Contents

In Memoriam

**Dr. Wilbur L. Smith (1941-2021) &
Dr. Frank T. Hawkins (1935-2020)**

The National Association of Mathematicians (NAM)

publishes the NAM Newsletter four times per year.

NAM's History and Goals: The National Association of Mathematicians, Inc. (known as NAM) was founded in 1969. NAM, a nonprofit professional organization, has always had as its main objectives, the promotion of excellence in the mathematical sciences and the promotion and mathematical development of under-represented minority mathematicians and mathematics students. It also aims to address the issue of the serious shortage of minorities in the workforce of mathematical scientists.

NAM's National Office, subscriptions and membership: National Association of Mathematicians, 2870 Peachtree Rd NW #915-8152, Atlanta, GA 30305; e-mail: info@nam-math.org.

NAM's Official Webpage: http://www.nam-math.org

Newsletter Website: The NAM website has a list of employment as well as summer opportunities on the Advertisements page. It also features past editions of the Newsletter on the Archives page.

Letters to the editor and articles should be addressed to Dr. Omayra Ortega via e-mail to editor@nam-math.org.

From the Editor
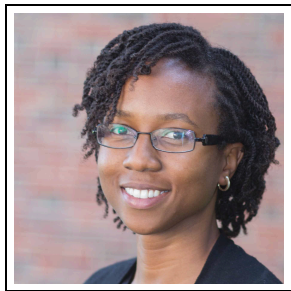
Hello friends,

As I have been editing this newsletter, I have been reflecting on the changes we've all faced over the last 2 years. We must acknowledge that none of us has escaped the effects of the pandemic, and those effects are felt both personally and professionally. During workshops, from panelists, and at conferences I have heard many different people asking themselves versions of the same questions. How do we keep doing the work that is important to us when things have become so difficult? How do we continue to imagine a future when the future is so unclear?

With the support of our chosen communities, we may yet grow to meet the new demands of our profession and rise to the challenge of changing the larger mathematical community for the better. Specifically, my hope is that we will build on our community, here, at NAM, to be closer, stronger, more fulfilled in our mathematical practice and more capable of collective joy in the future. Ultimately, not all change is bad.

Dr. Omayra Ortega is now the president of NAM. I am also pleased to join the NAM board as the new Editor in Chief and Chair of Publications and Publicity Committee. NAM will always remember and honor its roots, and the NAM board and NAM members will continue the work.

This is my first issue as your editor. This is the beginning of what I believe will be wonderful journey with you, and I look forward to my service for the National Association of Mathematicians.

Be well,
Dr. Haydee Lindo

Publishing in the NAM Newsletter

Submissions: The *NAM Newsletter* is a quarterly publication. Articles and letters should be submitted electronically to the editor at `editor@nam-math.org`. You can find more information at the web page

`https://www.nam-math.org/submitting-advertisements-and-articles.html`

Advertising:

NAM Online Advertisement Policy: As a part of its Newsletter Advertising, a copy of the advertisement will be placed on the web during the period it appears in the quarterly Newsletter - at the Job Openings website.

NAM Newsletter Print Advertisement Policy for Non-institutional Members: Receipt of your announcement will be acknowledged. You will be billed after the advertisement appears. A copy of the advertisement will be placed on the *NAM Newsletter* website during the period it appears in the *NAM Newsletter*. To estimate the page size, use 12 point font on a standard size page.

1. One issue advertising

A. One-fourth page	$200		D. Two-thirds page	$500
B. One-third page	$300		E. Three-fourths page	$600
C. One-half page	$400		F. One whole page	$800

   *advertisements over one page are pro-rated

2. Consecutive, multiple issue advertising

   Each consecutive issue thereafter 75% of the first issue charge.

NAM Newsletter Print Advertisement Policy for Institutional Members: Receipt of your announcement will be acknowledged. You will be billed after the advertisement appears. Institutional Members of NAM are entitled to one 1/4 page advertisement at 1/2 the regular price during the fiscal year of their membership. Additional advertisements follow the above stated cost structure. A copy of the advertisement will placed on the *NAM Newsletter* website during the period it appears in the *NAM Newsletter*. To estimate the page size, use 12 pt font in your favorite word processing program on a standard size page.

Deadlines: The deadlines for submissions and advertisements can be found in the following table.

Edition	Deadline		Edition	Deadline
Spring	February 13		Fall	August 13
Summer	May 13		Winter	November 13

Advertisements should be submitted electronically to the editor at `editor@nam-math.org`.

We reserve the right to reject any advertising that is not consistent
with the stated goals of NAM, or that is in any way deemed inappropriate.

Introducing the 2021 Class of Karen EDGE Fellows
by Rhonda Hughes, for The EDGE Foundation

The EDGE Foundation is delighted to announce the 2021 Class of Karen EDGE Fellows. The Karen EDGE Fellowship Program was established with a generous gift from Karen Uhlenbeck on the occasion of her 2019 Abel Prize. The Fellowships are designed to support and enhance the research programs and collaborations of mid-career mathematicians who are members of an underrepresented minority group. The 2021 Fellows were selected on the basis of their excellent research programs and their plans to use the funds for enhancing those programs through collaboration and travel. The Karen EDGE Fellows for 2021 are Emille Lawrence, University of San Francisco, and Manuel Rivera, Purdue University.

