

# AN <sup>Online</sup> SLICE OF $\pi$

THE NEWSLETTER OF THE DEPARTMENT OF MATHEMATICS & STATISTICS

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## Dr. Chad Awtrey Receives Multiple Accolades



The Elon Department of Mathematics and Statistics is happy to announce that Dr. Chad Awtrey was recognized by the Mathematical Association of America for his excellence in teaching with the Henry L. Alder award. Dr. Awtrey was presented with this award at Mathfest in Denver in August. Chad also received the Elon College Excellence in Scholarship award in August. Dr. Awtrey has been particularly successful at publishing his research with students. He has received multiple grants to fund collaborations with math educators, high school students, and undergraduate research students, including a National Security Agency grant to support a summer research experience for undergraduates housed at Elon this past summer.

Congratulations Dr. Awtrey! We are very proud of you!



Dr. Awtrey receiving his award from MAA President Deanna Haunsperger.

## Announcements from the Chair – Crista Arangala



2018-2019 will be an action packed year for the Mathematics and Statistics Department. We are in the 3rd year of our strategic five-year plan so are starting to think creatively about where we will be in 8 years. With your contributions, the department continues to support incoming students in our Scholarship and Mentorship program. Our Statistics Practicum is being offered for the first time this Fall. And for all of you who went through the senior portfolio process, there have been some thoughtful changes made to the math and applied math guidelines for this year.

As usual, our faculty lead the way with innovation in the classroom and in curriculum, so expect exciting changes in the near future. Stay tuned for a new department mantra and bumper sticker this year.

## Elon Medallion Presented to Helen Walton

Helen Walton, Instructor Emeritus of the Department of Mathematics and Statistics received the Elon Medallion on August 20, 2018. Helen joined the Elon faculty in 1984 and went on to to be a leader in the department. She helped bring a chapter of the national mathematics honor society, Pi Mu Epsilon, to Elon in 2003 and for nearly two decades served as the sole writer and editor of the departmental newsletter, a publication that has successfully kept alumni connected to their faculty mentors and to Elon.

Walton also lead Elon's successful effort to shelter a chapter of Phi Beta Kappa (PBK). She would serve with distinction as secretary/treasurer and historian of Elon's chapter, establishing the procedures for inducting new members, planning speaker visits and keeping chapter records. Helen was also instrumental in rewriting the faculty handbook and crafting Elon's SACS reaccreditation report in 2012.



Recipients of the Elon Medallion are: (L to R) Debrah Long, Jo Anne Maynard, James Maynard and our very own Helen Walton.

# Department Hosts the first eCOTS Dinner

Faculty from the Mathematics and Statistics Department hosted the first eCOTS electronic Conference on Teaching Statistics Regional Dinner at Elon University on May 24, 2018.

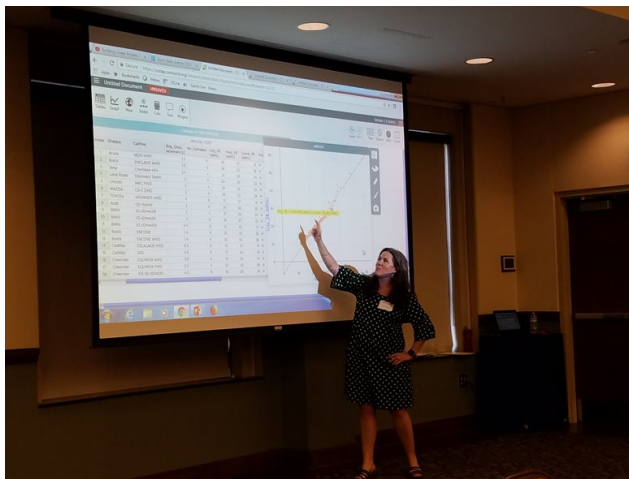
The conference is held virtually in May of even-numbered years and is sponsored by the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE). This year's theme was "Data Science For All." Faculty members **Lisa Rosenberg**, **Ryne VanKrevelen**, **Kirstie Doehler** and **Laura Taylor** gave a virtual poster presentation on "Efficacy of 'The Islands'-based Projects Compared to Student-Collected Data Projects in Introductory Statistics Courses," which can be viewed at <https://www.causeweb.org/cause/ecots/ecots18/posters/2-06>.

