



Vectors

The Newsletter of the Mathematics Department at Rowan University

CONGRATULATIONS TO MATHEMATICS STUDENT AWARD RECIPIENTS

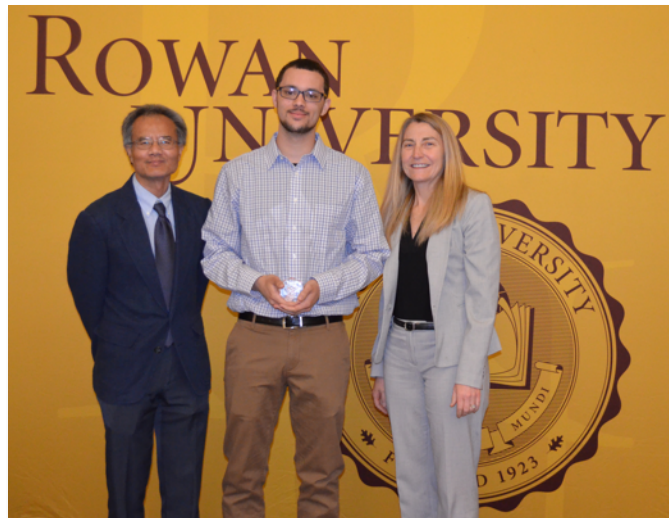
The Rowan Mathematics Department recognized our top students during the annual Awards Luncheon held on April 27, 2017, in the new business building. Numerous students were also honored for their participation on the Rowan math team and for conducting research.

Savanna Dautle

was awarded the Scholarship for Outstanding Junior Mathematics Major. In addition to excelling in the classroom, she has presented her research with *Abdul Hassen* at both the Rowan STEM Symposium and the Rowan Math Department Colloquium. Savannah received Honorable Mention this year in the prestigious Barry Goldwater Scholarship program. She will be participating in an REU program this summer at the University of Minnesota's Materials Research Science and Engineering Center.

Megan Welch (shown above with Math Department Head *Dexter Whittinghill*) received the John Sooy Award. This scholarship honors an outstanding junior pursuing a double major in mathematics and education.

Riley Gartland '17 was honored with the James M. Shafer Excellence in Mathematics Medallion



Award as the graduating senior math major with the highest GPA. She also won the Leonard L. Mancuso Medallion Award for Excellence in Secondary Student Teaching. She has been employed as a mathematics teacher at Cinnaminson High School since January 2017.

Alexander Drumm '17 (shown to the left with *Hieu Nguyen* and CSM Dean



Karen Magee-Sauer) received the Dean's Outstanding Senior Award for Mathematics on the basis of his mathematical achievements both inside and outside the classroom. Alex has conducted research with *Hieu Nguyen* for several years and given presentations at the Rowan STEM Symposium, the Rowan Math Department Colloquium, the Fall 2017 Joint MAA-NJ/EPa-Del section meeting, and the 2017 Joint Mathematics Meeting in Atlanta, GA. He has also participated in the

Putnam Mathematical Competition, and he scored a perfect 200 on the ETS Mathematics Major Field Exam. Alex will be starting a Ph.D. program in Pure Mathematics at Pennsylvania State University in Fall 2017. A short video honoring Alex's many accomplishments can be viewed at <https://youtu.be/FvfNpMKGoy4>.

Awards continued on Page 2...

...STUDENT AWARDS, CONTINUED FROM PAGE 1

Freshman **Patrick Bray** was the top Rowan scorer on the 2016 Putnam Mathematics Exam. He also placed 9th overall in the 2017 New Jersey Undergraduate Mathematics Competition, and he presented his research with *Hieu Nguyen* at the 2017 Rowan STEM Symposium. Patrick was elected President of the Rowan Math Team in Spring 2017.

Other students who have worked on mathematics research projects during the 2016-2017 academic year include **Maximilien Bielsa, Johan Burke, Giuseppina Carannante, Dane Charlton, Mitchell Ciecierski, David Currie, Srihari Datla, Ronak Desai, Marc-gregory Dixon, Christopher Ernst, Derek Gaffney, Stanimir Genov, Rostylav Hnatyshyn, Fikriye Kabakci, Jeffrey Maurer, Kaitlyn Myers, and Eric Zielonka.**

Volunteer math tutors during the 2016-2017 academic year included **Kelsey Borrell, Johan Burke, Giuseppina Carannante, Rachael Carlin, Christopher Cooper, Nathan Jones, Fikriye Kabakci, Janki Khadela, Gina Marino, Rafael Martinez, Jeffrey Maurer, William Neubaus, Kaitlin Peltz, and YongXian Wu.**





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New members of the New Jersey Xi Chapter of Pi Mu Epsilon include (front row, from left to right): Brooke Paskas, Katherine Schmidt, Nicole Chermark, Brigette Alessandrini, Elisabeth Gordon, Allison Gilbert, Brianna Arnold; (back row, from left to right): Sky Waterpeace, Christopher Cooper, Lizbeth Hernandez, Michelle Bertino, Benjamin Caldwell, Mark Donahue, Kyle Firestone, Ronak Desai, and Nicholas Eusebi.