Emille Davie Lawrence received her Ph.D. in Mathematics from the University of Georgia in 2007, under the direction of Will Kazez and Clint McCrory. She was an undergraduate at Spelman College. She was a postdoctoral fellow at the University of California, Santa Barbara and subsequently joined the faculty of University of San Francisco, where she has taught since 2011. She is currently Term Associate Professor and serves as Department Chair. Emille's research is in spatial graph theory, a branch of geometric topology in the intersection of knot theory and graph theory.
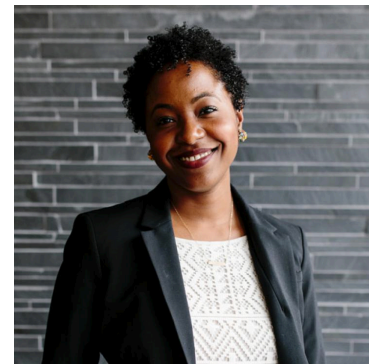
Dr. Emille Davie Lawrence

Dr. Manuel Rivera

Manuel Rivera received his B.A. in Mathematics from Massachusetts Institute of Technology and his Ph.D. in 2015 under the direction of Dennis Sullivan at CUNY Graduate Center. He was a CNRS Postdoctoral Researcher at Institute de Mathématiques de Jussieu Paris-Rive Gauche, was a Research Assistant Professor at University of Miami and CINVESTAV, and is currently Assistant Professor at Purdue University. The overarching goal of Manuel's research is to understand the algebraic nature of geometric space using the ideas and tools of algebraic topology.

□

Frank T. Hawkins (1935-2020)
Prepared by Sylvia T. Bozeman, Ph.D.

Dr. Frank Terroll Hawkins was born on August 26, 1935 and passed on December 21, 2020, a resident of Prairie View, Texas. He dedicated his life to his family, Prairie View A&M University, his church, and the surrounding community. Dr. Hawkins retired after 39 years of distinguished service at Prairie View University, where he progressed through the faculty ranks to become Professor of Mathematics and Chair of Mathematics. At various times, he held the positions of Chair of Mathematics and Computer Science, Member of the Faculty Senate and numerous other positions. During the 1960's and 70's Dr. Hawkins served as golf coach for the Prairie View A&M golf team and the team won the National Association of Intercollegiate Athletics on several occasions. He also played and won in many international bridge tournaments.

Dr. Hawkins was married to Dr. Mary S. (Brown) Hawkins, whom he met as a fellow student at Prairie View A&M. They enjoyed a long and happy union which was blessed with four children. At Prairie View A&M, Dr Hawkins earned the B.S. degree (1957) in Mathematics and Physics and the Master's degree (1965) in Mathematics. He continued his education by earning a specialty master's in Mathematics for Teaching (1969) at the University of Illinois and culminated his formal studies with a Doctorate in Mathematics Education from the University of Houston.

Dr. Frank T. Hawkins

Professionally, Dr. Frank Hawkins and his wife, Dr. Mary Hawkins were both active supporters and Life Members of the National Association of Mathematicians (NAM). In addition, he was a distinguished fellow of Phi Delta Kappa, the Founder of the Research Association of Minority Professors (RAMP), and a Life Member of Phi Beta Sigma Fraternity, Inc. A native of Hearne, Texas, Dr. Hawkins was a very visible and respected member of the city of Prairie View, Texas where he served as a board member on the City Council and a member of the Chamber of Commerce. He was a member of Saint Katherine Drexel Catholic Church as well as Saints Peter and Paul Catholic Church where he became

a Fourth Degree Knight. Frank will be warmly remembered and terribly missed by his devoted wife Mary, their three surviving children, and a host of relatives, friends, former students, and colleagues near and far.

Sylvia T. Bozeman, *Ph.D is member of the NAM Historical and Archival Committee*   □

Wilbur L. Smith (1941-2021)
Prepared by Johnny L. Houston, PhD

Dr. Wilbur L. Smith

Dr. Wilbur Lee Smith was born on August 27, 1941 in Thomasboro, NC and passed on January 23, 2021 in Greensboro, NC. Dr. Smith was a family man who made it one of his major missions in life to keep the family a strong unit. It was known that he would appear at family functions such as graduations, weddings, birthday parties, family reunions, or holiday gatherings and he also attended sports games in support of his only child Wyatt Lee. He married Flossie Louise Vereen in 1969 who was his cherished life partner for over 50 years. At a young age Wilbur's mother felt that he had received a special anointing of the Holy Spirit when he began to pray extensively while on the family tractor. After the passing of his dad, when he was 16 years old, he took on the role of patriarch of his siblings' family. He had a quiet demeanor, but his words were profound, full of wisdom, and of great substance. In addition to family, he would strive to help anyone who had a need.

Upon graduation from Union High School in Brunswick County, NC (1959), Dr. Smith matriculated at North Carolina A&T State University and obtained his BS (1963) and his MS (1966) degrees in

Mathematics. Desiring further education, he earned the PhD degree in Mathematics from Pennsylvania St. U. in 1968, being the second African American to earn a PhD in mathematics from Penn State and one of the first 50 African Americans to earn a PhD in mathematics. Dr. Smith was a true educator and master communicator, serving on the faculty at Fisk University, Tuskegee University, MIT, and UNC-Chapel Hill for several years. However, his love for teaching mathematics and for NC A&T State U. (Aggie Pride! Aggies Do!) led him back to his alma mater where he was Professor and Chairman of the Mathematics Dept. for over forty years.

