



Special points of interest:

- Department institutes new Graduate Certificate in Mathematics
- Students win awards
- The number of math majors is currently 53 undergraduate and 22 graduate students.

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Pittsburg State University
College of Arts and Sciences

News from the Chair

As I reflected on this last year, not a lot of “big” happenings came to mind. Everything seemed somewhat quiet. However, as I read through a proof of this newsletter, I was amazed by the accomplishments of our faculty and students. When these activities occur day in and day out, it is difficult to realize the scope of these endeavors. We should all be proud of what we do and the quality of our math students, both undergraduate and graduate. (and alumni too!)

One of the landmark occurrences this year was the golden anniversary of our math relays. When I was preparing my remarks for the math relays opening convocation, I went back and tried to find information on the first math relays. The earliest reference I could find was a Wednesday, April 14, 1971 article from the Carthage Press Newspaper. Under the headline, “Carthage among 20 schools in Pitt State math relays” the article read,

The department of mathematics at Kansas State college of Pittsburg is sponsoring the third annual Pitt State Math relays Thursday April 22. More than 700 students from 20 high schools have entered the 29 events. Winners of the individual



events will be awarded medals. Plaques will be given in the team events. Seniors who score sufficiently high will be eligible to apply for a scholarship provided by the KSC Alumni association. High schools represented will be Altamont, Baxter Springs, Columbus, Derby, Fort Scott, Frontenac, Humboldt, Turner, Sumner, McCune, Mound City, Neodesha, Olathe, Pittsburg, College High, Riverton, Topeka, Highland Park, Seaman, Uniontown, Butler, Carthage, Cassville, Lamar, Liberal, Neosho, Seneca and Meeker.

Many of these schools still attend today and I am willing to wager several have competed in all 50. As you may be aware, we no longer award plaques or scholarships. If anyone wanted to sponsor a scholarship, I would be happy to visit with you!

One thing that struck me about the article was the reference to Pitt State. As

you can see, we were known as Kansas State College of Pittsburg at the time and did not become known as Pittsburg State University until 1977. I was always under the assumption that Pitt State simply came from shortening Pittsburg State University. I visited with Randy Roberts, Dean of Library Services, and he confirmed that our sports teams were referred to as Pitt State long before we became Pittsburg State University.

In the previous newsletter, I highlighted our new 18-hour Certificate in Graduate Mathematics that is designed to certify the recipients have a knowledge base in graduate mathematics requisite in a variety of areas, including collegiate level teaching. We were quite happy to have our first student receive this credential this past year.

As always, I hope you enjoy the rest of this newsletter and reading about the incredible breadth of accomplishments within the department. If you have any news about happenings in your life, please feel free to let us know so we can pass the word on to others. As you can see from this newsletter, our retired faculty members are still active and drop in occasionally for a visit. We would welcome a visit from you as well if you ever happen to be back in Pittsburg. We would love to reminisce and to hear what's new in your life.

GET INVOLVED

Want to help students attend conferences? Contact Dr. Tim Flood (tflood@pittstate.edu) for information about supporting student travel.

Join us on Facebook:
Pitt State (Kansas) Math Alumni

PSU Math Relays hits 50 years!!!

Over 1100 students from 59 schools visited the PSU campus on April 10 to participate in the 50th annual PSU High School Math Relays. The competition started in 1968 when math faculty, including Don Hight, Jerry Stein, and Bryan Sperry, came up with the idea of a math competition modeled after a track meet. The event, which for many years has been organized by Mrs. Terry Martin, gets Pitt State faculty, retired faculty, faculty spouses, and graduate and undergraduate students involved in welcoming the high school students to campus for a day filled with short individual events and some team relay events. It is also exciting that many

of the high school teachers are also Gorillas and can share with their students where they went to college.



Clockwise from top left: PSU graduate student Dhaifallah Alsayahani and undergraduate student Sharnnel Sumang helping administer a test, high

school teachers Deanne Bloesser (Christian Learning Center, Ft. Scott), Alan Shinn (Uniontown) and Christen Jackson (Girard) enjoying lunch, Jordan Epler (St. Paul) and some of her students taking a break between tests and talking strategy, and PSU students in the busy grading room under the direction of

Dr. Hazel Coltharp.



KME Regional Convention in Emporia, KS

Kappa Mu Epsilon, national mathematics honor society, held a Regional Convention on April 13 - 14, 2018, in Emporia, Kansas. The tradition of PSU's KME Chapter Kansas Alpha being well-represented continued as 3 undergraduate students and 3 faculty attended the convention. Undergraduate student Jordan Bailey presented *Solving a Diophantine Equation with Some Triangle Numbers.*, for which he received one of the top presentation awards of the convention. Dr. Cynthia Huffman gave the invited Keynote Address on *A Mathematical Treasure Trove in Our Own Backyard (Rare and Significant Mathematical Books at the Linda Hall Library)*. The group was joined by Gorilla Vanessa Peach Williams, now a faculty member at Truman State University (KME Missouri Eta), who brought 12 students.

The PSU chapter of KME, which is called Kansas Alpha, has a long history going back to 1934 when we were the 3rd chapter in the country installed into KME. More than 2000 Pitt State students have been induct-

ed into KME over the years.

Several faculty members have served national offices with KME, starting with J.A.G. Shirk, who was the second National President of KME and also served as Secretary. Dr. Ron G. Smith served as Vice-President (1957-1961) and Dr. Helen Kriegsman was Editor of the *Pentagon* journal (1965-71). Dr. J.D. Haggard was Historian (1963-1967). Dr. Harold Thomas served as Historian, President-Elect, and President. He received the most prestigious award granted by KME, the George R. Mach Distinguished Service Award, in 1997. Also, Dr. Thomas and Dr. Huffman each served as Regional Directors for 8 years, and Dr. Huffman served as Treasurer (2007-2015). PSU currently has 2 faculty members on the KME Executive Council: Dr. Leah Childers is President-Elect and Dr. Cynthia Huffman is Historian. In addition, Gorilla alumna Vanessa Williams serves as KME Social Media Director.

The Kansas Alpha Chapter of KME is very grateful to Dr. Thomas for his generous support for student travel to conventions.

Kansas Alpha has a Facebook group called "Pitt State KME Math Honor Society" where information about the monthly local meetings and other events is posted. Feel free to send a request to join the group. There is a Facebook page for national KME as well.

KS Alpha members: Georgette Searan, Dr. Scott Thuong, Dr. Cynthia Huffman, Jordan Bailey, Dr. Leah Childers, and Levi Humbard at the 2018 KME Regional Convention in Emporia, KS.



Jordan Bailey during his award winning presentation at the KME Regional Convention.