We proudly inducted 33 students into the New Jersey Xi chapter of [Pi Mu Epsilon](#) (PME) at Rowan University on April 26, 2017. PME, the National Honorary Mathematics Society, is dedicated to promoting mathematics and recognizing students who successfully pursue mathematical understanding.

Our new inductees include *Brigette Alessandrini, Brianna Arnold, Michelle Bertino, Russell Binaco, Benjamin Caldwell, Ethan Caldwell, Nicole Chermark, Christopher Cooper, Ronak Desai, Mark Donahue, Nicholas Eusebi, Kyle Firestone, Justin Gavin, Kelsey Gazzara, Brittany Georgette, Allison Gilbert, Elisabeth Gordon, Lizbeth Hernandez, Henry Hill, Anthony Lee, April Licato, Dominick Macaluso, Rocco Mazzo, Keenan McElwee, Matthew Mignano, Heather Newton, Brooke Paskas,*

Kaitlin Peltz, Bartholomew Ricci, Rachael Ross, Katherine Schmidt, Matt Senni, and Sky Waterpeace.

Inductees who have not yet graduated are invited to serve in leadership roles as PME strives to organize new events next year.

PME membership qualifications include the following:

- ☉ Undergraduate students who have completed at least the equivalent of two semesters of calculus and two additional courses in mathematics, at or above the calculus level, all of which lead to the fulfillment of the requirements for a major in the mathematical sciences. In addition, such students must have maintained a grade point average equivalent to that of at least 3.0 on a 4 point scale, both for all courses that lead to fulfillment of requirements for a major in the mathematical sciences, and also for all

courses that lead to fulfillment of requirements for an undergraduate degree.

- ☉ Graduate students whose mathematical work is at least equivalent to that required of qualified undergraduates, and who have maintained at least a B average in mathematics during their last school year prior to their election.
- ☉ Members of the faculty in mathematics or related subjects.
- ☉ Any persons who have achieved distinction in a mathematical science.

Contact the faculty advisor, Marcus Wright (wright@rowan.edu), for more information about our PME chapter. Dr. Wright would especially like to hear from returning members who would like to serve as chapter officers next year.

ALUMNI NEWS

Elsie (Albone) Hornblum '10 married Jesse Hornblum in April 2017. She is a data analyst for ETS in Princeton, NJ.

Nicole Engle '13 is teaching math and religion at Holy Trinity Regional School in Westville.

Nicole Kopp '13 and **Eric Walter '13** are both math teachers at Salem County Vocational-Technical High School.

Brooke Logan '15 took time out from her Ph.D. studies at Rutgers University to visit the math department and attend this year's Rowan STEM Symposium. On a more personal note, Brooke and her long-time boyfriend, Mariusz Ogrodnik, were engaged in December 2016.



Kimberley Earley '16 works in the billing department at Genesis Biotechnology.

Jillian Jamerson '16 will be working for BAE Systems.

Jeffrey Maurer '16 will be starting a Ph.D. program in Bioinformatics at Boston University in Fall 2017.

Mitchell Ciecierski '17 will be a systems engineer at Lockheed Martin.

Gina Marino '17 passed the Society of Actuaries Exam P (Probability) in March 2017.

Amy Timko '17 will be teaching Algebra I, Algebra II, and Calculus II at Lenape High School next year.

Annamarie Webb '17 will be a junior data analyst at Altegra Health in Mt. Laurel, NJ.

Sarah White '17 will be a Nuclear Surface Warfare Officer as part of the U.S. Navy's Nuclear Propulsion Officer Candidate (NUPOC) program.

Jonathan Weisbrod '12 and his wife Carole welcomed twin daughters Haley Victoria (*left*) and Olivia Joy (*right*) to their family on March 24.



James Rosado '16 had a paper accepted for publication with Hieu Nguyen in *Linear Algebra and Its Applications*. He plans to enroll in the Ph.D. program in Applied Math at Temple University in Fall 2017.

Dominick Mancaluso '17 will be starting a Math Ph.D. program at Drexel University in Fall 2017.

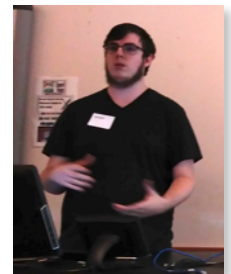
FACULTY NEWS

Umashanger Thayasivam received the Best Research Paper award for his presentation, "Assessing Robust Clustering for Gaussian Mixtures in the Presence of Outliers and Noise Levels with Component Overlap—A Simulation Study," at the 5th Annual International Conference on Operations Research and Statistics held in Singapore in March 2017.