Dr. Smith never forgot to reach back. Even after his retirement from NC A&T St. U., one could find him at Aggieland inspiring and encouraging the next generation, having lunch with other faculty members, supporting the Alumni Foundation, attending sporting events or enjoying a theatrical production. Over the years Dr. Smith was an active member of the AMS, MAA and NAM. He was a Life Member of NAM and served on the NAM Board of Directors for several years. He attended the Annual Joint Mathematics Meetings (JMM) in January most years and he frequently attended regional meetings of these organizations. He enjoyed engaging in scholarly activities proving and discussing theorems in algebra, calculus, quadratic and linear equations, hyperboles, topology, and other higher mathematical areas.

Dr. Smith had a "green thumb." Everyone marveled at his vegetable garden and crops which yielded prolific produce that he shared freely. His meticulously manicured and lush green lawn was the envy of the neighborhood. His life was very impactful for many.

Johnny L. Houston, *Ph.D is the Chair of the NAM Historical and Archival Committee* □

Tribute to Attorney Eldrewey Stearnes, A Civil Rights Leader Extraordinaire
by Rev. Jacqueline Brannon-Giles

One day in 1969 I was bored when I was living in New York City. I caught the A Train and decided to go to Midtown Manhattan. As I exited the train and stood on the platform waiting for another subway, someone called my name. To my surprise it was Eldrewey Stearnes. I only knew him from casual encounters on the Texas Southern University campus. He knew me and I was surprised. Atty. Stearnes invited me to a book signing in Harlem that occurred the next day. I accepted his invi-

tation but I did not know who the author was. When I arrived at an apartment in Harlem, Stearnes introduced me to Maya Angelou. She signed her book, I Know Why the Caged Bird Sings, and I kept that book for years.

Next, Stearnes invited me to meet him in Midtown Manhattan to be in the presence of another professional. Again, he would not tell me who it was. I listened. I caught the subway and met him a few days later, and I had the pleasure of meeting Dr. Margaret Mead, the great anthropologist. As I look back over my life, I can affirm that Atty. Stearnes perceived that it was important for me to meet these two great women. Perhaps, he saw something in me that I did not even recognize.

A phone call from Reggie Browne, the executive director for Friends of the African American Library at Gregory School, a component of the Houston Public Library, called me on January 7, 2021 to let me know that Atty. Eldrewey Stearnes passed away on December 23, 2020, and the news article was published on the day of Browne's call. I reflected on my experiences in New York City and I asked myself, "What is the probability of meeting Eldrewey Stearnes on a New York subway platform and hear him call my name and then he invited me to meet two powerful, creative women in 1969?" Clearly, the Lord is directing my life, and now I have learned to listen to His call in my life.

I love to tell people that I was born in the Negro Hospital in Third Ward, on Elgin and Ennis during a time when prejudice did not allow most African American medical doctors to practice medicine in other Houston hospitals. I attended an all Black high school housed in a relatively new building that was closed down and torn down when schools were desegregated in Texas. Racism was so severe and pungent during my early years and my father refused to allow me to attend the University of Texas in Austin because he learned that the dormitories for African American women were not air conditioned and that roaches were prevalent in the facilities that housed African American female students. He insisted I study at Texas Southern University because he believed that the environment would be more nurturing and welcoming for me since I was 17 years old when I entered college for my first degree.

I see all of these past experiences as a blessing now. During my years at Texas Southern I believe Stearnes was observing me. I did not know that he knew me. I did not really know him. Now, I see that his perception of me prompted him to insist that I meet two great scholars and writers. At 77 years old, I can say that the meeting on the subway platform in New York City was foundational to awakening me to have great expectations in my career as a mathematicians, lifelong learner, writer, and ordained minister, who is now pursing a Doctor of Ministry to add dimension and depth to my understanding of ministry and serving others in Houston and beyond.

In conclusion, once I returned to Houston, I was interviewed and hired by George McElroy to write for the Houston Informer.

McElroy wrote a feature on me and titled it, "Young Educator, Already Dynamic at 30." It can be recovered in the archives of the Houston Post. Then, I wrote feature stories for editors Varee Shields and Bud Johnson starting in 1971. Now that one of the most effective advocates for freedom has transitioned, I feel inspired to write books, confirming what Stearnes saw in me, more than 52 years ago. Well, I am a slow learner, but I have learned!

At this time I offer a tribute to Attorney Eldrewey Stearnes for his bold vision for freedom, liberty and justice for all. I salute him for his vision for me and others he encountered and shared his views. He was and is a great man who provided a legacy of achievement that we must all embrace during these challenging times which replicate, somewhat, the times he lived in and fought so hard to awaken us for full, complete and exhaustive liberation and freedom to achieve liberty and justice for all.

God moves in ways that we do not understand. Stearnes' transition during an era that is wretched with the stories of George Floyd who attended Jack Yates High School in Houston, Texas– the town in which Stearnes boldly advocated for desegregation of lunch counters, as a start to spur integration of other entities in Houston, Harris County, the South and the entire United States of America. Perhaps his transition during this era is a powerful reminder that we, too, must take up our cross and strategically and persistently advocate for freedom and justice for all.

