Discovering the Art of Mathematics, and the STEM mobile vehicle. I was filled with pride at the expertise of my MichMATYC colleagues and their generosity in sharing their ideas with others. I would like to thank all the individuals who were involved. A special thanks to the sponsors which included Delta College President Dr. Jean Goodnow through an Innovation Incubator Grant, The American Mathematical Association of Two-Year Colleges (AMATYC) Traveling Workshop Grant, Graff Chevrolet of Bay City, Zehnder's of Frankenmuth, McGraw-Hill (ALEKS), Knewton, Pearson, Wolfram Technologies, Cengage, Mathnasium of Saginaw, Web Assign, and Texas Instruments. We can now look forward to the 2017 MichMATYC Fall Conference at Baker College in Muskegon on October 20-21. The executive board would like to have a four-year schedule for conferences. Currently 2018 is being hosted by Kalamazoo Valley Community College and 2019 tentatively being planned by Henry Ford Community College. Who will be the host in 2020?

The Annual Meeting of MichMATYC and the Michigan Section-MAA will be held March 31-April 1, 2017, at Ferris State University. Meeting details can be found at <http://mcclendonmath.com/maa2017.html>. I will miss seeing all of you at this meeting, as I will be in Australia with two of my former students over Spring Break. I have wanted to visit Australia for a long time and am looking forward to touring with these amazing young women.

MCSS, MASU and the Right Math at the Right Time Standing Committee will be presenting a Mathematics Pathways Summit on June 28, 2017. The summit will be hosted at Michigan State University and will feature presentations and breakout sessions focused on strengthening the

implementation of quantitative reasoning, statistics, and preparation for calculus pathways across Michigan's community colleges and universities. Our organization is financially contributing to this summit and I encourage our members to participate. We want to be part of the discussion on the direction that mathematics is taking in Michigan.

It is not too soon to start planning for the 43rd Annual AMATYC Conference to be held in San Diego, California on November 9-12, 2017.

Please encourage your colleagues to join MichMATYC. The membership application is available on our website. I also encourage you to become more involved in our organization by volunteering for committees or presenting at conferences. In addition to the President, the MichMATYC Executive Board currently includes: Cindie Wade (Past President), Sam Bazzi (Treasurer/Secretary), Frances Lichtman (AMATYC Affiliate Delegate), and Marie St. James (AMATYC Affiliate Delegate). Other individuals who deserve our thanks include Desidera Kooswinarsinindyah (MichMATYC newsletter editor) and Mark Pelfrey (Webmaster). Three of AMATYC's brightest stars, Jim Ham (President-Elect), Jon Oaks (Midwest Vice President), and Julie Gunkelman (Professional Development Coordinator) are members of MichMATYC.

In closing, I want to wish everyone a wonderful semester and to encourage you to reach out to any of your executive board members. I appreciate the opportunity to serve as your president. I have the highest regard for the MichMATYC organization and its fantastic members. We are a great community of educators who care about mathematics education.

Anna Cox

MichMATYC president

SAVE THE DATES



43rd AMATYC Annual Conference
San Diego, CA
November 9-12, 2017

MichMATYC 2017 Conference
October 20 - 21, 2017
Baker College, Muskegon

AMATYC Update

Jon Oaks

AMATYC Midwest Regional Vice President

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I hope that everyone's winter/spring semester is off to a great start. At my college, we started Monday January 9th. The break between the fall and winter semesters just never seems long enough when there is so much to enjoy in the winter and over the holidays.

Below is a picture of all of the first time attendees from AMATYC's 42nd Annual Conference in Denver last November. If you missed out on the fun last year, I hope that you will plan to attend the 43rd AMATYC Annual Conference in San Diego November 9-12. Although it is now too late to submit a proposal to present, please consider presiding over a session at the conference. Duties include introducing the speaker, helping with handouts, and giving directions on how to complete the session evaluation form.