STUDENT NEWS

Dane Charlton received the "Best Student Presentation" award at the Garden State Undergraduate Math Conference (GSUMC) in March 2017 for his talk titled "New Algorithms for Correcting Insertions in Helberg Error-Correcting Codes." His research mentor is Hieu Nguyen.



Bailey Lacke was selected to participate in the inaugural NCAA Division III College Sports Information Directors of America (CoSIDA) Student Program. The program will be held in conjunction with the 2017 CoSIDA Annual Convention in Orlando, Florida. Bailey is one of six students selected from across the United States, receiving a grant to cover all convention costs. The CoSIDA Student Program will allow the selected students to participate in Division III Day and be exposed to the CoSIDA convention, its members, and the athletics communication profession. Bailey's mentor in the program will be Jayson Ameer Rasheed, who is the SID at Wilmington College in Ohio.



PROFESSOR PAPACHRISTOU PRESENTS STUDENT RESEARCH WORKSHOP

Charalampos (Babis) Papachristou presented a workshop on April 6, 2017, for students interested in pursuing research opportunities in the Rowan Math Department. He summarized the educational, professional, and personal benefits of conducting student research. **Gaoyuwei Gu** and **Crystal**

VanSise each won a \$100 gift card for meeting with three faculty members after the workshop to discuss research options. Students who will be

participating in the Rowan Math Department’s 2017 Summer Undergraduate Research Program (SURP) include **Briana Arnold, Ronak Desai, Marcus Mitchell, Tatheer Moosavi, Kaitlyn Myers,** and **Veronica Williams.**

The following table lists faculty who are willing

to supervise student research projects during the 2017-2018 academic year and some of their ideas for potential projects.

Faculty Member	Possible Research Projects
Nasrine Bendjilali	<ul style="list-style-type: none"> Genetic risk factors contributing to development of cardiovascular diseases Also open to student-initiated projects
Abdul Hassen	<ul style="list-style-type: none"> Convergence of roots of the hypergeometric Bernoulli polynomials A Hecke correspondence for automorphic integrals with poles
Hieu Nguyen	<ul style="list-style-type: none"> Construct multiple insertion/deletion error-correcting codes with high rates Construct maximal ETFs and algorithms to partition them
Babis Papachristou	<ul style="list-style-type: none"> Using radiomics variables to predict survival of ovarian cancer patients Using functional near-infrared spectroscopy (fNIRS) data to predict food preference Also open to student-initiated topics
Uma Thayasivam	<ul style="list-style-type: none"> Using data mining algorithms to identify biomarkers Telemedicine and telehealth statistical learning Advanced statistical computing for modeling big data Robust methods for high dimensional data Also open to student-initiated projects using statistical/data mining
Min Wang	<ul style="list-style-type: none"> Nosocomial infection models in the ICU And more!
Marcus Wright	<ul style="list-style-type: none"> Geometry of Julia sets associated to root-finding methods (Newton, Halley, Secant, etc.) Constructive algorithms for elementary number theory (Fermat two squares, factorization, chirality of triples/quadruples, etc.)



Alumni Spotlight: John P. Kelly '12

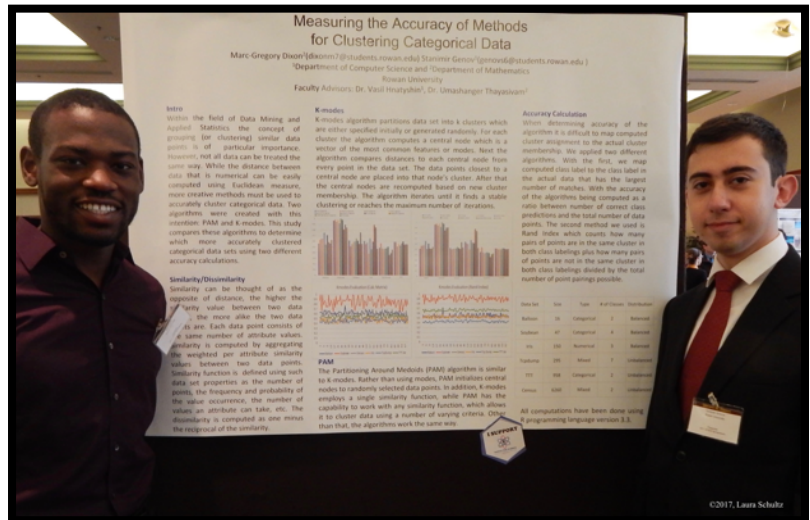
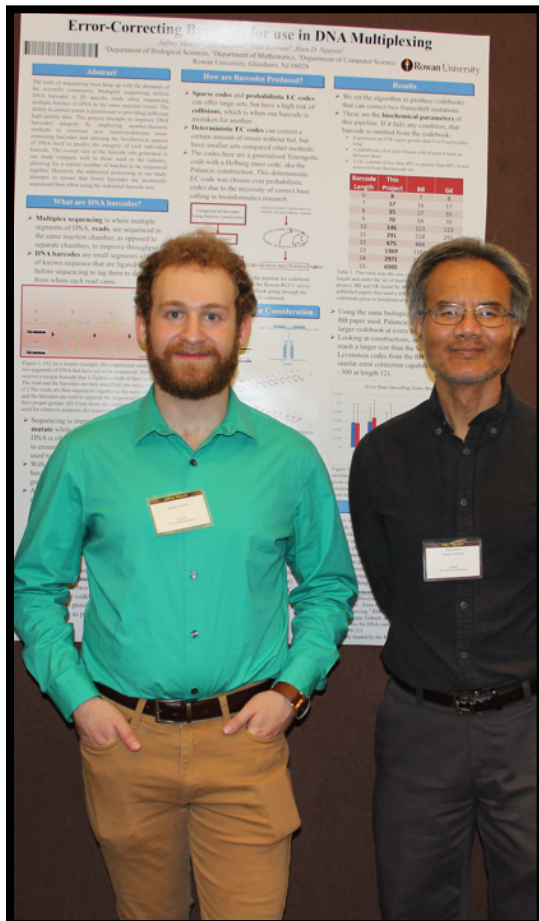
John Kelly graduated *summa cum laude* from Rowan University in 2012 with a B.A. in Mathematics and a minor in Economics. He then earned a Master’s degree in Applied Financial Mathematics from the University of Connecticut in 2014. At UConn, he was a teaching assistant for calculus I, calculus II, and math for business and economics. He is currently a mathematical/actuarial analyst at SEI Investments in Oaks, PA, where he works on the institutional advice team. He runs Monte Carlo simulations and deterministic analyses to show clients how different portfolios would perform in large defined benefit pension plans.