What do you think? What role are you willing to play? Think about it. I am "thinking" because God has called me to do so and awakened me by allowing me to experiences the rare probability of meeting and learning from Attorney Eldrewey Stearnes in 1969. Our meeting was 52 years ago, and today's challenges are signaled by the events of January 6, 2021, exactly five days ago from the writing of this tribute.

Dr. Jacqueline Brannon-Giles *is a Professor of Mathematics at Houston Community College & Texas Southern University* □

Building Your Mathematics Community for Non-Academics
by Zerotti Woods for the NAM-MAA Math Values Blog

Ok, let's set the scene. You're a freshly minted professional mathematician. You've graduated, those new letters "Ph.D." have been officially added to your name, and you have a great job offer. Your job offer is not in academia, but that's ok because recently graduate programs have stopped trying to disown you if you choose a career in another place than academia. Your program even encouraged it! You are

on a serious high right now and nothing can bring you down.

Now, you start your new position but you immediately realize that one thing is missing. How on earth do you build a community in your new environment? In graduate school, even though you did a lot of things in isolation, you still had a community to look to for various things. How do you find new collaborators? How do you know which conferences to go to? Does your job support you going to conferences? How do you find a good friend to crack a corny math joke with?

Your friends that are working in academia tell you all about the conferences that they are planning on attending soon. They tell you about the weekly tea and coffee hour. They even tell you about the weird department social with the pizza, cookies, and mathematicians standing around talking about what they are researching or teaching. Your friend might even rant a little about how they don't particularly like the social things that their department hosts . But in your head, you

might be thinking that it's better than nothing because it at least gives you some chance to talk about math, get new collaborators, and you may have even made a new friend! Not to mention the conferences: these are the places where you get to hang out with all of your math friends and do math things!

In graduate school, there were seminars and talks about how to build your community, but you realize that those talks were geared towards people who will work in academia! This seems to be a weird oversight since a third of all professional mathematicians work for the federal government, not academic institutions! So, if you're a person that likes community, how do you build one when you're not in academia? This question is especially important for under-represented people. The feelings of isolation will always be present, but not having like-minded people to talk to from time to time would only make this worse.

To be clear, many employers outside of academia do a great job at trying to harness an inclusive and collaborative work environment. We can not look over this. But there is always a big difference between your colleagues and your mathematical village. In graduate school you didn't have to choose! The shared struggle that happens between cohort members in graduate school builds a bond that nurtures friendships between current and future collaborators. This is not necessarily true in the workforce. Your colleagues are not necessarily your friends or a part of your mathematical community and vice versa. This

transition is something that many of us might mourn. It's hard to hang out with a fifty-something-year-old white guy that is on your team because you might not have that much in common. To make things a bit more complicated, it is known that you are taking a risk intertwining friends and colleagues. These types of relationships require a great deal of trust. This is especially true for underrepresented minorities and becomes even more complicated when you fit in more than one underrepresented group, (women of color, LGBTQ+ person of color, etc). These types of relationships require us as well as other people to change. It requires people other than us to think about themselves and their interactions with people that don't look like them. The fifty-something-year-old white guy probably has power over the younger colleague even if it isn't direct. He is probably more advanced professionally and has influence that could be good or detrimental to the younger colleague.

Ok, enough with the ranting. Let's think of some solutions. In many government and industry research jobs, there are still many conferences that are available to attend. These are great opportunities to build professional relationships. Maybe a good idea is to find out if your job will sponsor going to the conferences if they align with your work or research. There are also many conferences that you heard of in graduate school that still apply. The National Association of Mathematicians (NAM) is a great place to search for many conferences that are targeted

for minority mathematicians. The Society for Industrial and Applied Mathematicians (SIAM), Society for Mathematical Biology (SMB), and Special Interest Groups of the MAA (SIGMAA) are great places to look for conferences that are targeted to the applied mathematics community.

Social media has also been able to make people more accessible. Many blogs, Facebook groups and other similar things have made networking and socializing much easier. Social media also helps with keeping up with old math friends.

Some employers host social events. Maybe your next really good friend comes from the job social over food that is slightly better than pizza and cookies. The fifty-something-year-old white guy might actually be cool to talk to. If he is more senior, he might also be a person that could show you the ropes and give you insight about what working in your field is like. There are risks and rewards to opening yourself up to friendships at work. It requires a level of trust that needs to be earned. But opening yourself to this may have many benefits that could welcome a great new friend, colleague, or both!

Community and collaboration are really important, especially for new hires. Mathematicians get the reputation of being isolated, but in our opinion, this is changing. Sometimes we don't think about community for people outside of academia, but this is a mistake. Our community should include mathematicians both inside and outside of academia. I am sure that I have overlooked many ways to build commu-

nity, and we need to talk about this more as a mathematical community to get more ideas. Maybe we could have more discussions about this on social media, conferences, and maybe even more conversation about it in the workplace. Hopefully we can begin this discussion soon.