Dr. Cynthia Huffman delivering the invited Keynote Address at the KME Regional Convention.



Upcoming Events

**KATM, Manhattan, KS,
Oct 8, 2018**

**PSU Fall Break,
Oct 11-12, 2018**

**PSU High School Math
Honor Day,
Oct 18, 2018**

**PSU Homecoming,
Oct 20, 2018**

**2019 Spring Semester
Starts Jan 14, 2019**

**Joint Mathematics
Meetings, Baltimore,
MD, Jan 16-19, 2019**

**KSMAA, Pittsburg
State University, TBA**

**PSU Math Relays,
April 9, 2019**

**KME National
Convention, Frostburg
State U, Maryland,
April 11-13, 2019**

**PSU Math Banquet,
April 28, 2019**

Alumnus Receives Teaching Award

Dr. Bob Glasgow received the 2017 Orien B. Hendrix Distinguished Teacher Award at Southwest Baptist University. The award is given annually. Recipients are selected by previous graduating classes and then give an address at the opening convocation for faculty and students at the start



Contributed photo/Rollie Skinner

Dr. Bob Glasgow, 2017 Orien B. Hendrix Distinguished Teacher, delivers SBU's convocation address on Wednesday, Aug. 23



Contributed photo/Rollie Skinner

Dr. Bob Glasgow, left, accepts the Orien B. Hendrix Distinguished Teacher plaque from President Dr. C. Pat Taylor during SBU's Aug. 23 convocation.

of the school year. Dr. Glasgow received a Masters of Science degree in mathematics from PSU in 1985, after receiving a BS in mathematics from BSU and before earning a Ph.D. in mathematics education at the University of Missouri. (Source: <http://bolivarmonews.com>)

Student Selected for Prestigious Dept. of Defense Award

Graduate student Georgette Searan received word that she was selected to receive a prestigious and highly competitive Science, Mathematics, and Research for Transformation (SMART) Scholarship. The application process involved obtaining letters of recommendation, taking the Graduate Record Exam (GRE), writing statements about leadership and community service and interest in the program, a phone interview, and a Skype interview with a sponsoring facility.

The SMART Scholarship was established by the Department of Defense (DoD) to support students who are pursuing degrees in Science, Technology, Engineering and Mathematics (STEM) disciplines. The program aims to increase the number of civilian scientists and engineers working at DoD laboratories. Winning candidates get a stipend paid at a rate of \$25,000 – \$38,000.

The Secretary of Defense is the principal defense policy advisor to the President. The mission of the Department of Defense is to provide the military forces needed to deter war and to protect the security of the country.

After completing her Masters in math, Georgette will go to work for TRAC. The Training and Doctrine Command (TRADOC) Analysis Center (TRAC) conducts operations research and analysis to inform decisions about the most challenging issues facing the Army and the Department of Defense (DoD).

Georgette was inspired to apply for the SMART scholarship by campus visits of Georillas Andrew Buchholz and Cara Long, who work at TRAC.



Annual PSU Math Picnic Pictures

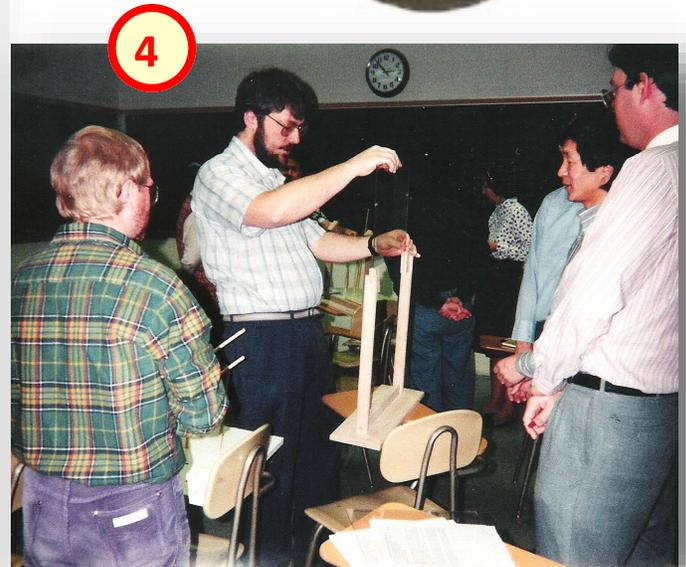
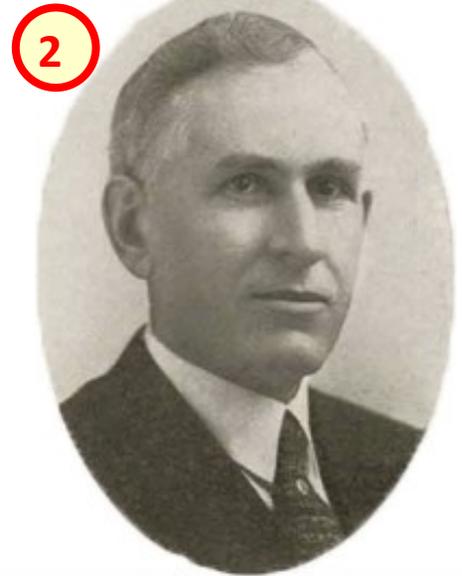


Pre-Images

The next two pages contain a collection of pictures from the “archives”. How many can you name and date? (Answers at bottom of next page.)

Thanks for the Support!

A big thanks for donations made to PSU in support of the Math Department and its programs. These generous gifts have been used to support travel by students and faculty to conferences, as well as student scholarships. For summer 2018 and the 2018-19 academic year we awarded \$31,100 in undergraduate scholarships and \$13,000 in graduate scholarships.





Picture 1: Dr. Harold Thomas in the 1995 Kanza Yearbook. Dr. Thomas was featured on page 5 of the yearbook . (<https://digitalcommons.pittstate.edu/cgi/viewcontent.cgi?article=1076&context=kanza>)

Picture 2: J.A.G. Shirk, Math Department head, from the 1927 Kanza Yearbook.

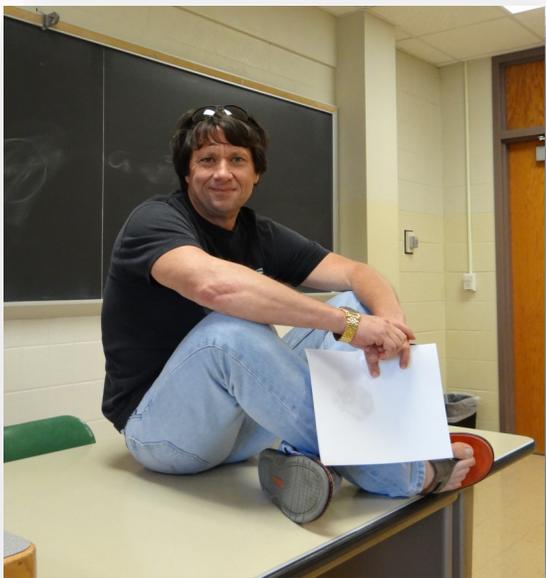
Picture 3: Dr. Helen Kriegsmann in the 1973 Kanza Yearbook.