This presentation marks the initial dissemination of their research study from Spring 2018 in the course STS 110: Introduction to Statistical Reasoning. This study required students to complete one of the course projects by collecting data from a virtual world known as The Islands and one of the course projects to be completed using data collected by the students with real human subjects or objects. Their research looked at student learning outcomes and perceptions based on the two project approaches. Heather Barker presents the online statistical software CODAP.

The department also received funding from CAUSE to host a Regional Dinner at Elon University in conjunction with eCOTS. Faculty from Elon University, Wake Technical Community College, N.C. State University, Alamance Community College, Davidson County Community College, the University of North Carolina at Chapel Hill and Guilford Technical Community College registered for the dinner. Hollylynne Lee and graduate student Heather Barker from N.C. State University gave a talk on "Building Learning Opportunities for Future Statisticians and Data Scientists" at the dinner. Participants were able to stream eCOTS sessions at the dinner and visit demonstration booths.



The conference is in full swing!



Heather Barker presents the online statistical software CODAP

## Dr. Mark Weaver Joins the Department



The Mathematics and Statistics Department is excited to announce that Dr. Mark Weaver has joined our faculty. Dr. Weaver is a biostatistician and comes to us from UNC where he was a researcher. Dr. Weaver has many years of collaborative and consultative experience in non-profit, industry and academic settings. His main areas of statistical interest include analysis of longitudinal and survival data, design, analysis, and interpretation of individually and cluster-randomized trials, and analysis of data from complex sampling designs.

Dr. Weaver lives in Hillsborough with his wife and daughter. In his free time he is supporting his daughter who is a very active equestrian.

Welcome Dr. Weaver!

## Kristen Mazur Named MAA Southeastern Section Lecturer



Assistant Professor of Mathematics and Statistics Kristen Mazur was selected as the 2018-19 Section Lecturer for the Southeastern Section of the Mathematical Association of America (MAA). The nominating committee of the section selects one mathematics faculty member from the Southeastern Section of the MAA for this one-year position. Mazur is the first Elon faculty member to hold this position.

As Section Lecturer, Dr. Mazur will deliver an address at the Annual Meeting of the Section. She will also be available to visit institutions within the Section and present lectures on mathematical topics to the faculty and students of those institutions.

## Welcome Baby Delpish!

Congratulations to Dr. Ayesha Delpish and her husband Ritson on the birth of their daughter, Elise Grace Delpish. Elise was born on Wednesday August 29th weighing in at 8lbs 10ozs and 21.75 inches long.

Congratulations Ayesha, Ritson and big brother Aiden!



## SPOTLIGHT ON STUDENTS

Congratulations to our 34 graduating seniors! Many have lined up exciting careers or will attend graduate school.

Those attending graduate schools include: **Alonzo Cee** (Masters of Higher Education at Elon University), **James (Zach) Greenwell** (Georgia Institute of Technology), **Nicholas Hadgis** (Duke University), **Matthew Laing** (Indiana University), **Christian Reese** (Washington and Lee University), and **Angeline Sanders** (UNC Chapel Hill).