Dr Zerotti Woods *PhD. is a mathematician in The Johns Hopkins Applied Physics Laboratory* □

A Note on Generalized Trigonometric Functions
by Torina Lewis(1) and Ronald E. Mickens(2)

The main purpose of this Note is to discuss how the standard sine and cosine functions may be generalized. We do this within the context of the geometry of the two-dimensional Euclidean plane, using both cartesian and polar representations.

Let us consider a simple, closed, convex curve, $C(x, y)$, with the origin an interior point O; see Figure 1.
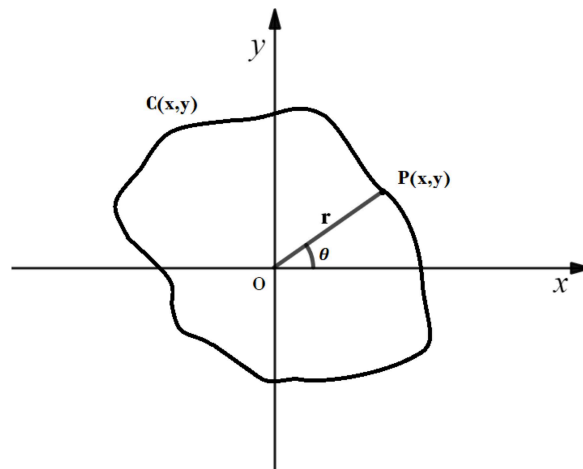
Figure 1: A simple, closed, convex curve.

At a point $P(x, y)$ on $C(x, y)$, draw a ray from the origin to $P(x, y)$ and denote by θ, the angle this ray makes with the positive x-axis. Further, let the curve be defined by the relation,

$$F(x, y, \gamma) = 0, \tag{1}$$

where γ is the set of parameters needed to characterize $C(x, y)$. Note that,

$$x = r\ cos(\theta),\ y = r\ sin(\theta),\ r^2 = x^2 + y^2. \tag{2}$$

Inspection of Figure 1 shows that the variables (x, y, r) are periodic functions of θ with period 2π. For $C(x, y)$, the unit circle, i.e.,
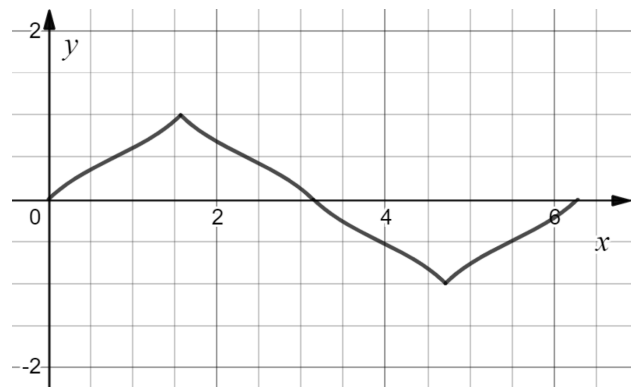
(a) Square Sine Function
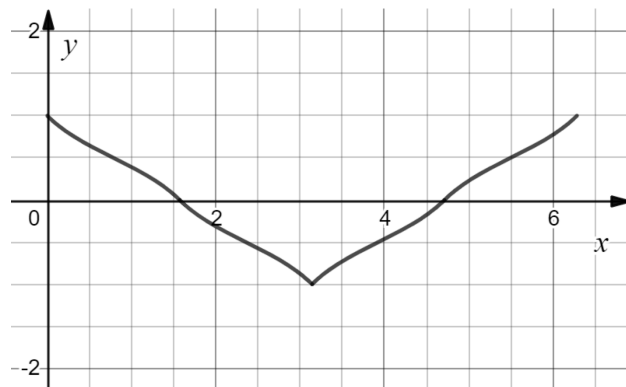
(b) Square Cosine Function
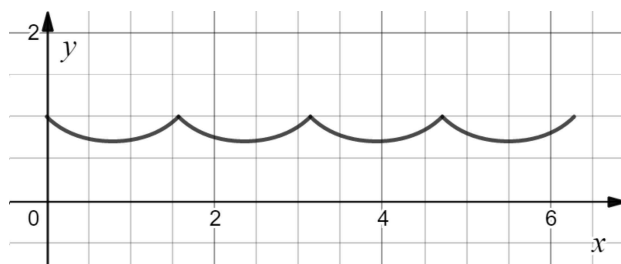
(c) Square Dine Function

Figure 2: Three "square periodic functions."

$$F(x, y, 1) = x^2 + y^2 - 1 = 0,\qquad(3)$$

we obtain the standard cosine and sine functions with $r(\theta) = 1$, i.e.,

$$x = cos(\theta), \; y = sin(\theta), \; r = 1.\qquad(4)$$

For $C(x, y)$, the unit square function [2], we have

$$F(x, y, 1) = |x| + |y| - 1 = 0.\qquad(5)$$

A direct calculation gives

$$r(\theta) = \frac{1}{|cos(\theta)| + |sin(\theta)|},\qquad(6)$$

and $x = r \; cos(\theta)$ and $y = r \; sin(\theta)$. Observe that (x, y, r) are periodic with period 2π and that r is positive. Plots of these periodic functions are given in Figure 2.