Picture 4: Dr. Tadek Dobrowolski, Dr. Bobby Winters, Dr. Yaping Liu, and Dr. Tim Flood at a Math Dept Colloquium by Dr. Elwyn Davis in January 1997.

Picture 5: 2003 Dr. Elwyn Davis Chair Retirement Dinner: Barbara and Forrest Coltharp, Ed and Terry Martin, Manel and Ananda Jayawardhana, Jean and Bobby Winters, Cynthia Huffman, Bill and Suzanne Lindsay, Glenn and Hazel Coltharp, George Kaemmerling, Karen and Elwyn Davis, Tim and Chris Flood, Gary and Fran McGrath, Reita and Bryan Sperry, Alice Thomas, Helen Kriegsmann, Don and Betty Hight, Bettye Haggard, Yaping Liu, Harold Thomas. Front Row: Kappa Mu Epsilon (Math Honor Society), 1971 Kanza Yearbook. Front Row: Carolyn Burgan, Susan Rogers, Peggy O'Toole, Stephen Nutt, David Newcomb, Kathy Peterson, Dr. Gary McGrath; Second Row: Mrs. Annabelle Loy, Wayne Patterson, Dean Weltmer, Kathleen Urankar, Patricia Kuhel, Mr. J. Bryan Sperry; Third Row: William Probst, Dr. Forrest Coltharp, James Harlin, Dr. Ronald Smith, Dr. Harold Thomas, Thomas Bardon, Dr. Helen Kriegsmann; Back Row: Dr. Elwyn Davis, Dr. Donald Hight, Dale Goodrich, Allan Carlson, Mike Ricketson, David Hudson, Douglas Leonard.

Math Department Institutes New Graduate Certificate in Mathematics

The accrediting body for post-secondary institutions in the central US, the Higher Learning Commission, requires that anyone teaching a college course, including dual credit courses, must have a Masters degree and at least 18 hour of graduate credit in the discipline in which they are teaching. To meet the need of area teachers who want to teach dual credit mathematics courses and already have a Masters degree in something other than Mathematics, the PSU Math Department has begun offering a Graduate Certificate in Mathe-

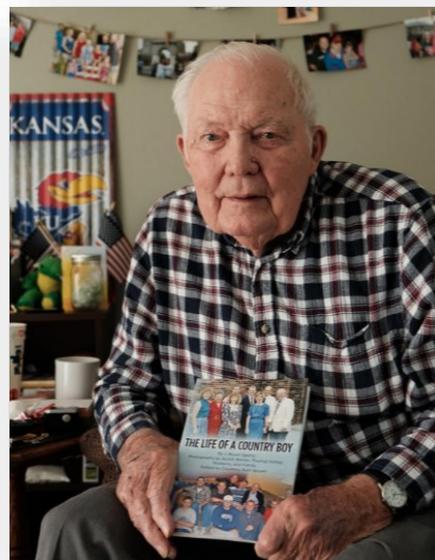


matics. The Certificate in Graduate Mathematics is an 18 hour non-degree and non-licensure program designed to certify that participants have a knowledge base in graduate mathematics. All of the courses may be applied to a Master's Degree in Mathematics. Undergraduate students may begin the Certificate program in their final semester with approval from their advisor and mathematics department chair. In order to meet the expectation for college-level teaching an individual must also hold a master's degree or higher in some area of study. More information, including admission requirements, procedural steps for the certificate, and required coursework, can be found in the Pittsburg State University Catalog. (http://catalog.pittstate.edu/contentm/blueprints/blueprint_display.php?bp_listing_id=154&blueprint_id=314&sid=1&menu_id=13296)

The certificate was awarded for the very first time after the Spring 2018 semester. The first person to receive the new PSU Graduate Certificate in Mathematics is Jeff Aldridge (picture above). Mr. Aldridge is a faculty member at Northeastern Oklahoma A&M College (NEO) in Miami, OK.

Retired Professor Featured in Local Newspaper

Retired mathematics professor J. Bryan Sperry was featured in the Patrick's People section of the Pittsburg *Morning Sun* in June. The article, which includes 3 pictures, one of which is to the right, contains an interview with Mr. Sperry. There is information about Mr. Sperry's active duty in the Army during World War II, his education, his teaching career, and his autobiography, *The Life of a Country Boy*, shown in the picture. Mr. Sperry taught in the Pittsburg State Mathematics Department for over 34 years. He also authored three mathematics texts. The newspaper article can be found at <http://www.morningsun.net/news/20180605/patricks-people---bryan-sperry-shares-his-life-story>.



2017 Math Department Christmas Party



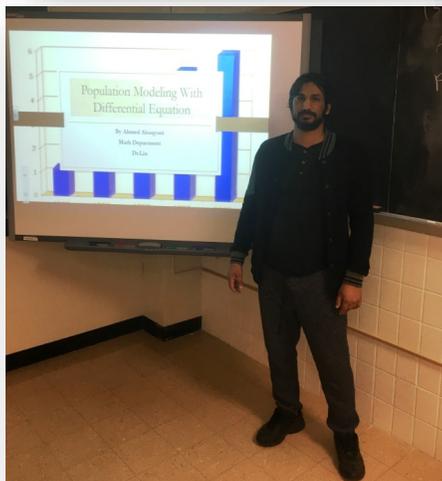
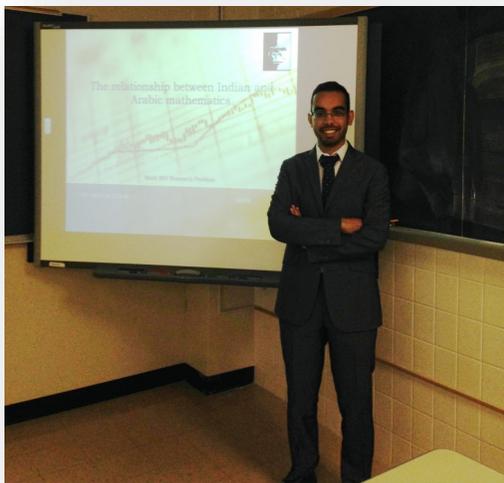
PSU Mathematics on Facebook

If you are a Facebook user, there are two ways that you can stay connected with the PSU Mathematics Department. One way is via a group with a focus on teaching called *Gorilla Math Teachers*. It is a great source of information including teaching ideas and job openings. It also provides a community for asking advice and questions related to teaching. The other way to stay connected is with the *Pitt State (Kansas) Math Alumni* group. Information related to the department and alumni is posted along with interesting mathematical tidbits as well as opportunities and job openings. Both of these groups are closed, so that anything posted is only available to be seen by others in the group. (Can you guess why the Kansas part was added to the name of the alumni group?) New in the past year to the alumni group are scanned pictures from the mid to late 1990's. Many other photographs have been added as well. We would love to have you join either or both groups if you are interested. Just search for the name of the group within Facebook and put in a request to be added to the group.