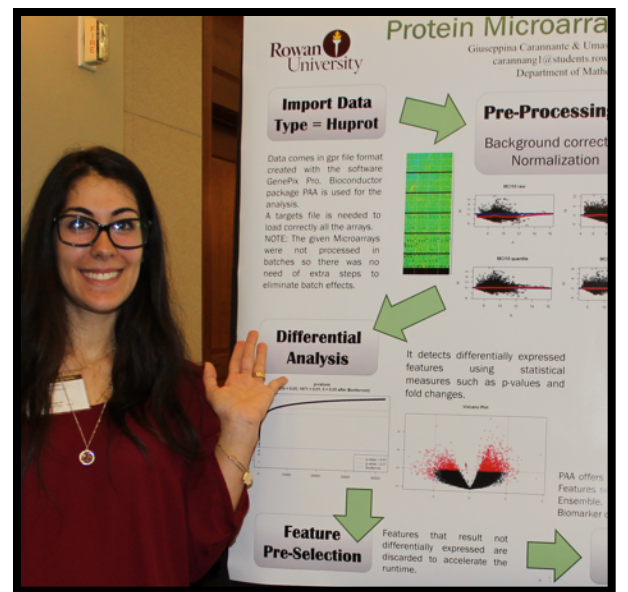
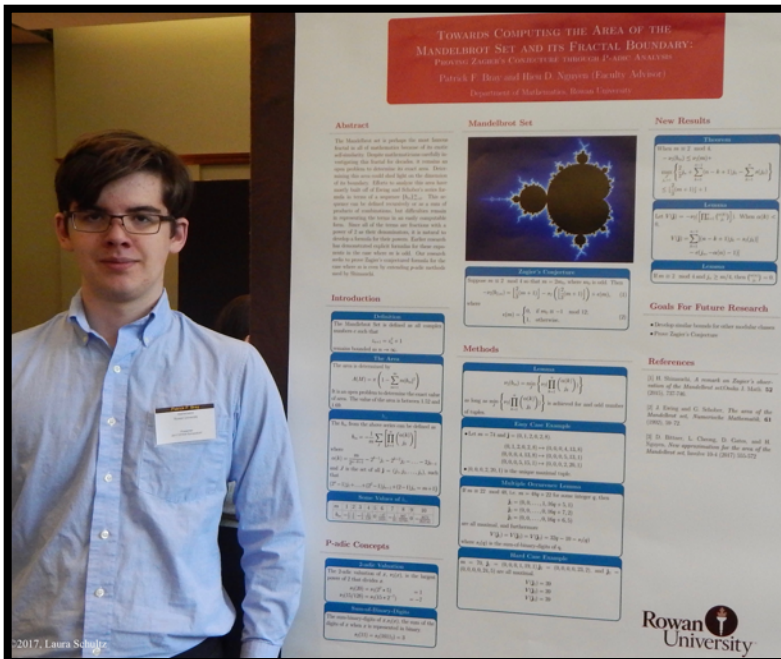
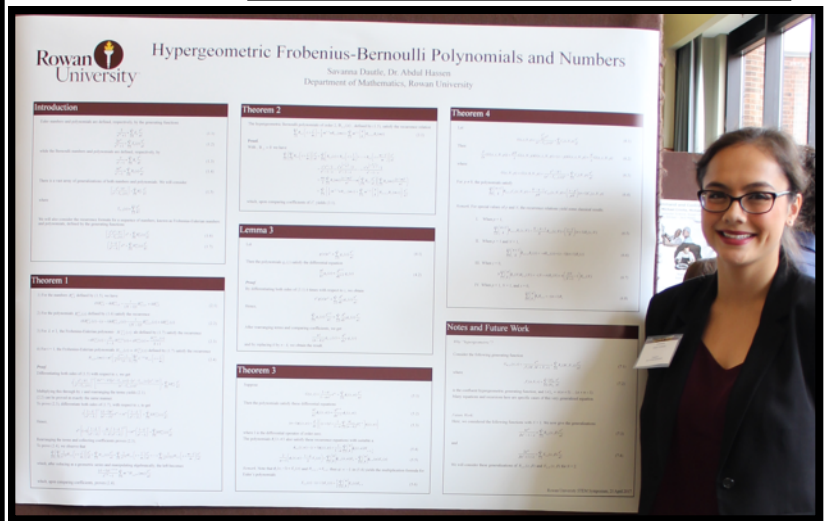
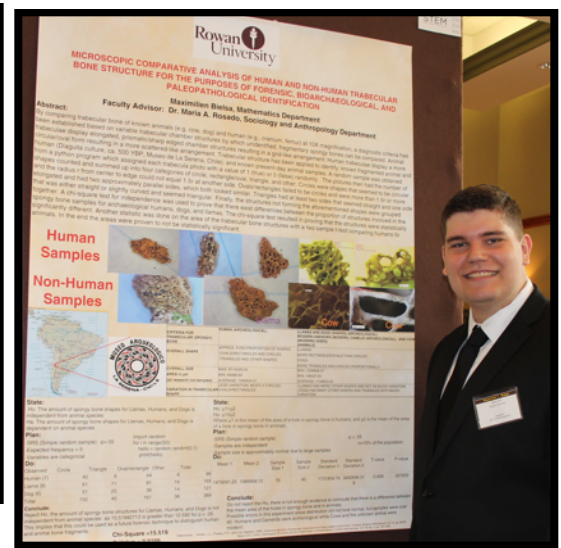
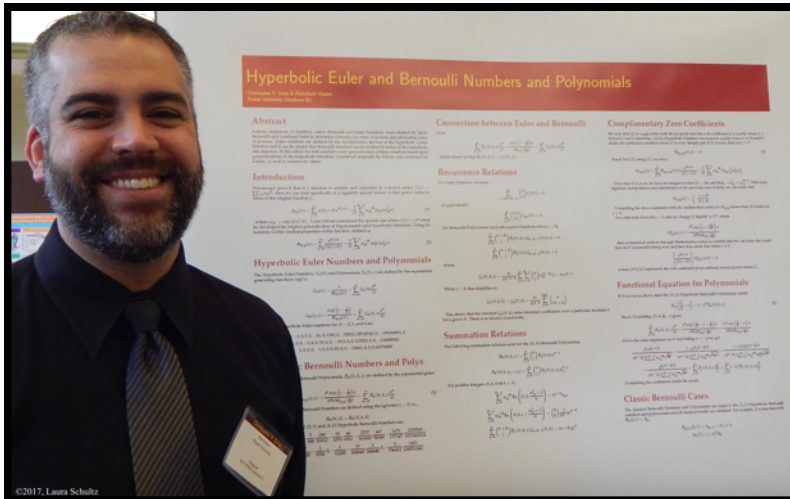