As a last explicit example, we consider the elliptic functions; see Mickens [3] Chapter 2,

$$y^2 + \frac{x^2}{k^2} = 1, \ k > 0, \tag{7}$$

which produces the three Jacobi elliptic functions.

$$x = cn(\theta, k), \ y = sn(\theta, k), \ r = dn(\theta, k), \tag{8}$$

where "dn" is the positive, periodic "dine" function. From the above discussion and close inspection of Figure 1, it follows that there are an unlimited set of triples of the generalized trigonometric functions as defined geometrically in Equation (2). Once a simple, closed, convex curve is selected, then the corresponding three periodic functions are uniquely determined. The "dine" function, $r(\theta)$, is always non-negative and may have a period less than 2π. For example, the square periodic function, $Sqd(\theta)$, has period $\frac{\pi}{4}$ [2][3].

Additional generalized classes of cosine and sine type functions may be found by examining certain periodic solutions of the functional equation,

$$|f(t)|^p + |g(t)|^q = 1, \tag{9}$$

where $p, q \in \mathbb{R}$ and $p, q > 0$. The case where (f, g) have at least a continuous first-derivative is discussed by Mickens [3] in Chapter 7. Also, similar kinds of constructions may be used to generalize the standard hyperbolic functions.

There also exist alternative, analytical techniques for constructing generalized trigonometric functions. An explicit example of this construction is given in Edmunds et al. [1]. However, these two methodologies, the geometrical and integral formulations, are not equivalent.

In summary, we have briefly presented a geometrical method to construct generalizations of the standard trigonometric cosine and sine functions. The construction shows that there are actually three such periodic functions. The third function is called a "dine" function and, based on its definition, is non-negative.

Finally, we are currently carrying out work on the following issues related to our geometrical versions of construction generalizations of the trigonometric functions:

1. Do sum and difference formulas exist?

2. What are the derivatives and integrals of these functions?

3. What are the Fourier series in terms of the standard cosine and sine functions?

4. Can we construct Euler-like (complex) exponential representations for these periodic functions.

(1) Torina Lewis Ph.D is Associate Executive Director, Meetings and Professional Services, American Mathematical Society, Providence, RI 02904 email: tdl@ams.org, (2) Fuller E. Callaway is Distinguished Professor Emeritus, Clark Atlanta University, Atlanta, GA 30314 email: mickens@cau.edu

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[1] D. Edmunds, P. Gurka, and J. Lang. Properties of generalized trigonometric functions. *Journal of Approximation Theory*, 164:47–56, 2012.

[2] T. Lewis. Trigonometric-type functions derived from polygons inscribed in the unit circle. *Springer*, 18:277–288, 2019.

[3] R. E. Mickens. *Generalized Trigonometric and Hyperbolic Functions*. CRC Press, New York, 2019.

□

Events of Interest to NAM Members

A complete list of events containing these and more can be found online:

`https://www.nam-math.org/upcoming-activities.html`

The Julia Robinson Mathematics Festival (JRMF) seeks to inspire joy in mathematics through exploration and collaboration. Due to COVID-19, the JRMF team has been organizing Zoom Webinars in 3 different languages: English (Saturdays at 7 pm EDT), Spanish (Saturdays at 12 pm EDT) and Hebrew (Thursdays at 12 pm EDT). These virtual events are free and open to the general public, which means that kids and adults of all ages are welcome to join. Every week we explore a different fun math Activity.

If you are interested in volunteering to become a facilitator of the JRMF Webinars, please contact Dr. Jeanette Shakali, the JRMF Outreach and Marketing Consultant, at `jeanette.shakalli@jrmf.org`.

Call for proposals for JMM 2022 If you have a topic that you would like to explore with the community, now is the time to put your great idea into motion. The American Mathematical Society (AMS) invites all members of the mathematics community to submit proposals for JMM 2022 events. The JMM, the largest annual mathematics gathering in the world, is scheduled to take place January 5-8, 2022, in Seattle. JMM 2022 features an expanded classification system for sessions and talks in addition to existing MSC classifications to cultivate a broader range of presentations on mathematics research, pedagogy, inclusion, and more.

2021 Field of Dreams Conference to take place virtually on November 5 & 6 After a thorough discussion considering many factors, our Field of Dreams Agenda Committee recommended we hold the conference in a virtual format again this year. The recommendation was unanimously endorsed by the Executive Council and Math Alliance Leadership. Our partners at the Institute for Mathematics and its Applications expressed their full and enthusiastic support for this decision. To paraphrase one leader's comments, this is an affirmation by the Math Alliance that Black and Brown Lives Matter. While there has been significant progress fighting the pandemic, there are still good reasons to be cautious, including the significant increase in risk posed to the communities we serve, the concern for whether vaccinations will reach these communities in a timely fashion, the continued reluctance of some to travel, and the reality that many campuses will continue to restrict faculty travel for budgetary reasons. We are announcing this decision now in order to allow for participants to plan accordingly and also to apply the lessons learned from last year's conference to improve and enhance our events for this fall. The Agenda Committee provided us with an announcement of the event:

We are pleased to announce this year's Field of Dreams Conference will take place on Friday November 5 and Saturday November 6. The IMA has graciously agreed to a renewed partnership for this year's Field of Dreams Conference which will allow us to apply their technical expertise as we plan an interactive virtual conference. Come join us at a particularly impactful moment as we all navigate a crisis that has disproportionately impacted people of color.

We look forward to a great conference with all of you in November!!