PSU Mathematics Colloquium Series

The Math Department continues to hold a colloquium series. To schedule a colloquium or for more information, contact Dr. Liu at yliu@pittstate.edu. The following were the colloquia for 2017-2018.

- ◆ Dr. Cynthia Huffman, PSU: *Up Close and Personal with Ancient Greek Mathematics*, August 31, 2017
- ◆ Dr. Cynthia Huffman, PSU: *Leonardo Pisano: A Mathematician Who Rocked the Western World*, Sept. 21, 2017
- ◆ Mr. Reid Alotaibi, PSU: *The Relationship between Indian and Arabic Mathematics*, November 2, 2017
- ◆ Mr. Ali Hakami, PSU: *Applications on Group Actions*, November 6, 2017
- ◆ Mr. Logan Houk, PSU: *A Comparison of the Riemann and Lebesgue Integrals*, November 14, 2017
- ◆ Mr. Ahmed Alsaqyani, PSU: *Population Model with Differential Equations*, November 17, 2017
- ◆ Dr. Leah Childers, PSU, *Area, Dots, and Shoelaces*, November 28, 2017
- ◆ Mr. Abdullah Alanazi, PSU, *Harvesting Models*, December 1, 2017
- ◆ Mr. Jeff Armstrong, PSU, *Formative Assessments in the Secondary Math Classroom*, December 13, 2017
- ◆ Dr. Cynthia Huffman, PSU, *Mathematics of Movie Magic*, February 13, 2018
- ◆ Mr. Derek Holmes, FCAS MAAA CPCU, P&C Actuarial Director, State Farm Insurance Companies, *How to Become an Actuary*, February 22, 2018
- ◆ Mr. Danny White, FSA, Gabriel Roeder Smith & Co, *What Can I do with a Math Degree*, April 12, 2018
- ◆ Ms. Katherine Brumley, PSU, *Evolution of the Quadratic Formula*, April 26, 2018
- ◆ Mr. Landis Duff, PSU, *Elementary Explorations in Differential Geometry*, May 1, 2018
- ◆ Mrs. Cait White, PSU, *The Word Problem in Braid Groups*, May 3, 2018
- ◆ Mrs. Laura Rawlins, PSU, *Differentiated Instruction in the Math Classroom*, June 12, 2018
- ◆ Mr. Michael Morrison, PSU, *A Comparison of Traditional Instruction & Project-Centered Instruction*, July 11, 2018
- ◆ Ms. Reine Loflin, PSU, *The Life of Dr. Helen Kriegsman*, July 24, 2018
- ◆ Ms. Julie Oswald, PSU, *Discovery Based Learning Versus Traditional Learning*, July 25, 2018



Colloquia Pictures Pictures of some of the graduate student colloquia speakers and one alumnus.

Top row: Reid Alotaibi, Katherine Brumley, Ali Hakami

Second row: Logan Houk, Landis Duff, Laura Rawlins

Third row: Ahmed Alsaqyani, Alumnus Derek Holmes, Cait White

Graduation Pics (December 2017 and May 2018)



Kayla Jones, Emily Allen, Ethan Hartzell, Alexis Youvan, Mr. David Newcomb, Amber Bartlett, Dr. Scott Thuong, Chelsea Williams, Dr. Tim Flood, Dr. Cynthia Huffman, Erica Bischoff, Reid Alotaibi, Dr. Hazel Coltharp, Ahmed Alsaqyani, Jeff Armstrong, Logan Houk, Ali Hakami, Dr. Bobby Winters



Yazeed Alhassan, Julie Oswald, Rashell Yockey, Dr. Ananda Jayawardhana, Ashley Spencer, Mr. David Newcomb, Dr. Leah Childers, Caitlin White, Katherine Brumley, Dr. Scott Thuong, Angela Slater, Landis Duff, Dr. Cynthia Huffman, Dr. Tim Flood

Photos courtesy of Dr. Ananda Jayawardhana

Alumnus Publishes in the *Mathematical Monthly*



Dr. Bryan Dawson (BS 1986, MS 1987) had an article “A New Extension of the Riemann Integral” appear in the February issue of *The American Mathematical Monthly*. An eprint can be found at this link: www.tandfonline.com/eprint/BUHDX7D9cNwi7gCv84Ez/full

Dr. Dawson was the highlighted alumnus in the PSU Mathematics Department 2017 Newsletter. He is a University Professor of Mathematics at Union University in Jackson, Tennessee.

Math at the PSU Graduate and Research Banquet

Clockwise from top: Jeff Armstrong and his wife, Haley Botts and her husband, Dr. Winters and his wife Jean, Jeff Armstrong receiving his award, and Haley Botts receiving her award.

Awards given were:

- ◆ Excellence in Research

Jeffrey Armstrong, & Landis Duff

- ◆ Excellence in Scholarship

Haley Botts, Zachary Bowen, Katherine Honeywell, & Michael Morrison

- ◆ Excellence in Teaching

Haley Botts & Caitlin White

- ◆ Excellence in Professional Service

Georgette Searan & Caitlin White



KSMAA Meeting

Pitt State mathematics faculty continue to be very active in the Kansas Section of the Mathematical Association of America (KSMAA). Dr. Tim Flood currently holds three offices: Vice-Chair, Historian, and Coordinator of Section Liaisons, Dr. Cynthia Huffman is Public Information Coordinator, Dr. Leah Childers is Secretary, and Dr. Scott Thuong is co-coordinator of the Kansas Collegiate Math Competition. In addition, the Chair of KSMAA is a Gorilla math alumna, Beth Edmonds of Johnson County Community College.

The 2018 KSMAA meeting was held on April 20-21 in Overland Park, KS. Keynote speaker was Matt Boelkins (Past Chair of the Mathematical Association of America Congress) and the invited speaker was Mark Yannotta of Clackamas Community College. Five PSU faculty members and nine students attended the meeting, making the Gorilla group one of the largest at the conference. Two teams of students competed in the Kansas Collegiate Math Competition, held in conjunction with the KSMAA meeting.