MATH STUDENT RESEARCH PRESENTED AT 2017 ROWAN STEM SYMPOSIUM

The Math Department was well represented at the 20th annual Rowan Science Technology, Engineering, and Math (STEM) student research symposium held on April 21, 2017, in the Chamberlain Student Center. Photos of our math student poster presenters continue on the next page.

Student Presenters	Faculty Mentors	Title of Poster Presentation
Maximilien Bielsa	Maria Rosada (Sociology & Anthropology)	<i>Microscopic Comparative Analysis of Human and Non-Human Trabecular Bone Structure for the Purposes of Forensic, Bioarchaeological, and Paleopathological Identification</i>
Tatheer Moosavi, David Currie, and Caitlin DiStefano	Carl Hock (Cell Biology, Rowan SOM) and Nasrine Bendjilali	<i>Candidate Variants Interact with Omega-3 to Confer Risk of Cardiovascular Diseases</i>
Jeffrey Maurer, Paul Bayruns, and Alexander Drumm	Hieu Nguyen	<i>Error-Correcting Barcodes for Use in DNA Multiplexing</i>
Stanimir Genov and Marc-gregory Dixon	Vasil Hnatyshin (Computer Science) and Umashanger Thayasivam	<i>Accuracy of Clustering Prediction of PAM and K-Modes Algorithms</i>
Mitchell Ciecierski	—	<i>If Life Gives You an NHL Team, You Make a Dynasty</i>
Christopher Ernst	Abdulkadir Hassen	<i>Hyperbolic Euler and Bernoulli Numbers and Polynomials</i>
Patrick Bray	Hieu Nguyen	<i>Towards Computing the Area of the Mandelbrot Set and Its Fractal Boundary: Proving Zagier's Conjecture Through P-adic Analysis</i>
Giuseppina Carannante	Umashanger Thayasivam	<i>Protein Microarray Data Analysis</i>
Alexander Drumm	Hieu Nguyen	<i>From UPC to DNA Barcodes: An Efficient Filtering Algorithm to Construct New Non-Binary Insertion/Deletion Error Correcting Codes</i>
Savanna Dautle	Abdulkadir Hassen	<i>Hypergeometric Frobenius-Bernoulli Polynomials and Numbers</i>