Those entering the workplace include: **Michael Bernetti** (Booz Allen Hamilton, Washington D.C.), **Nicole Ciotoli** (Guy Carpenter, New York, NY), **Jacie Cooper** (Avalon Health Economics, Morristown, NJ), **Emily Gaa** (Citibank, New York, NY), **Timothy Gaetani** (Gartner, Fort Myers, FL), **Josselyn Geyer** (Piscataway Township Schools, Piscataway, NJ), **Juliet Goodman** (Elon University, Elon NC), **Alexa Grasz** (Fidelity Investments Raleigh NC), **James (Zach) Greenwell** (Prometheus Group Raleigh, NC), **David Higgins** (Washington Nationals Baseball Club, Washington, DC), **Jamie Klauber** (Ernst and Young, Charlotte, NC), **Erin Kost** (Deloitte, Boston, MA), **Bethany Lake** (GlaxoSmithKline, Nashville, TN), **Olivia Lennox-Sanzone** (Analytics8, Raleigh, NC), **Lauren Levy** (Infosys, Raleigh, NC), **Benjamin Maloney** (Xplore Asia, Hua Hin), **Alexis Padula** (Fidelity Investments, Raleigh, NC), **Kiley Shannon** (Ernst and Young Seattle, WA), **Janae Williams** (SAGA Innovations, Chicago, IL) Congrats and good luck to all of our grads!

Congratulations to **Jacie Cooper '18**, **Jossie Geyer '18** and **Zach Greenwell, '18**, on their recent induction in Phi Beta Kappa.

Congrats to Math, Applied Math, and Stats Phi Kappa Phi Inductees: **Jack Amend, Sarah Boggins, Jamie Bottino, Isabel Gesen, Madison Jaudon, Ian Mayne, Emma Ott, Hannah Parker, Abigail Phillips, Ashley Pritchard.**

At a recent dinner to celebrate our majors, **Nicholas Hadgis and Alexis Padula** were presented with the Outstanding Achievement Award in Mathematics. **Jamie Klauber and Angeline Sanders** were presented with the Outstanding Academic Achievement Award in Statistics.

New inductees into Pi Mu Epsilon, the national mathematics honor society include: **Sarah Harper Allen, Kathryn Joy Barthelmess, Mary Clare Donahue, Morgan Ferguson, Timothy James Gaetani, Sam Glick, Kylee Gomilla, Michael Robert Guadagnino, Margaret Hinote, Madison Jaudon, Sarah Kapinos, Camille Kelley, Peter Komlofske, Matthew Lawson, Eleanor Macklin, Ian Mayne, Lauren McMahon, Julia Needham, Alexis Padula, Hannah Parker, Ashley Pritchard, Ryan Rudinger, Angeline Sanders, Tyler Schanzer, Laura Spung and Sabrina van der Gracht.**

New inductees into Mu Sigma Rho, the Statistics Honor Society include: **Jack Hartmann, Olivia Hensley, Bethany Lake, Chase Moyer, Abigail Phillips, Jonathan Shaw, Christian Wagner, Lauren Wind, Lara Yeast.**

## Melody Titus '18 Receives Fulbright Award



Melody Titus '18

Melody was one of 11 Elon seniors and alums selected to receive Fulbright awards, the most the university has seen in a single year. Recipients of Fulbright grants are selected on the basis of academic or professional achievement, as well as demonstrated leadership potential in their fields. The program operates in over 160 countries worldwide, with English teaching assistants serving as cultural ambassadors for the U.S. as well as teaching English in the community.

A native of High Point, N.C., Titus has majored in mathematics with K-12 Teacher Licensure with a minor in Spanish. She will be a Fulbright English Teaching Assistant in Galicia, Spain after graduation. "I am so honored to have received this award and I feel so blessed for this opportunity to work with students in Spain and grow as a member of our global community," Titus says.

Titus is a Teaching Fellow and member of the Kappa Delta Pi education honor society, Sigma Delta Pi Spanish honor society and the Pi Mu Epsilon mathematics honor society. She studied abroad in Spain in 2016 and completed a Winter Term Study USA course in Washington, D.C. in 2017.

Assistant Professor of Mathematics Aaron Trocki has served as Titus's research mentor, and says he's thrilled to see that her passion for education will be honored with this Fulbright Award. "She is open to experiencing and understanding various cultures while maintaining a sense of groundedness in who she is and her priorities," Trocki says. "I expect her to thrive in the different settings she will be a part of in the near future, and we look forward to Melody's many contributions as a representative of the Elon community."