2018 Faculty Presentations:

- ◇ Cynthia Huffman, *Movie Magic in Calculus and Pre-Calc Classes*
- ◇ Ananda Jayawardhana, *Introducing Bayesian Statistics to Undergraduate Classes*
- ◇ Yaping Liu, *STEM: The Development of an Engineering Calculus Class*



PSU Alumna Beth Edmonds, Johnson County Community College, welcoming attendees to the 2018 KSMAA meeting.



PSU graduate students Landis Duff, Yazeed Alhassan and Dhaifallah Alsayahani waiting for the first keynote address.



Dr. Scott Thuong waiting to announce student contest winners. Behind him are Dr. Yaping Liu and Dr. Tim Flood.



Waiting for the invited address. Graduate student Georgette Searan in front row. Row 2, 2nd from left: Dr. Cynthia Huffman next to PSU Alumna Dr. Rochelle Beatty, Row 4, 2nd from left: Dr. Yaping Liu. Top left: Dr. Tim Flood. Top right: graduate student Dhaifallah Alsayahani and down two rows: graduate student Yazeed Alhassan. (Photo by Dr. Ananda Jayawardhana)



Part of the Pitt State group waiting for hotel rooms. L-R: Dr. Yaping Liu, Dr. Scott Thuong, Levi Humbard, Maddi Webb, Jordan Bailey, Georgette Searan.

Pictures from KME meetings



PSU Math Honor Day

The 18th annual PSU Math Honor Day was held on October 12, 2017. Area high school students and teachers were treated to presentations by PSU faculty, a planetarium show, and a luncheon. The featured lunch speaker was Gorilla Aaron Flood, Mechanical Engineering PhD Candidate at the Missouri University of Science and Technology in Rolla, MO. His presentation was “Metal 3-D Printing and Simulation,” about some of the interesting things on which his research group has been working.

Sherry Sharp (Carl Junction HS, PSU alum) and Karen Henderson (Blue Valley Northwest HS) were recognized as the 2017 Outstanding Veteran Secondary Math Teachers while Jessica Booth (Basehor-Linwood HS, PSU Alum) received the Outstanding Novice Teacher award.



Some of the students and presenters from Math Honor Day.

Presenters from upper left around clockwise:

Dr. Yaping Liu, Dr. Leah Childers, Dr. Scott Thuong, and retired math professor Dr. Elwyn Davis.



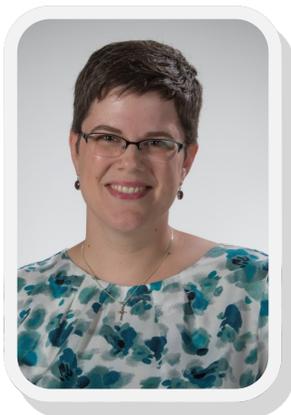
Photo Credits: Haley Botts, PSU Math Graduate Teaching Assistant

Math Department Awards Banquet





Faculty Updates



Dr. Leah Childers

As always, one of the highlights of my year has been having the opportunity to work with our students, in particular directing undergraduate research. This year I worked with Jordan Bailey who solved a problem posed in the *MAA Monthly* and presented his work at the KME regional convention. His presentation earned him a top paper prize at the convention!!! Giving students opportunities to experience mathematics outside of the traditional classroom is one of the many reasons I'm so excited and honored to serve as the president elect for the national Kappa Mu Epsilon mathematics honor society.

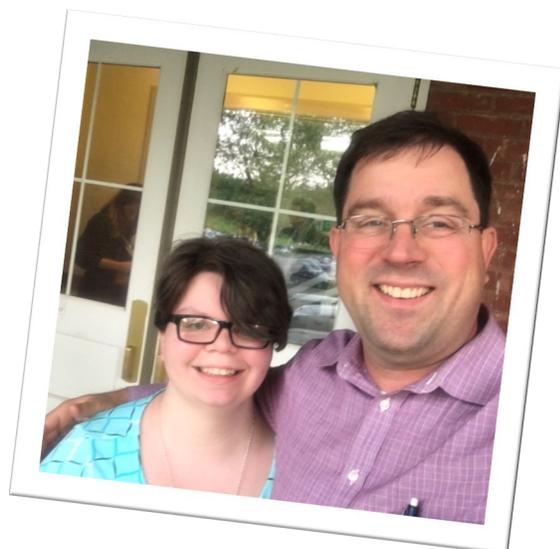
I've also enjoyed getting to know the students in my classes and sharing some beautiful mathematics together--they teach me so much! In particular, I taught a course in Geometric Group Theory and have since had two students want to complete their masters project in that area.

This year I was asked to join the Gorilla Advising Academy Council. As part of this, I get to help facilitate the Master Advisor training offered each semester. It is a great opportunity to share ideas and learn from others to improve our advising skills. As PSU focuses on improving advising across campus, I hope that our students will have an even better experience at PSU.

I had the opportunity to talk about "Area, Dots, and Shoelaces" to several groups including: Math Honor Day (high school students), Inspired by Math and Expanding Your Future (middle school students) and department colloquium.

Lastly, but definitely not least, my girls—This year we had the joy of welcoming Jennifer to our family! She is a happy baby and works hard to keep up with her sisters! Elyse (5) will start kindergarten this fall and loves to learn, explore, and play. Bridget (3) has adjusted to her big sister role wonderfully and loves surprising us with her new songs. It is amazing watching their curiosity and love of learning!

Graduate student Georgette Searan and Gorilla alumnus Andrew Buchholz during Georgette's visit to TRAC in Leavenworth in May. See the story about Ms. Searan winning the prestigious DoD SMART scholarship on page 4.





Dr. Karla Childs

The highlight of my year was being awarded a research sabbatical for the spring semester. The primary purpose of my sabbatical was to conduct research that leads to improved retention in introductory collegiate mathematics courses identified as gateway courses in the Retention Performance Management (RPM) process at PSU. Specifically, I was interested in improving the preparation of Graduate Teaching Assistants (GTAs) who teach undergraduate RPM mathematics courses.

I worked at San Diego State University with colleagues in the MAA CoMInDS project, which is an NSF funded project, to move the needle forward in this relatively new and important area of research. San Diego State University has a well-known and robust mathematics GTA professional development program. I spent time with Dr. Daniel Reinholz and Dr. Hayley Milbourne at SDSU who work with GTAs in the math department observing and participating in their GTA training program.

As always, I love working with the Graduate Teaching Assistants and our Math Learning Community students in Freshman Experience. They are exceptional young adults with so much excitement for learning and for the future.

Of course, I made several trips to LA to visit my kids who work in music + film.