However, the AMATYC Conference isn't all fun and games, either. The AMATYC Delegate Assembly met on November 19, 2016, during the annual conference in Denver, CO. During the Delegate Assembly, Toronto was announced as the site of the 2022 AMATYC Annual Conference. Also, Nancy Rivers, Southeast Vice President, addressed the Delegate Assembly to inform delegates that a Task Force has been set up by the Executive Board with the charge of investigating options and possibly proposing an amendment(s) to the AMATYC Bylaws that will change the criteria for determining the number of additional state/province delegates. I will soon be looking for new state delegates for the upcoming 2-year term. Please let me know if you would be willing to serve **Michigan** and AMATYC in this capacity!

Other Notes from Around AMATYC:

Please consider joining one of AMATYC's Academic Committees, such as the Statistics Committee.

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. In particular:

- To provide professional development and support for the teaching and learning of statistics
- To foster the use of the *GAISE* guidelines, making them relevant to the two-year college setting
- To serve as a liaison with four-year college faculty, other mathematical organizations and professional statistics organizations in order to share resources

In collaboration with the AMATYC/ASA Joint Committee (AMATYC's Joint Committee with the American Statistical Association), we maintain a webpage of information for statistics teachers. On the webpage you'll find links to classroom resources, pedagogy and course content, recordings of previous webinars, and more. A link to it is located on the main page of the AMATYC website under the "Quick Links to Popular AMATYC pages" heading. It is located at

<http://www.amatyc.org/?page=StatsResources>

If you teach statistics, please consider joining our committee. To join or to learn more about the AMATYC Statistics Committee, please contact Julie Hanson at julie.hanson@clinton.edu.

AMATYC Webinars – Webinars are a great form of Professional Development that you can do from the comfort of your own home or office. If you miss a webinar, you can always watch the recording online for free! Some of the upcoming 2017 webinars include:

- IPUMS Data: Real-World Data for Teaching, February 6 at Noon Eastern
- Course Assessment from Start to Finish, March 15 at 3 p.m. Eastern
- Incorporating Discovery into Developmental Mathematics, April 19, at 4 p.m. Eastern

AMATYC Midwest Region on Facebook – I encourage you to join the AMATYC Midwest Regional Group on Facebook if you haven't already. This is a great place to see more frequent updates from around the region and have informal networking with others. We even had a contest over the winter break - congratulations to Meghan VanderMale on winning a new AMATYC tote bag and Starbucks gift card!

Consider Membership in AMATYC – I encourage you to learn about and join AMATYC if you are not a member. For more information about AMATYC events and activities, please check out the recent AMATYC newsletter at <http://www.amatyc.org/?page=AMATYCNews> or visit the AMATYC website at amatyc.org.

Thanks for all you do in the wonderful state of **Michigan** and for your continued support of MichMATYC and AMATYC. If there is ever anything that I can do to assist you at all, please don't ever hesitate to reach out to me at jonnyoaks@gmail.com. I hope you have a great semester!

Jon

2016 MichMATYC Teaching Excellence Award

The 2016 MichMATYC Teaching Excellence Award was awarded to Lisa Winch of Kalamazoo Valley Community College at the fall conference. Lisa has devoted her career to assisting students in need and does so with tremendous patience and approachability. She has taught everything from arithmetic through calculus, making significant contributions including: developing a conceptual arithmetic course designed to draw out students' thinking strategies and understanding of arithmetic operations; working with colleagues to restructure the math for elementary and middle school teachers curriculum; mentoring students and colleagues; and serving as department chair, MichMATYC president, a volunteer high school tutor, and an active member of her community. Congratulations Lisa!



Teaching Excellence Award Nominations for 2017 Award due May 17, 2017

By **Laura Wicklund (Oakland Community College)**
Teaching Excellence Award Committee Chair

Nominations for the 2017 Teaching Excellence Award are now being accepted. The Committee encourages departments or individuals to nominate their worthy colleagues for this award. We recognize that there are many outstanding teachers in MichMATYC, but we can only consider those who are nominated.