She believes strongly in the importance of learning about other world cultures, and views studying foreign languages as a way to connect with other people across cultures. "Through this opportunity with Fulbright I will develop as an educator of a foreign language as I also grow in my cross-cultural understanding," Titus says. "I will bring the perspective and skills I gain from this experience with me as I continue to pursue teaching English as a foreign language."



## News from Alumni



We love to hear from our alumni! Please keep us updated on family, education and employment! Send updates or anything you would like to see in the newsletter to Tracy McBane at [tmcbane@elon.edu](mailto:tmcbane@elon.edu) or Crista Arangala at [ccoles@elon.edu](mailto:ccoles@elon.edu).



**Amanda Brown '10** is a current PhD student in epidemiology at UNC

Dr. Lee, Amanda Brown '10 and Dr. Yokley



**Joe Simmons '10** is working as an electrical engineer at Analog Devices in Greensboro, NC. He and his wife, Lindsay, had their second child this summer: a daughter named Piper Jane Simmons. Their oldest child is Zachary.



**Amanda Davis '98** is "finally back in the math world with a new position as full time instructor at Forsyth Technical Community College as of this February."



**Nathan Poole '17** is currently living in Raleigh and going into the second year of the Computer Science PhD program at NC State. His research focus is Machine Learning with an emphasis on Spatio-Temporal Data Analytics --- aka computer vision with satellite imagery. Excitingly, he is working with is the more mathematical side of computer science.

This summer he interned at SAS working on developing models for credit card fraud detection and am continuing work with them as a year-round intern!

**Ameya Bengal '16** is currently an Associate Research Economist at RTI Health Solutions (a division within RTI International). His thesis on "Armed Conflict and Infectious Diseases" was published in the Issues in Political Economy (IPE) undergraduate journal.

**Diana Liberto '05** Married Garth Grove on May 13, 2017.

**Ryan Mansfield '17** is working at JP Morgan Chase.

**Sam Jennings '11** received a MEd in Curriculum and Instruction Dec 2016 and a Masters of School Administration Dec 2017.

**Glynis Ewing '12** moved to Austin, TX in August 2016. She is a statistician at RTI International based in RTP, NC. She was recently engaged to a lawyer named Jase Burner and they are getting married in November 2018.

**Alyse Keim '13** recently took a role at JP Morgan Chase in NYC as a Senior Data Scientist, building her own team and the data science function for Global Technology Operations. While working, she is also pursuing an MS in Computational Science & Engineering at Georgia Tech (distance learner).

**Rachel Mitchener '13** is pursuing a Masters in Math Finance at the University of North Carolina-Charlotte, and over the summer, did an Actuarial internship at SCOR Global Life. She is currently studying abroad at Universita Cattolica in Milan, Italy, and for fun, she has been binge watching sci-fi shows and "eating gelato. Lots of gelato".

**Mackenzie McCraw '14** is teaching math at Pine Lake Prep in Mooresville, NC. She has also started working on MA in Math through a hybrid program with App State.

**Cindy Goodson Blanchard '10** is pleased to announce a new addition to the Elon Math community! Bethany Marie Blanchard was born on May 14, 2017. Cindy is enjoying a semester at home with Bethany before returning work as a high school math teacher in Knoxville, TN in 2018.

**Matthew Christian '07** and his wife welcomed their second son, Calvin Joseph Christian in June 2017.

**Hal Gartner '14** is teaching at math at Cardigan Mountain School, a private boarding school in New Hampshire.

**Greg Mader '11** received his PhD in Biomathematics from North Carolina State University in December 2016 and recently joined RTI-Health Solutions as a Senior Research Health Economist.

## What's your favorite memory from Elon?

In a recent survey, the alumni were asked what their favorite memory was from their time at Elon. Here are a few of their responses:

"Interacting with the local friends. An event with volunteers from First Baptist church coming to Elon every month or so interacting with students--particularly international students."

"Elon is family. The little things from college coffee, to lanterns at Christmas to walking through the faculty at graduation all make Elon special. I wish I could do it all again!"

"Being a part of the Teaching Fellows program and Allen Russell/Jan Mays as professors."