Dr. Tadek Dobrowolski

I am still enjoying my duties as teacher; I am sure that the PSU's environment has a lot to do with that. The only troublesome news is that the enrollment is getting low and classes tend to be smaller. But this has a positive impact – it allows me to work with the students on an individual basis.

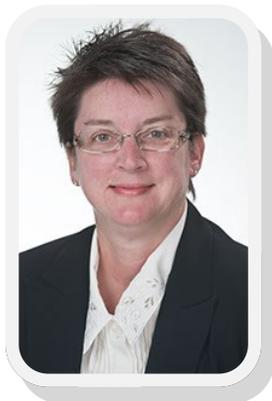
Two interesting international trips: Puebla, Mexico, and Pusan, Korea. I have a research collaborator in Puebla so, when I was invited to take part in their annual International Conference on Mathematics and its Applications, I went there with pleasure. One day during my stay, a few minutes before midnight, I heard noises of people going down the stairs in my hotel. I was in bed, but decided to check on the noises before I did I felt my room swinging – it was an earthquake ... So, in my pajamas I joined the crowd and I was out on the street, a safe distance from the walls of the hotel and other buildings. But then I noticed how ignorant, uneducated (on earthquake matters), and unprepared I was. Everybody in the crowd had their belongings with them – I did not grab even my documents like the passport ... I was lucky the hotel withstood this powerful earthquake and I was able to safely return to Pittsburg.

The other trip, to Pusan (or Busan, if you like) was also interesting. Pusan is a huge port city. At one point during the Korea war, this was the only city that did not fall to North Koreans! Then the counteroffensive started from there. Nowadays, Korea is a very modern country. Japan was their ultimate enemy, as Germany for Poland. The difference is that they can call their enemy by name, but Poles (as around the whole world) are pressured to use Nazis in place of Germans. It always bothered me that Nazis invaded Poland in 1939, Nazis invented death camps, name it ..., but Japan (instead of Nazi Japan) bombed Pearl Harbor. Apparently, after 1945, Germans worked pretty well to erase their responsibility from the atrocities they did in Europe and else. They made the world believe that Nazis, unknown nationals, should be blamed. Simple and Smart.

Otherwise, it was a sad year after my personal loss. Life goes on.

Working hard on joint research project (with Daniel Azagra and Miguel Garcia-Bravo entitled: Smooth approximations without critical points of continuous mappings between Banach spaces, and diffeomorphic extractions of sets). Yes, a critical point is the same that shows up in Calculus.

Have a nice 2018/19 year.



Dr. Hazel Coltharp

I don't know how many years Dr. Huffman has been *gently* prodding us to submit updates for the Department newsletter, but this is the sixth file that I've saved! As I read back through them, there is evidence of both **change** and **consistency**.

Consistency:

We **continue** to strive to be responsive to the needs of area and regional school districts by educating the outstanding students who come to us with the desire to teach secondary mathematics and beyond. Hopefully, that will **never change**! My middle name is **con-**

sistency – I am starting my 26th year as a faculty member in the Mathematics Department – omg – I have become an old-timer! I really don't feel that old, and I credit my students and my colleagues for that. I am **still recording** our students, during their student teaching, but we've **changed** from Sony handycams (and recording them in VHS then DVD formats), school cameras, Flip cameras, iPads, and now I just use my iPhone because it has enough memory, and it's less attention-grabbing than any of the others!

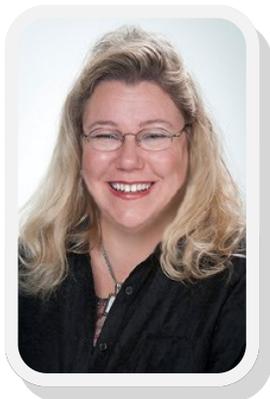
Change:

Last year, we were only able to send 3 Math majors, and 3 Math minors out into the employment field, but ... this fall, we have eight enrolled in the Techniques course, and they will be ready for the job market, if they choose that route, in May of 2019. Couple that with the 3 student teachers out in the field this fall, and we might be able to fill **11** job openings for the 2019-2020 school year! Plus, our **new** emphasis area in Middle School Mathematics Education is starting to gain some sincere interest! Come on area high school teachers, keep talking our program up – they will fill your spot when you get close to retiring!!!

We are also seeing a lot of interest in our **new focus** for our Master's candidates – action research in their classroom. Dr. Childs and I are guiding several classroom teachers, and graduate teaching assistants, who want to investigate a new avenue of mathematics teaching instruction, so we hope that encourages others to consider returning to us as well!!!

My family has seen both **consistency** and **change**. My husband is in a time of **consistency**, which for him, is a **change**! He's beginning his seventh year as Vice President of Academic Affairs at Crowder College, but he's always game for a new **change**! Most of the **change** is with the younger generation – our daughter and Gorilla Math Teacher, Jean, finished her doctorate in Mathematics Education at the University of Missouri-Kansas City. It was very special to loan her my robe and hood to "walk," and I'm looking forward to seeing her in her own as soon as she picks it out! She's **continuing** to enjoy teaching at Missouri Southern, starting her fifth year there, and looking forward to **changing** and moving into a new Math building at MSSU next spring. She has also **added** teaching a couple of adjunct courses for Crowder College (now that her time of being a student is done, she has a little extra time on her hands). Our son, Benjamin, is closer to his official status as a Gorilla Math Teacher as he is in his last year of his undergraduate degree, and, I'm very sure, is looking forward to having his Techniques class from his mother this fall – I'm certain that he would appreciate words of encouragement and advice from those who survived that class! His placement for Internship and the Professional Semester is Webb City High School, so we'll see if the former Carl Junction Bulldog can cheer for the rival Cardinals!

I **continue** to love keeping up with all of you; if you're not on Facebook (or haven't joined Gorilla Math Teachers), please update via email (hcoltharp@pittstate.edu). Teacher Education always needs updating for follow-up data for accreditation, and if Amanda can't find you on Facebook, her next source is me! I **continue** to love the interaction between all of our competent, committed, and caring secondary math teachers on Facebook discussions – I really enjoy **continuing** to learn from others (including my former students)! I hope all of you are happy, healthy and **continuing** to spread the gospel of mathematics!



Dr. Cynthia Huffman

As time continues to fly by, I love my career of working with awesome PSU students and dedicated colleagues! The 2017-18 school year was filled with encouraging students to push themselves to learn new things and to appreciate the beauty and usefulness of mathematics. I also enjoyed learning more myself through various scholarly activity projects as well as through a study trip in the summer to England (I got to be inside of Stonehenge at dawn just a few days after the summer solstice and got special permission to see the Rhind Papyrus in a locked storage room at the British Museum).