The criteria for the award include instructional effectiveness, professional involvement, and service. Nominees must have a minimum of five years of full-time teaching experience at a two-year college. The person selected by the Committee will be presented with the award at the 2017 MichMATYC Fall Conference.

The nomination form is available on the MichMATYC website <www.MichMATYC.org>. Send an electronic copy of the completed form to Laura Wicklund at lkwicklu@oaklandcc.edu. Anyone may make a nomination. Nominations from department chairs, supervisors, and campus representatives are particularly encouraged.

Alpena CC - Dan Rothe

As we begin the spring semester at ACC, our enrollment is up 1.765 in credit hours. In addition to our Alpena Campus and Huron Shores Campus (Oscoda); we are again offering an online Intermediate Algebra class, which is filled to capacity and a College Algebra (Finite Math) for dual enrollment students at Rogers City High School.

ACC will be hosting the Regional Science Olympiad Tournament on Saturday, March 11, 2017. Many faculty members participate running the various events at this competition, which involves high school, and junior high teams from a larger portion of the Northern part the Lower Peninsula.

Alpena Community College will be hosting the 2nd annual Huron Shores EdTech Conference on August 15, 2017. Would you like to attend or be a presenter? Visit our website:

<http://huronshoresedtech.amaesd.org/> for more information or contact Meghan Cameron at cameronm@alpenacc.edu.

We were pleased to have one of our students Brienne Becker as one of the recipients of the Karen Sharp Students Scholarship this fall at the MichMATYC conference at Delta College. Picture are Brienne Becker, now at CMU with ACC faculty Meghan Cameron and Dan Rothe.



That is the news from Mathland at Alpena Community College.

Sigma Zeta Math/Science Honor Society

During the fall semester, Sigma Zeta Math/Science Honor Society inducted five new members. We went on an educational tour of Decorative Panels International (DPI) here in Alpena. (See pictures below). This plant manufacture fiberboard for use in paneling, pegboard, etc. The size of the operation and the amount of technology used was or particular interest. Sigma Zeta members will be

running the Experimental Design Event at Science Olympiad as well as assisting faculty members with other events. A spring trip and formal induction ceremony are in the planning stages.



Delta College - Frances Lichtman

The Mathematics Division is participating in the NSF-sponsored project, *Algebra Instruction at Community Colleges: An Exploration of its Relationship with Student Success*. This three-year project, involving six community colleges from three states, Arizona, Michigan, and Minnesota, will investigate the conditions under which instruction in community college algebra courses can be associated with student learning gains and course performance. The initial focus was on the topics of linear equations, rational equations, and exponential equations. Randy Nichols is the Faculty Research Associate managing the Delta College contribution, working under the direction of the principal investigators.

The Mathematics Division is also involved in an Achieving the Dream grant project, *Engaging Adjunct Faculty in the Student Success Movement*. The goal of this project is to develop practices to support both full- and part-time faculty as they improve instruction and engagement in student success initiatives. Activities include faculty learning communities and team teaching. Myung Pinner and Katie Grappin are working on this grant with English Division faculty.

David Redman is working on the Quantitative Reasoning Pathway of the Michigan Transfer Agreement as part of a work group formed by the Right Math at the Right Time standing committee to strengthen the implementation of math pathways across Michigan's two- and four-year postsecondary institutions.

Mary Roberson served as a judge for the MAA Undergraduate Student Poster Session at the 2017 Joint Mathematics Meetings in Atlanta.

Henry Ford CC - Jeanine DiDonato

Henry Ford College is working on several ways to reduce the time students spend in developmental math courses. In Fall 2016, Rama Chidambaram piloted a "Fast Track Intermediate Algebra" course, which is a co-requisite model Intermediate Algebra class targeting students with a high school GPA of 3.0 or better who placed into our Beginning Algebra class. These students registered for a regular Intermediate algebra class and a 2-credit developmental math class, taught by the same instructor.