ICERM

UPCOMING WORKSHOPS

Computational Aspects of Discrete Subgroups of Lie Groups – *June 14-18, 2021*
Organizing Committee > Alla Detinko, University of Huddersfield; Michael Kapovich, UC Davis; Alex Kontorovich, Rutgers University; Peter Sarnak, IAS/Princeton; Richard Schwartz, Brown University.

Applications of Rough Paths: Computational Signatures and Data Science – *July 6-9, 2021*
Organizing Committee > Thomas Cass, Imperial College London; Terry Lyons, University of Oxford; Hao Ni, University College London; Harald Oberhauser, University of Oxford; Mihaela van der Schaar, University of Cambridge.

Hot Topics: Workshop on Advances in Theory and Algorithms for Deep Reinforcement Learning *August 2-4, 2021*
Organizing Committee > Nan Jiang, University of Illinois; Sanjay Shakkottai, University of Texas; Rayadurgam Srikant, University of Illinois at Urbana-Champagne; Mengdi Wang, Princeton.

D-modules, Group Actions, and Frobenius: Computing on Singularities *August 9-13, 2021*
Organizing Committee > Christine Berkesch, University of MN; Linquan Ma, Purdue University; Claudia Miller, Syracuse University; Claudia Raicu, University of Notre Dame; Uli Walther, Purdue University.

Prediction and Variability of Air-Sea Interactions: the South Asian Monsoon *August 23-27, 2021*
Organizing Committee > Baylor Fox-Kemper, Brown University; Jennifer MacKinnon, University of California, San Diego; Hyodae Seo, WHOI; Emily Shroyer, Oregon State University; Aneesh Subramanian, CU Boulder; Amit Tandon, UMass Dartmouth.

Hot Topics: Foam Evaluation *November 5-7, 2021*
Organizing Committee > Mikhail Khovanov, Columbia University; Aaron Lauda, University of Southern California; Louis-Hadrien Robert, University of Luxembourg.

Holistic Design of Time-Dependent PDE Discretizations *January 10-14, 2022*
Organizing Committee > David Ketcheson, King Abdullah University; David Keyes, King Abdullah University; Michael Minion, Berkeley Lab; Jingmei Qiu, University of Deleware; Benjamin Seibold, Temple University; Carol Woodward, LLNL.

The Institute for Computational and Experimental Research in Mathematics (ICERM) at Brown University

To learn more about ICERM programs, organizers, program participants, to submit a proposal, or to submit an application, please visit our website: *https://icerm.brown.edu*

The National Association of Mathematicians, Inc (NAM) is seeking 3 new Board members

The open positions include:

- **Vice-President,**
- **Region B member,**
- **Majority Institution Member**

Board members provide guidance and vision for our organization through direct service, fundraising, and top-level leadership. As the only professional organization with the mission and purpose of promoting excellence in the mathematical sciences and promoting the mathematical development of Black mathematicians, NAM seeks mathematical scientists to consider nominating a colleague or self-nomination for the NAM Board of Directors. The President and members of the NAM Board of Directors serve for three years. Candidates must be a current member of NAM; must be currently employed as a professional mathematician; and must have had previous employment at an institution of higher learning for at least two of the last five years prior to the current year.

To submit nominations for one of these positions, please email Dr. Michael Young at majority-institution-member@nam-math.org **by August 1**. Please include the following information: Position For Nomination (VP, Region B, Majority Inst.), Candidate Full Name, Professional Title, Current Career Level, Institution, E-Mail Address, Telephone, How long have you/they been a NAM member?, Membership Type, Previous Board Participation?, Highest Degree Earned, Education History, Briefly explain why you want to run for this position/why you nominated this person, **in 250 words or less**

Job Openings, Fellowships & Other Opportunities

American Mathematical Society

California State University, Fresno - Department of Mathematics

Fresno State invites applications for a full-time, **tenure-track position** in the Department of Mathematics beginning in Fall 2021 at the **Assistant Professor** rank. The successful candidate will generally: teach, supervise and advise undergraduate (B.S.) and graduate (M.S.) students; conduct research/scholarly activities (that lead to grants, presentations, and publications); and engage in service to the University and the community. Depending on departmental needs and the candidate's expertise, their teaching responsibilities will include various mathematics courses in the Bachelor of Science in Mathematics. Instruction and project advising of students in the Master of Science in Mathematics program is also expected.

Qualifications:

An earned doctorate (Ph.D.) in Applied Mathematics or closely related discipline. Candidates nearing completion of their doctorate (ABD) may be considered. However, for an appointment, the doctorate must be completed by August 1, 2022.

To apply, visit `https://apptrkr.com/2296518`

California State University, Long Beach - Department of Mathematics & Statistics

The Department of Mathematics and Statistics at California State University, Long Beach (CSULB), warmly invites applicants for the following two positions beginning August 17, 2022:

1. One **tenure track position** at the rank of **Assistant Professor of Mathematics** (Ph.D. in Mathematics, Applied Mathematics, Statistics, Computer Science, or a related discipline)

2. One **tenure track position** at the rank of **Assistant Professor of Mathematics Education** (Ph.D. or Ed.D. in mathematics education, statistics education, or a related field)

Salary will be commensurate with qualifications and experience. Review of applications begins on October 15, 2021, and will continue until the position is filled. The details of the positions, including Preferred Qualifications, Duties, and information about the Department, can be found at

http://www.csulb.edu/academic-affairs/faculty-affairs/ assistant-professor-of-mathematics-2646
http://www.csulb.edu/academic-affairs/faculty-affairs/ assistant-professor-of-mathematics-Education-2647
Please submit all application materials electronically at `http://www.mathjobs.org/jobs/CSULB`
CSULB is an Equal Opportunity Employer.