Student Spotlight: Johnathan Morris '17



John Morris was named the New Jersey Athletic Conference (NJAC) Men's Diver of the Year for the 2016-2017 season, his fourth consecutive year winning this honor. He also earned All-American honors for one-meter and three-meter springboard diving by finishing fifth place in both events at the 2017 NCAA Division III national championships. John was also named to the *Philadelphia Inquirer* Academic All-Area Men's Swimming & Diving Team for the third straight year. He was NJAC Diver of the Week 30 times

during his four years at Rowan.

John graduated *cum laude* in May 2017 with a B.S. in Mathematics. He was a Rowan Scholar-Athlete, a member of the Student-Athlete Advisory Committee (SAAC), and a regular on the Dean's List. He was also inducted into the Chi Alpha Sigma National College Athlete Honor Society. His long-range goal is to attend medical school and become a dermatologist.

Upcoming Events

July 29 - August 3, 2017

Joint Statistical Meetings in Baltimore

July 26-29, 2017

MAA MathFest in Chicago

September 5, 2017

Start of Fall 2017 classes at Rowan

November 6, 2017

Fall MAA-NJ Meeting at
Georgian Court University

January 10-13, 2017

Joint Mathematics Meetings in San Diego
(Abstract Deadline: September 26, 2017)

CONGRATULATIONS TO FALL 2016 UNDERGRADUATE DEANS' LIST HONOREES

The following students majoring in Mathematics were named to the Undergraduate Dean's List in Fall 2016 in recognition of achieving a GPA of 3.45 or higher for at least 12 credit hours. Those students whose names are in boldface type were also named President's Scholars of Excellence for achieving a perfect 4.0 GPA in Fall 2015.

*Jennifer Abdul-Malak, Brigette Alessandrini, Cassandra Bailey, Michelle Bertino, **Dominic Boccaleri**, Marissa Bontz, Pawarisorn Boonyubol, Patrick Bray, Colin Burnett, **Justin Cagnassola**, Ethan Caldwell, Phoebe Carano, Rebecca Carr, Francis Casey, Nicole Chermack, Sean Chini, Joshua Codis, Stephanie Cook, David Currie, Erin D'Ascenzo, Edward Daisey, **Savanna Dautle**, Rachel Davis, Marc-gregory Dixon, Sivan Doan, Luke Dromgoole, Cody Fauver, Amelia Fellnor, Derek Foglein, Samantha Fredericks, Natalie Frey, Carlina Fuscellaro, **Riley Gartland**, Brittany Georgette, Jillian Giacobbe, Angelica Giancaspro, **Allison Gilbert**, Samantha Gladis, Shannon Glatz, Zachary Goodwin, Trevor Greig, Tyler Groot, Joel Gupta, Amanda Halloran, Ryan Hardin, **Henry Hill**, Edward Hodan, Parazee Isom, Jillian Jamerson, **Kimberly***

***Johnson**, Patrick Kelly, Alana LaMorte, Heather Lazoff, Brittany Lazzaro, **Amanda Lensen**, **April Licato**, Hailey Lynch, **Gina Marino**, Rocco Mazzo, Jennifer McNamara, Erika McNulty, Rebecca Metelow, **Matthew Mignano**, Kelsey Miller, **Marcus Mitchell**, Johnathan Morris, **Kaitlyn Myers**, Heather Newton, Allie Nickerson, Alexandra Nowak, Zachary Ozalis, Dean Pierone, **Madeline Presnell**, **Ryan Rainey**, Amber Roscetti, Timothy Rourke, Ashley Santos, Katherine Schmidt, Matthew Senni, **Tracy Sherr**, Nicholas Shoppas, Brittany Simonka, Thomas Smyth, **Leatrice Spiewak**, Corry Stapleton, Augustus Stolte, **Alyssa Stratton**, **Kyle Sullivan**, Jack Tarasewicz, Salvador Teves, **Amy Timko**, Luis Torres, Victoria Triozzi, **Daniel Van Gemert**, Xuantong Wang, Courtney Waring, Annemarie Webb, **Megan Welch**, Sarah White, Veronica Williams, and YongXian Wu.*

Got News?