"When I think back about my time at Elon, I like thinking about how the light shines through the trees on campus and has a warm glow on the bricks, and how my mindless bike ride across those bricks in the sunshine was the perfect prelude to working hard in class. I wish I had a morning commute like that!"

"My favorite memory at Elon was going to see musicals in McCrary theater."

"I loved Math Tea! It was a highlight of my week when we got to interact with professors and peers in a relaxed environment."

"Loved seeing Dr. Russell's shirts!"

Let us know what your favorite Memory is from Elon!!

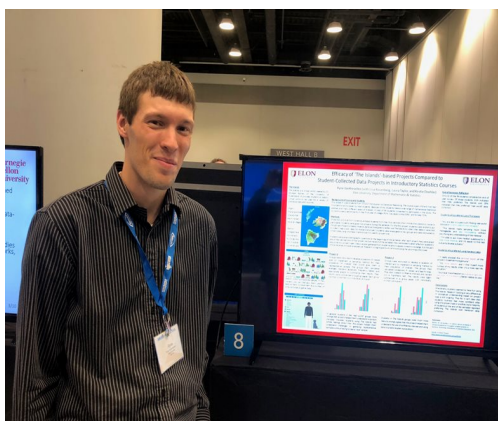


## FACULTY UPDATES

**Aaron Trocki** and Karen Hollebrands recently published their full length peer-reviewed research report entitled, "The Development of a Framework for Assessing Dynamic Geometry Task Quality" that appeared in a recent edition of the journal *Digital Experiences in Mathematics Education*.

The paper was selected for a feature piece on Math Ed Podcast, a premier online platform for sharing important works from the field of mathematics education with researchers, practitioners, and the public.

The podcast, produced by Samuel Otten, was published Aug. 9, 2018, and is available at: [https://www.podomatic.com/podcasts/mathed/episodes/2018-08-09T09\\_42\\_54-07\\_00](https://www.podomatic.com/podcasts/mathed/episodes/2018-08-09T09_42_54-07_00)



**Ryne VanKrevelen**, lecturer in statistics, presented a speed talk and poster at the 2018 Joint Statistical Meetings held July 28 to August 2 in Vancouver, BC, Canada.

VanKrevelen's presentation of "Efficacy of 'The Islands'-based Projects compared to Student-Collected Data Projects in Introductory Statistics Courses" introduced early results from having students use a virtual world as compared to the "real world" to collect data for student projects in STS110. The work is from a joint research project with fellow Mathematics & Statistics Department faculty members **Kirstie Doehler**, **Lisa Rosenberg** and **Laura Taylor**. As a result of the conference, the faculty members were asked to present a webinar on August 21, 2018 on the topic for CAUSE (Consortium for the Advancement of Undergraduate Statistics Education).

**Jan Mays**, senior lecturer in mathematics, and **Aaron Trocki**, assistant professor of mathematics, presented research at the Mathematical Association of America's Annual MathFest Meeting in Denver, Colorado, held Aug. 1-4, 2018.

**Jan Mays**, **Aaron Trocki**, **Karen Yokley** and **Jim Beuerle** were selected to present their contributed paper entitled: "Strategies that support students meeting the demands of a first-year calculus course," at the Mathematical Association of America's Annual MathFest Meeting in Denver, Colorado.

**Kirsten Doehler**, associate professor of statistics, presented on "Diversity-Related Projects in an Introductory Statistics Course" at the 10th International Conference on Teaching Statistics held July 8-13 in Kyoto, Japan. Participants in this ICOTS session were from the United States, the United Kingdom, Indonesia, and Australia. The presentation, which introduced results from using diversity-based projects in a statistics course, is based on a joint research project with fellow statistics faculty member **Laura Taylor**, associate professor of statistics. The associated publication by **Doehler** and **Taylor** was published as a refereed paper in the ICOTS conference proceedings. The abstract and link to the paper can be found at <https://icots.info/10/?contributed=C240>



**Dr. Doehler (center)** at the ICOTS session in Japan.

**Aaron Trocki** presented his research at the Society for Information Technology and Teacher Education in Washington, DC on March 26-30, 2018.