In the fall, students in my History of Mathematics course and I participated in a multi-year NSF grant project called TRIUMPHS (Transforming Instruction in Undergraduate Mathematics via Primary Historical Sources). We classroom tested a group project based on primary source material of Babylonian mathematics. It inspired me to write some activities based on original sources which are available at <https://digitalcommons.pittstate.edu/>.

I continue to try to balance my work time among teaching, scholarly activity, and service. Teaching is my favorite part and I try to make learning mathematics fun and relevant for my students. For the past few years, I have been teaching an overload course for Management and Marketing, which is essentially an Operations Research class. After adding some new service responsibilities (mentioned below) which are taking more of my time, I decided this past fall would be the last time to teach that course. It was nice to have the opportunity to see math in action. In the spring I successfully applied for an OpenPITT grant to create an Open Educational Materials course on Women in Mathematics. During the summer, I researched and wrote material on 11 famous female mathematicians and developed activities based on their mathematical contributions. This curriculum will be classroom tested in the fall and shared with a Creative Commons license so that others can use it as well.

For scholarly activity this year, I continued a project from my last sabbatical, writing articles about “Mathematical Treasures at the Linda Hall Library” for the online journal *Convergence*. <http://www.maa.org/press/periodicals/convergence/mathematical-treasures-at-the-linda-hall-library>. My second Euler translation project, a collaboration with a student at Quest University in British Columbia, Canada, was approved for publication after peer-review (<http://eulerarchive.maa.org/pages/E543.html>), and I started working on my third Euler translation. Also, Dr. Thuong and I had our second joint peer-reviewed article *More Classroom Activities Based on Ancient Indian Rope Geometry* published. It can be found at <https://www.maa.org/press/periodicals/convergence/more-classroom-activities-based-on-ancient-indian-rope-geometry>.

Service-wise I continue as the public information officer/webmaster/newsletter editor for the Kansas Section of the Mathematical Association of America. I am starting an unprecedented third term as a member of the Board of Editors for the MAA Classroom Resource Materials series as the “chief editor in training.” Typically we are sent a book manuscript to review every four to six weeks. It takes a lot of time, but I feel it is a privilege to serve on a national board, plus it is an important job to decide what gets published and what does not, and to guarantee the quality of materials published by the MAA. In addition, I have found some of the manuscripts very interesting and have learned a lot of new things that can then be passed on to benefit PSU students in the classroom. I will be taking over as the chief editor in 2019. I have begun serving as the National Historian for Kappa Mu Epsilon. I was also elected as Secretary/Treasurer for the Mathematical Association of America Special Interest Group on History of Math and re-instituted a semi-annual newsletter. Closer to home, I am a member of the Steering Committee of PSU’s eLearning Academy, whose mission is to provide professional development to PSU faculty for designing quality online courses, and I have been serving as an online course reviewer for PSU, reviewing several courses each year.

I sure enjoy hearing what all of you are doing, whether it be through Facebook, LinkedIn, or some other means. (In case you didn’t know, there is a Facebook group called “Pitt State (Kansas) Math Alumni”.) It is wonderful to hear how well so many of our alumni are doing in their careers and personal lives. Please continue to keep in touch and to stop by the department anytime you are in town. Once a Gorilla, always a Gorilla!



Dr. Ananda Jayawardhana

I have been promoted to the rank of University Professor. I am continuing to teach my courses at PSU and at KU Medical Center. I attended several conferences over the last 12 months. Once again, I coordinated the local statistics poster competition this year. I am still serving as the President of the national statistics honorary society Mu Sigma Rho. I participated in grading AP Statistics exams in June. During spring 2018, I was elected as a life member to the Royal Asiatic Society Sri Lanka Branch.



Dr. Yaping Liu

The most significant event in my life during the past 12 months was an accident I had last November, which forced me to miss five weeks of classes. My colleagues in the math department helped me through this difficult time. In particular, a few professors took over my teaching responsibilities. I was also fortunate to be able to recover fully and to come back to work in the spring.

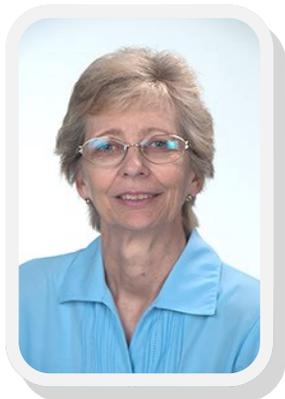
From year to year I teach my regular classes, but from time to time, I get to teach a new class for a change. This spring I taught Calculus II for the first time in many years. You may not believe it, but I have been teaching Calculus I and III almost every year, while the last time I taught Calculus II was 23 years ago. Guess how long I have been teaching at PSU. In the fall semester I will be teaching a topics class in advanced differential equations. I have been working hard this summer to prepare the class notes.

One of my many service responsibilities is the faculty advisor for the Chinese Student Association. I feel proud to tell you that the Mid-Autumn Festival hosted by CSA last fall was a big success and was awarded the Program of the Year (small) by Campus Activities. CSA has won this award two years in a row.



This year we have a record number of graduate students in the math department. From July 2017 to July 2018, fifteen graduate students have successfully finished their research, passed the master's comprehensive exams, and received their master's degrees. A few more graduate students will likely achieve the same before fall semester starts. This means a lot of work for me as the Graduate Coordinator who is responsible for administering Master's Comprehensive Exams, but it has been a rewarding experience to see students succeed.

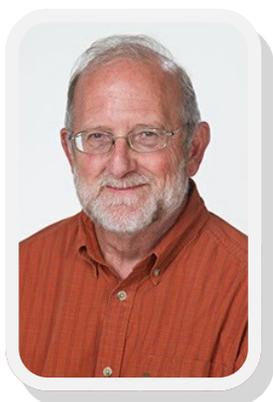
This summer I took a trip to China. I have always hated flying, but the June trip allowed me to endure the longest flight in my life. I first flew from Joplin to Philadelphia via Dallas to join my daughter and son-in-law. Then we flew from Philly to Shanghai via Toronto and Montreal. The whole flight took two days. It was torture. On the other hand, the sightseeing in China was fun. The high speed rail from Shanghai to Henan was also a good experience. The ride was really smooth and comfortable.



Mrs. Terry Martin

In April of 2018 we had 59 schools attend our Pitt State Math Relays. We consistently have 1000-1100 students from high schools in Kansas, Missouri, Oklahoma and Nebraska. We will hold the 51st Annual Pitt State Math Relays on Tuesday April 9, 2019.

I continue to serve as faculty advisor for Campus Christians and Chi Omicron Rho (a men's Christian fraternity). I also continue to serve as a board member for Country-side Christian School.