California State University, East Bay – Department of Mathematics

The Department of Mathematics at CSU East Bay is seeking a **tenure track faculty** member at the **Assistant Professor** level to help increase the number of underrepresented minority students in STEM fields, to teach undergraduate and graduate level numerical analysis, optimization and a range of other applied courses and to engage students in applied mathematics research. In addition, we seek a colleague who is versed in Active Learning – a pedagogical approach that plays a key role in our curriculum, which is designed to support all incoming students regardless of academic preparation. We have faculty who are active in grant funded curriculum design and research to support student success at all levels of mathematics and the successful candidate will be expected to engage in this important work. For more information and to apply see `https://www.mathjobs.org/jobs/list/17776`

Mississippi School of Mathematics and Sciencs

The Mississippi School for Mathematics and Science, recently named the 6th best public high school with the number 1 ranked faculty in the U.S., is accepting applications for a faculty position in Mathematics for the 2021-22 academic year. For more information about MSMS, visit `www.themsms.org`. Application can be made by submitting a resume and cover letter to amoore@themsms.org.

MINIMUM REQUIREMENTS

1. Master's Degree in Mathematics.

2. Teaching experience at the secondary or post-secondary level. Five years of experience and a valid Mississippi teaching license (endorsement 154) are desirable.

TERMS OF EMPLOYMENT

Beginning salary ranges are from $56,087 to $59,359; reporting date will be on or near August 4, 2021.

Cleveland State University – Department of Mathematics and Statistics

The Department of Mathematics and Statistics at Cleveland State University has an opening for an **Assistant Professor of Practice of Mathematics** and **Director of the OpSTEM program**. The starting date of the appointment is August 16, 2021. The successful applicant is expected to be the Director of OpSTEM and coordinator of calculus. OpSTEM is a student support program whose aim is to increase the number of students successfully completing (pre-) calculus sequences on the path to their STEM degree, as well as to close the achievement gap for first generation and underrepresented students majoring in STEM. OpSTEM provides mandatory supplemental learning sessions in (pre-) calculus sections led by peers teachers. In addition, it offers a two-week intensive Summer Institute to review (pre-) calculus skills, build a community of peers, and provide academic success strategies to OpSTEM Scholars prior to the start of the Fall semester.

The successful applicant will also be expected to teach a mix of pre-calculus and calculus courses, provide guidance to STEM peer teachers, and be a liaison with faculty from other institutions in Ohio as PI on the Louis Stokes Alliance for Minority Participation (LSAMP) grant. The University, College of Sciences and Health Professions, and Department seek to attract an active, culturally and academically diverse faculty of the highest caliber. This is a renewable, non-tenure-track position.

Minimum Qualifications: Master's degree in a mathematical science (such as mathematics, statistics, math education, or a related field) and at least ten years of experience teaching mathematics OR Ph.D. in a mathematical science and at least five years of experience teaching mathematics

Preferred Qualifications:

- Ph.D. in a mathematical science;

- extensive experience teaching college-level mathematics including calculus;

- experience directing/coordinating a student success program involving the training of students to take leadership roles in peer-to-peer instructional activities;

- evidence of leadership in an academic environment, such as coordination of multi-sectioned courses, designing course components, and making common exams and syllabi;

Submit materials electronically at & to see full details https://hrjobs.csuohio.edu/postings/13923.

Cleveland State University is proud to be an Equal Employment Opportunity and Affirmative Action employer

NAM Board of Directors

Region A **Southeast/West**	**Region B** **Mid-Atlantic**	**Region C** **Midwest/Southwest**
Alabama	Delaware	Arkansas
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California	North Carolina	Mississippi
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Any state not in B or C	Virginia	Texas
	West Virginia	

NATIONAL ASSOCIATION OF MATHEMATICIANS
MEMBERSHIP AND DONATION FORM

MEMBERSHIP CALENDAR YEAR: JANUARY 1, 2021 to DECEMBER 31, 2021

This form can also be completed online at `https://www.nam-math.org/authenticate/register/`

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SELECT APPROPRIATE MEMBERSHIP TYPE

[ ] STUDENT: $30   [ ] INDIV'L: $50   [ ] LIFE: $1,000   [ ] INST'L: $150

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PLEASE RETURN COMPLETED FORM AND MEMBERSHIP DUES TO:

Dr. Cory Colbert, Treasurer

National Association of Mathematicians
2870 Peachtree Rd NW #915-8152
Atlanta, GA 30305

E-Mail: `info@nam-math.org`
Web: `http://www.nam-math.org`

INDIVIDUALS AND STUDENTS

Please complete below if you did not send NAM this information within the past three years. List all degrees you currently hold. Circle the correct degree.

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NAM Newsletter
c/o Dr. Haydee Lindo, Editor
National Association of Mathematicians
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