Assistant Professor of Mathematics and Statistics **Kristen Mazur** along with coauthors Mutiara Sondjaja from New York University, Matthew Wright from St. Olaf College and Carolyn Yarnall from California State University, Dominguez Hills published a peer-reviewed article entitled "Approval Voting in Product Societies," in the *American Mathematical Monthly*. In this article, **Mazur** and her coauthors applied original mathematics to develop lower bounds on the number of voters that agree in scenarios in which voters simultaneously apply approval voting to multiple platforms.

Faculty members **Jeff Clark**, **Laura Taylor** and **Ryne VanKrevelen** in the Mathematics and Statistics Department attended the International Conference on Technology in Collegiate Mathematics. The conference was held in Washington, DC from March 15-18. **Clark** presented on "Using Mathematica in the Teaching of Calculus-Based Probability." **Taylor** and **VanKrevelen** presented on "Creating Shiny Apps for in-class Activities."

## THANK YOU FOR YOUR DONATIONS!

Thank you so much for your donations to our department, which help us provide money for equipment and projects. We are so grateful for the following donors for spring semester 2018: Abigail Garcia '11, Alexandra C. Schoenfeld '12, Alexandra N. Grasz '18, Alexis Goslen '17, Amalia Llorente '17, Amanda Davis '98, Amanda Marusiak '10, Amanda Sherman '98, Amy Flower '04, Amy Robbins '14, Amy Nicholson '04, Angela Leonard '89, Angeline Sanders '18, Anne D. Klein '10, Ayesha Delpish, Bethany V. Lake '18, Bob and Carrie Ryan '03, Brian J. Murphy, Briana T. Long '05, Carl Taylor '99, Cheryl A. Borden '05, Christopher Long '05, Crista Arangala, Crystal A. Edwards '14, Daniel Borgia '15, Daniel Rapp '13, Donna Strickland '84, Elaine M. Bottino, Eleanor S. Schlechter, '17, Elise D. Lake '12, Elizabeth Bentley '12, Emma Luparello '16, Emma Yarborough '17, Eric Vetack '88, Erin Donahue '15, Erin Krupa '02, Erin M. Kost '18, Glynis Ewing '12, Helen Walton, Horace Holloway '87 Insuk Shim, International Business Machines, James R. Beuerle, Janae Y. Williams '18, Jane Lennox, Janet P. Mays, Jessica Kelly '09, Jonathan Leeds '14, Joseph Old '71, Karen Ellis '09, Katherine Cunningham '03, Kathleen and Mark Lovin '03 Kelly Reagan '17, Kiley Shannon '18, Kylee Gomilla '20, Lisa Rosenberg, Lynne Davis '71, Marty and Laura Callinan '08, Mary C. Hall '10, Mary Macdonald '15, Mary Brown, Mary Neill '92, Matthew Feather '15, Meredith Webster '96, Michael O'Brien '16, Olivia F. Lennox-Sanzone '18, Paul C. Kantlehner '16, PNC Foundation Matching Gift Program, Ralph Mueller '83, Richard Flower, Richard Watkins '71, Robert Hege '68, Robert Tommy '82, Ronald J. Gomilla, Ronald Russell, Rose Prey '01, Ryne VanKrevelen, Samuel M. Rankin '67, Sara Galinko '17, Sara Rodgers '16, Sebastian King '16, Shaun M. Lynott '03, Stanton D. Sandford '14, Tammy S. Newbern '94, Taylor Ellis '09 Todd Lee and Tracy McBane.

## CHECK OUT OUR WEBSITE

To learn about majors, see photos, and get contact information, visit our link at [www.elon.edu/e-web/academics/elon\\_college/mathematics\\_statistics/](http://www.elon.edu/e-web/academics/elon_college/mathematics_statistics/). Like our Facebook page at Elon University Math and Stats. This newsletter is a production of the Department of Mathematics and Statistics at Elon University.

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