The additional two hours of math per week helped these students review and strengthen their Beginning Algebra skills. Fall 2016 data shows a 96% retention rate and 89% completion with C grade or better. Considering its initial success, the Math Department will expand the course offering to four such classes in Fall 2017.

Henry Ford College is looking forward to hosting the Fall 2019 MichMATYC conference.

Kalamazoo Valley CC - Darlene Kohrman

Winter 2017 began with the usual round of cold and snowy weather. As a department, we collectively evaluated and completed the writing of our "four-year review" for the college.

Math 114, our Liberal Arts math course, has been redesigned from a three-credit course to Math 115 a four-credit course. The new course will better support some of our new pathways in our culinary area.

We continue to pilot ALEKS as a placement tool along with Accuplacer.

Several members attended conferences in the fall which included: MichMATYC, AMATYC, TeMaCC and the Great Lakes Navigators Conference IV. Winter semester brings some individuals attending Math In Action at GVSU, NADE, and Conversations Among Colleagues (MI-AMTE) at MSU March 17-18, 2017. The CaC conference goal is to actively discuss issues that challenge the effective teaching of mathematics as well as concerns in teacher preparation in Michigan. Faculty member Darlene Kohrman will participate in the pre-conference workshop of MI-AMTE on the teaching of statistics for pre-service teachers.

In addition, the annual MDEC conference on March 23-24, 2017 will be hosted at KVCC. Keynote speaker Dr. Stephan D. Brookfield will present "Creating Classrooms to Foster Survival and Success". We invite and encourage all to attend this conference that focuses on developmental education at the community college level.

Lisa Winch has returned from a sabbatical and also received the Teaching Excellence Award at MichMATYC this past fall. In addition, the following mathematics department members received service awards at the Annual Board of Trustees Breakfast on January 5, 2017:

Fifteen Years of Service - Nicole Newman

Ten Years of Service - Michael Raines and Jon Stasiuk

Five Years of Service - Nicole McClure

Kellogg CC - Anna Cox

The Kellogg Community College math department won the TRENDS award as Outstanding Educators. This honor was for curriculum redesign and offering students different paths to their success. Pat Kopf and Graham Smith wrote their own content to support a new course called Practical

Algebra. Other members of the department are Marcus Anderson, Sue Stetler, Emily Patterson, Anna Cox and Saeed Sabouni. The picture on the left below has Graham and Pat standing, the others are seated in the names listed with Saeed being absent from the picture.



Another event was after 30 years of teaching Saeed Sabouni retired from our department. We appreciate his years of service and dedication to our students.

We are also pleased to have had one of our students Hunter Mauck as one of the recipients of the Karen Sharp Students Scholarship this fall at the MichMATYC conference at Delta College (see the picture above on the right). He is doing outstanding work studying Chemical Engineering at Western Michigan University.

A Starfish Award was awarded to Anna Cox with her nominator being Hunter Mauk. Pictured are Hunter, Anna and Mark O'Connell, President of KCC.



Lansing CC - Leslie Mohnke

Diversity and Equity have been a topics of discussion within the Math Department and across the campus at Lansing Community College. Math Faculty at LCC have initiated and will be participating in a retreat, *Addressing Equity Gaps in Mathematics*. There will be a facilitator there to guide the work

and the focus will be for participants to answer the question, "What do YOU feel empowered to do with the knowledge that you have learned from this retreat?"

Hands-on-Mathematica are workshops being held during spring semester 2017. The workshops are open to LCC students and instructors, and do not require previous knowledge about Mathematica software. Additionally, LCC students and instructors can upload the software for free on personally owned machines.

Because Mathematica projects are assigned to pre-calculus and calculus students for credit and extra-credit, **Hands-on-Mathematica** workshops offer additional learning support. The workshops' objectives include:

- Graphing functions, families functions, equations, polar equations, parametric equations, vectors, and vector fields;
- Solving equations, literal equations, and systems of equations;
- Finding limits, derivatives, and integrals of functions;
- Studying transformation of functions;
- Printing 3D objects.