Mr. David Newcomb

It has been 11 years that I have been a full-time instructor in the Mathematics Department at Pittsburg State University. It continues to be a challenging and fulfilling experience. Preparing for the variety of courses that I teach (Quantitative Reasoning, Mathematics for Elementary Education I, Calculus I, and Mathematics Education Seminar) keeps me extremely busy. But it is a good busy. In addition, the nature of the variety of students is always interesting. The students are the heart of PSU and they keep everything and everyone active.

It was especially exciting to be able to attend the PSU Half-Century Reunion this last May. We participated in a Thursday evening banquet which included reminiscing about our times at Kansas State College of Pittsburg and viewing the changes and additions to Pittsburg State University. We also participated in the Friday evening graduation ceremony.

My wife and I continued some of our usual summer activities. We completed a few projects around the home, including building a pergola with patio pavers below and solar lighting above and doing some dirt work by the pond. We repaired five riding lawn mowers including Dr. Huffman's Cub Cadet. We helped at our son-in-law's Tailwind Cyclists bicycle shop. We went on a few camping trips at Fall River. We took care of a nice garden with green beans, potatoes, tomatoes, okra, and squash. There are still a few cantaloupes and watermelons that are doing well. We attended one family reunion at Hillsdale State Park/Spring Hill and there is another that we will attend at Dodge City. We got in several bicycle rides around the area. We will be helping with the 2018 Gorilla Century over Labor Day weekend.

I hope everyone has a wonderful 2018/2019 academic year at Pitt State.



Alumna Dr. Margaret Mohr Schroeder, Professor of STEM Education—Mathematics Education at the University of Kentucky recently had an article "The Multiple Identities of a Mathematics Professor Mom" published in the *Journal of Humanistic Mathematics*. The article can be found at <http://scholarship.claremont.edu/cgi/viewcontent.cgi?article=1502&context=jhm>.



Dr. Scott Thuong

This year I continued to teach my usual courses, and directed Landis Duff's masters research in differential geometry. I had to dust off some old grad school notes for that! I'm very proud of Landis, who decided to pursue a Ph.D., and will attend OU, my old alma mater, this fall with a teaching assistantship.

It's been a productive year for research. In January, I traveled to San Diego to attend the Joint Math Meetings and present one of my recently published papers. It was nice to escape the bitter cold in sunny California! This year I also had a new paper published in the journal "Geometriae Dedicata." Dr. Huffman and I finished the sequel to our

2015 MAA Convergence article on ancient Indian rope geometry, also appearing in Convergence. Those papers were really fun to write, and I certainly learned a lot about Geogebra!

Dr. Childers, Dr. Huffman, and I took 3 students to the KME regional meeting in Emporia. Like last year, a PSU student received a top presentation award. Unlike last year, and much to my disappointment, no table tennis was played.

At the Kansas Collegiate Math Competition, a team from Pitt State placed 6th and received a cash prize. I look forward to the day when a Pitt State team places in the top three, and I get to present them a plaque at the awards ceremony!

As usual, I am continuing as department webmaster. Have a great 2018-2019 academic year!



Dr. Bobby Winters

Dr. Bobby Winters is managing to keep himself busy and stay out of trouble as he continues as Associate Dean of the College of Arts and Sciences. Currently he is Director of PSU in Paraguay; Acting Chair of the Department of Physics; Acting Chair of the Department of Chemistry; and Interim Director of the Polymer Chemistry Initiative. In his spare time he is continuing to learn Python.



A picture of math students working in the library made the PSU homepage!

Photo Credit: University Photographer Sam Clausen

Alumni Highlight

Where we “brag” on one of our former students!

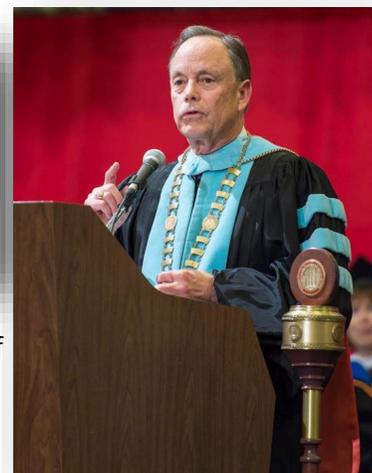
In this edition of the newsletter we feature the top Gorilla himself—PSU President, Dr. Steven A. Scott. Dr. Scott was inaugurated as the 9th President of PSU in 2009. His hometown is Baxter Springs, KS. He graduated from PSU with a BSEd in mathematics in 1973, a MS in Mathematics from Oklahoma State in 1977, an EdS in Higher Education from PSU in 1984, and an EdD in Higher Education Administration from OSU in 1990.

As a mathematics educator, Dr. Scott taught at every level from middle school mathematics through graduate level statistics. Early in his career when he was in K-12 education, he coached basketball, football, and golf.

Dr. Scott has been recognized multiple times for his outstanding work. Pitt State honored him a number of years ago as an outstanding alumni. He has also received recognition from the campus for diversity efforts and from Greenbush for his service to area youth. At this time, one of the highest levels of service in which he has been involved with is the NCAA. As chair of the Presidents Council for Division II in 2016, he led the division's policy, planning and legislative efforts. In addition, he served on the NCAA's Board of Governors and the Executive Committee for two years.

When asked how he uses mathematics in his posi-

*Dr. Steve Scott:
1995 Kanza and
Dec. 2017 gradua-
tion (photo: Sam
Clausen, University
Photographer)*



tion, Dr. Scott shared, “So much of my work involves confronting and resolving difficult, and in some cases persistent, problems. The constructs of mathematics creates the perfect backdrop and underlying foundation for this kind of work. I often think about how fortunate I am to have this type of preparation for life and career. I also think often of the extraordinary faculty who I had in class while I was a student. They made a difference in my life and any successes I might achieve belong to them as much as to me. I am forever grateful for the start they gave me.”

Dr. Scott added, “My wife, Cathy, earned two degrees from Pittsburg State and spent nearly 30 years teaching in area classrooms. My daughter, Kylie, also graduated from Pittsburg State and has earned a Ph.D. from the University of Kansas in Special Education. And of course, my son, Phil, is Gorilla Nation's number one fan. Both of my parents were teachers, and they too were Pitt State graduates. Clearly, my family has benefitted from the opportunities provided by the university. I hope my work here and the many contributions of Cathy and Phil can in some way honor those who preceded us and who made this all possible.”

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The PSU Mathematics Newsletter is published once a year. The newsletters are archived on the department webpage at <https://www.pittstate.edu/math/index.html>

If you have anything to be included in the newsletter, please send it to cjhuffman@pittstate.edu

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