Please send any photos or news items to the newsletter editor (schultzl@rowan.edu) for inclusion in the next issue of Vectors.

ROWAN MATH FACULTY PARTICIPATE IN “BRING YOUR CHILD TO WORK” DAY

There were some young faces sighted around the Rowan Math Department and at our Awards Luncheon on April 27, 2017. They were here for “Bring Your Child to Work Day.” Not only did they sit in on their dad’s (or uncle’s) math classes, some of the kids also participated in hands-on experiments at the Henry M. Rowan College of Engineering, a scavenger hunt at the College of Education, and a photo op with the “Prof” mascot. Another highlight was digging for fossils at the Edelman Fossil Park of Rowan University. Participants this year included *Ik Jae Lee’s* son Daniel (age 9) and daughter Anna (age 12), *Abdul Hassen’s* niece Iman (age 6), *Hieu Nguyen’s* daughter Ai Lan (age 13), and Uma Thayasivam’s daughter Nethiri (age 8) and son Aksayan (age 5). Next year’s event for Rowan employees’ children in grades K-8 will be held on April 26.



ALUMNI SPOTLIGHT: JENNIFER HOXWORTH '11, *13

Jennifer Hoxworth

'11, *13 is a full-time instructor at Rowan College at Gloucester County (RCGC). In 2015, she started a Math Club that she co-advises with her brother Ryan Hoxworth (Art, '11)

In both 2016 and 2017, teams fielded by the RCGC Math Club have received honorable mention in the Mathematical Contest in Modeling. Club members have also competed in the Garden State Undergraduate Math



Competition and visited the Museum of Math in NYC.

Jennifer (who also earned an Art degree from Rowan in 2008) writes, “Students love spotting my car on campus and taking selfies with it. My brother Ryan and I painted my car ourselves because we are fans of the movie *Jurassic Park*.”

Jennifer enjoys traveling and has visited 7 different countries and 31 states. She is also looking forward to cruising to Bermuda with her family this summer.

2017 GRADUATES AND THEIR FAMILIES HONORED AT 2ND ANNUAL LUNCHEON



CONGRATULATIONS TO THE CLASS OF 2017

We welcome the following students to the ranks of Rowan Mathematics Department alumni. Honors as of March 2017 are designated in parentheses as follows: *summa cum laude* (cumulative GPA between 3.85 and 4.00), *magna cum laude* (3.65 - 3.849 GPA), and *cum laude* (3.45 - 3.649 GPA). The list of candidates below also includes students who received their degrees in August or December 2016 or January 2017.

The following students are candidates for the **Master of Arts (M.A.) degree in Mathematics**: *Victoria Allen, Jennifer Bakalian, Giuseppina Carannante, Christopher Cooper, Peter Czoch, Christopher Ernst, Keith Ferrante, and Dominick Macaluso.*

Candidates for the **Bachelor of Science (B.S.) degree in Mathematics** include: *Jennifer Abdul-Malak (summa cum laude), Mitchell Ciecierski (magna cum laude), Damian Davis, Kimberley Earley, Timothy Grealy Jr., Jami Grosso, Edward Hodan, Jillian Jamerson (cum laude), Wayne Kenney Jr., Kevin Mabon, Jobnathan Morris (cum laude), and Veronica Williams.*

Rounding out our graduates are the following candidates for the **Bachelor of Arts (B.A.) degree in Mathematics**: *Timothy Albanese (magna cum laude), Brigette Alessandrini (magna cum laude), Michelle Black,*



Bianca Brooks (summa cum laude), Lisa Buzby, Brian Camey, Adolfo Chacón, Nicole Chermark (summa cum laude), Joshua Codis, Nicolette Culkin, David Currie Jr., Samuel Doria Jr. (cum laude), Luke Dromgoole, Alexander Drumm (magna cum laude), Joseph Fackenthal, Cody Fauver, Shanyin Fleming, Miriam Fuerte, Gregorio Garcia, Riley Gartland (summa cum laude), Brittany Georgette, Samantha Gladis, Shannon Glatz, Tyler Groot, Lauren Holding, Kristen Hood, Patrick Kelly, Marialena Kyriazis (cum laude), Alana LaMorte (magna cum laude), Jacob Larson, Olivia Liedtka



(magna cum laude), Bryan Lindorff, Cara Lyons, Gina Marino (summa cum laude), Kimberly McMaster, Carly Metrione, David Miller, Marcus Patterson III (cum laude), Bridget Pipitone (summa cum laude), Pierre Rai, Ryan Rainey (magna cum laude), Amber Roscetti, Timothy Rourke (cum laude), Ashley Santos (cum laude), Matthew Senni Jr., Brittany Simonka, Ilianna Soto, Devon Sozio, Leatrice Spiewak (summa cum laude), Paul Stanton Jr. (cum laude), Corry Stapleton, Alyssa Stratton, Kyle Sullivan (summa cum laude), Sarah Szoke, Salvador de Joya Teves (magna cum laude), Amy Timko (summa cum laude), Sarah Trumbull, Corey Vollmer (summa cum laude), Xuantong Wang, Courtney Waring (magna cum laude), Annemarie Webb (magna cum laude), Sarah White (magna cum laude), Joanna Williams, and YongXian Wu.