For additional information about **Hands-on-Mathematica** activity, please contact the workshops' coordinators and facilitators Jing Wang and Maria Johnson at wangj@star.lcc.edu and johns257@star.lcc.edu respectively.

Macomb CC South Campus - Jon Oaks

Last year was a long year for our campus as the primary building that holds our math classes was closed all of 2016 for renovation. Not only were our classes scattered all over campus, but our offices were scattered all over campus as well. It is nice to be back in our newly renovated building and have our offices all in one place again. Some of the hallmarks of our new classrooms include mediated stations, tables and chairs, and hanging moveable whiteboards. Our office space now has lockers for adjunct faculty use and a break area with a refrigerator. For the students, we have a new student lounge and study area, a new dedicated math tutoring area, and a new state-of-the-art computer lab. If you're ever in the area, I would be more than happy to give you a tour of our new facility.

Other exciting news includes that our long-time colleague **Victoria (Mell) Ackerman** retired at the beginning of January 2017. We had a wonderful send-off for her at the end of the Fall 2016 Semester with a nice dinner party at Kruse and Muer. Although it is sad to see Mell go and I personally will miss working with her, I am happy to report to you that she is already enjoying all of her free time visiting with friends and family from around the country.

As a result of Mell's retirement, **Gary Kaplan** has joined us for the Winter 2017 semester in a Temporary Full-Time Capacity. Gary has been with Macomb as an adjunct for about 5 years now and we appreciate that he was willing to step up to this new role on such short notice. This semester, **Deb Alrutz**, **Brendan Wilson**, and **Ken Williams** also joined us as new adjunct faculty members at the college. Welcome to all of you!

During the Fall Semester, **Jon Oaks** and **Mohamed Zorkot** submitted a proposal for the Michigan Colleges Online Open Educational Resource Grant (MCO OER), which was accepted. The project will focus on the adoption of an open textbook. The work should be done by the end of the Fall 2017 semester and we look forward to being able to share everything with the world via the OER Commons platform!

Finally, on Wednesday, May 3, at 2:30 p.m., Macomb will be hosting the Michigan Women's Historical Center & Hall of Fame for a presentation entitled, "STEMinists: Michigan Women in Science, Technology, Engineering, and Mathematics." Here is a short description of the presentation: "From engineers of the Mackinac Bridge to the first licensed female aviator, Michigan's STEMinists are leaders in their respective fields and beyond. The STEMinist program features the stories of six incredible Michigan women who were or are currently pioneers in the STEM field." We hope to see you there!

Desmos Classroom Activities

Julie Gunkelman - Oakland CC Orchard Ridge Campus

Desmos has become my go to website for beautiful graphs. If you haven't visited www.desmos.com, you should. Not only can you change colors and views of the graph easily but the website changes "keyboard math" to correct mathematical language. However, to quote Emeril Lagasse, Desmos decided to "kick it up a notch".

Desmos now has a collection of classroom activities on their site. Instead of launching the calculator, choose the Classroom Activities from the menu at the top of the screen. The activities already posted include graphing lines, area, perimeter, summation, conics, exponentials, logarithms and systems of equations just to name a few. My favorite activities are the marbleslides.

The basic premise for each of the marbleslides activities is to graph a function that will get the marbles dropped from a location on the top of your screen to roll down the function and hit targets which are stars. The challenges begin fairly easy and increase in difficulty requiring students to really understand the effect of changing a coefficient or constant in the function. Some of the challenges require the use of a restricted domain as well as adding multiple functions to get the marbles to slide just right. For example, lines with greater slopes send marbles flying as opposed to lines with smaller slopes which slow down the marbles.

Be sure to create an account, start a session and share your unique code with your students. Students will be able to create an account or use their Gmail to log in to the activity. You will be able to review what your students chose to use for each function and read their responses to the questions.

Marbleslides have provided my students with an opportunity for active learning in my class as well as created an opportunity for a healthy productive struggle. Students deepened their understanding of the functions and truly enjoyed the activities. I highly recommend that you check it out today.

News from the Research in Mathematics Education at Two Year Colleges (RMETYC) @ Michigan

Vilma Mesa, Midwest Region RMETYC Committee representative

There are two three-year NSF-funded grants ongoing right now that have a two-year college focus.

The Transitioning Learners to Calculus in Community Colleges (TLC3): Advancing Strategies for Success in STEM is a collaborative project that seeks to build and test theoretical models that predict the success of under-represented minority students interested in science, technology, engineering, or mathematics fields in the Developmental to Pre-calculus to Calculus II (DPC2) sequence and to identify the characteristics of programs, structures, and instructional that result in successful transitions. The project uses a mixed-methods approach (a census survey sent to 948 community college math department chairs followed by case studies of five minority-serving institutions). The models will inform the development of a change tool (i.e., the institutional self-assessment) that examines institutional readiness to facilitate successful outcomes for URM students in the DPC2 sequence. We are also building the TLC3 networked community who will be testing the models and self-assessment tool. The institutional self-assessment tool will help identify a professional development regimen that departments and institutions can use to remedy barriers that inhibit student success in the DPC2 sequence.

The award involves Helen Burn (Highline College, in Washington), Luke Wood (San Diego State University), Eboni Zamani-Gallaher (University of Illinois at Urbana-Champaign), and Vilma Mesa (University of Michigan). We will be launching the survey on February 15th. The survey should take less than 30 minutes to complete and includes questions about current courses, support structures, and instruction in courses that STEM-interested students take as they transition to calculus. In addition we are building a networked community of colleges that can engage with the information we gather from the survey. If you know of a college that can benefit from being involved in this community, either through sharing what they do or learning from others, please let us know. Stay tuned for a Webinar later in the Spring. If you have questions, please write to any of the investigators: Helen Burn (hburn@highline.edu), Vilma Mesa (vmesa@umich.edu), J. Luke Wood (luke.wood@sdsu.edu), or Eboni Zamani-Gallaher (ezamanig@illinois.edu).

The Algebra Instruction at Community Colleges (AI@CC): An Exploration of its Relationship with Student Learning and Performance is a collaborative project that seeks to increase our knowledge about the quality of community college mathematics instruction in algebra courses and its impact on student learning and success. We know that high quality of instruction matters to students' learning and performance in courses, but we do not know what makes a difference. We seek to understand the conditions under which instruction in two key algebra courses, intermediate algebra and college algebra, taught at large community colleges can be associated with student learning and performance in these

courses. The study uses a mixed-methods approach, collecting data on instructors (personal characteristics, beliefs, and attitudes), students (personal characteristics, beliefs, and attitudes), and mathematics instruction through video. The results of this study will allow us to inform the design of faculty development programs for algebra instruction at community colleges.

The award involves Laura Watkins (Glendale Community College, Arizona), April Ström (Scottsdale Community College, Arizona), Irene Duranczyk and Nidhi Kohli (University of Minnesota), and Vilma mesa, (University of Michigan) and is working with six colleges (two in each state (Arizona, Michigan, and Minnesota) that offer multiple sections of intermediate and college algebra taught by full-time and part-time faculty. The project works with a faculty research associates (FRAs) from each college who act as liaisons between the faculty participants and the research team. The FRAs are also involved in several research activities.

We just completed our pilot phase and are geared to the second year of the grant, collecting the data for the study. If you are curious about the project, please send questions to any of the investigators, Laura Watkins (laura.watkins@gccaz.edu), Vilma Mesa (vmesa@umich.edu), April Ström (april.strom@scottsdalecc.edu), Irene Duranczyk (duran026@umn.edu), or Nidhi Kohli (nkohli@umn.edu), or look for us in San Diego!