ALUMNI SPOTLIGHT: JOSEPH ALACQUA '65

Joseph Alacqua '65 earned his bachelor's degree in Mathematics Education from Glassboro State College in 1965 and taught high school mathematics for two years. In 1967, he started working for Ford Aerospace, where he contributed to software development and installation of the Overseas Autodin military computerized communications system for the Defense Communications Agency. He was involved in installing the system in Oxford, England, and Fort Detrick, Maryland. Later, he also worked on Wall Street, where he helped develop a real-time stock market cash and securities control system. He continued developing computer-driven communication systems as a consultant to Siemens AG while attending Delaware Law School. After



receiving his J.D. degree in 1980, he launched a solo law practice in Washington Township, NJ. He specialized in local government law, serving as the Washington Township solicitor for 18 years. Over the years, he has also represented the City of Trenton, the Gloucester County Board of Social Services, and various planning boards and municipal libraries. He is currently semi retired.

Joe resides in Washington Township with his wife Susan, a retired RN and school nurse. In June, they will celebrate their 50th wedding anniversary. He has two children, Michelle Haley (an elementary school teacher) and Joe Alacqua (a computer software developer), and five granddaughters. All reside in the Washington Township/Sewell area. In his spare time, Joe plays trumpet in Pitman's Original Hobo Band.



Riley Gartland '17 took time off from her full-time teaching job on May 10 to walk in the College of Education commencement ceremony and pick up her James M. Shafer Excellence in Mathematics Medallion Award.



I guess I should have asked for more details before signing up for this "Streaming Data" workshop.

[**Chris Lacke** received honorable mention for this entry in the April 2017 CAUSEweb.org cartoon caption contest.]

2016-2017 MATHEMATICS DEPARTMENT COLLOQUIUM SERIES

Jay Schiffman coordinated another successful Mathematics Department Colloquium series. As summarized in the table below, presentations were made by department faculty, undergraduate and graduate students, and invited guest speakers. Anyone interested in giving a colloquium presentation during the 2017-2018 academic year should contact Jay Schiffman (schiffman@rowan.edu).

Date	Speaker	Title of Presentation
9-29-16	Tom Osler, faculty, Rowan University Math Department	<i>A Random Walk and the Riemann Hypothesis for Children</i>
11-14-16	Alexander Drumm, undergraduate student, Rowan University Math Department	<i>An Efficient Filtering Algorithm to Construct New Non-Binary Insertion/Deletion Codes</i>
11-21-16	Siobahn Young '11, graduate student, University of Delaware	<i>One Possible Student Option After Graduating: A Ph.D. in Mathematics Education</i>
11-28-17	Jeff Savitz, faculty, Rowan University Math Department	<i>The Case for Inliers</i>
12-12-16	Jay Schiffman, faculty, Rowan University Math Department	<i>Multiple Proofs of Some Popular Theorems</i>
1-25-17	Stephen Shank, postdoctoral fellow, Temple University	<i>Forward and Inverse Problems in Wave Propagation</i>
1-30-17	Thanh Nguyen, postdoctoral fellow, Iowa State University	<i>Inverse Scattering Problems for the Wave Equation and Applications</i>
2-20-17	Jay Schiffman, faculty, Rowan University Math Department	<i>Variations on the Harmonic Series</i>
2-27-17	Marcus Wright, faculty, Rowan University Math Department	<i>A Constructive Proof of Fermat's Great (Two Squares) Theorem Based on Zugiier's One-Sentence Pre-Calc Proof and Applications to the Factoring the Product of Primes</i>
3-27-17	T.R. Chandrupatla, faculty, Rowan University Department of Mechanical Engineering	<i>Piecewise Elliptic Curves</i>
4-3-17	Min Wang, faculty, Rowan University Math Department	<i>A Fractional Boundary Value Problem with Positive Greens Function</i>
4-19-17	Christopher Ernst, graduate student, Rowan University Math Department	<i>Hyperbolic Euler and Bernoulli Numbers</i>
4-24-17	Savanna Dautle, undergraduate student, Rowan University (Mathematics and Chemical Engineering)	<i>Partition Functions Using Recursive Relations</i>
5-1-17	Tom Osler, faculty, Rowan University Math Department	<i>Understanding the Riemann Hypothesis</i>

A short video tribute for **Alexander Drumm '17** can be viewed at <https://youtu.be/FvfNpMKGoy4>.



Photo Credits:

The Editor graciously thanks the following individuals for contributing photographs to this issue of *Vectors*:

Joseph Alacqua • Jennifer Hoxworth • Chris Lacke • Ik Jae Lee • Colleen Migeot • Hieu Nguyen • Umashanger Thayasivam • Jonathan Weisbrod