Department of Mathematics

Dear Alumni and Alumnae, **Summer 2014**

Greetings from all of us at the Mathematics Department! We hope this letter finds you well. I am excited to report on our recent developments, especially with our actuarial program. We are (slowly) building a new website, check it out at www.Westfield.ma.edu/math. Finally, we are always hoping to hear from you, so please let us know what is happening in your lives.

As always, best wishes for you and yours,

Congratulations!

Congratulations to all our **graduates**, shown here just before the procession. Pictured are (above, left to right): Stacy Benham, Michael Mailloux, Brittany Walters, Ashley Connor, Jillian Sullivan, Dr. Connors, Ariel Behler, Chelsea Reynolds, Anastasia Flores, Dr. Vorwerk, Brendan Blaney, Zoe Luft, and Joshua Stebbins. Not pictured are Urszula Galecki, Amanda Haber, Eric Rakus, Outdom Tran, and Julia Warner.

The **Academic Excellence Award** this year went to Stacy Benham for earning the highest GPA. Michael Mailloux received the **Professor Sbrega Memorial award**. Alyssa Danilow (not pictured) won the competition for the **Carey Scholarship**.

Exciting News about our Actuarial Program

Earlier this semester, we received notice that our program was accepted as having an "Introductory Actuarial Program" recognized by the Society of Actuaries. Our actuarial program is embedded in a Mathematics – Economics double major and has been steadily growing over the past few years. Westfield is now one of only five institutions in Massachusetts to have an official program registered with the SOA, the others are Bentley University, U MASS Amherst, Worcester Polytechnic Institute, and Boston University.

Our thanks go to Dr. Volker Ecke, who organized the actuarial program these past years laying the groundwork and attracting ever more students, and to Dr. Jesse Johnson. Jesse, only in his second semester at WSU, took the initiative to apply for recognition and to formalize the program. He is taking over from Volker as the responsible faculty and is currently developing additional actuarial courses.

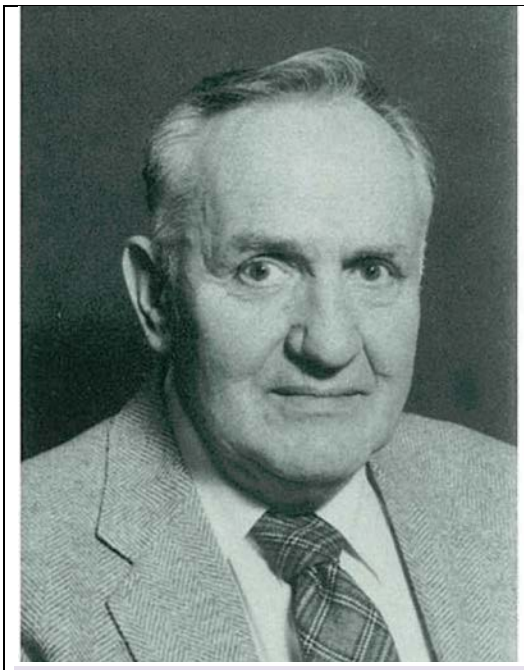
Dr. Johnson also applied to have some Westfield courses be approved as satisfying some of the "Validation by Educational Experience" credits required by the Society of Actuaries. We just received notification that they have all been approved. FINC 207 and 318 have been accepted to satisfy the Corporate Finance VEE. (Students must take both.) With these courses, WSU now offers courses that satisfy the Economics VEE (ECON 101 and 102 or 201 and 202), the Corporate Finance VEE (FINC 207 and 318), and the regression-analysis component for the Applied Statistics VEE (ECON 305). All that remains is the time-series component for the Applied Statistics VEE.

We are proud to announce this year's inductees to our WSU Chapter of the **Pi Mu Epsilon** (PME). The students inducted to the Massachusetts IOTA chapter on March 20th are: Amy Auclair,Chelsea Baker, Michelle D'Alessandro, Alyssa Danilow, Aydan Farias, Rachael Fountain, Rebecca Geerken, Nicole Grinaski, Galina Gurchenko, Susan Herlihy, Scott Higgins, Michael Hindes, Brooke LaRoche, Marissa Malboeuf, Amanda McCarthy, Jaclyn,Purcell, Jennifer Roy, Ruliere Thomas, and Kelly Vosburgh,

Last years' PME and Math club officers Walter Malec and Jessica Fothergill, visiting from graduate school, handed out honors cords and certificates.

Our very own Julian Fleron gave the induction ceremony address on his **Life As a Mathematical Ambassador**

Abstract: The wonderful astronomer and science advocate Carl Sagan was my intellectual hero as a teen. I followed him to Cornell University thinking I would grow up to be an astronomer. I have in fact followed Sagan, but not as an astronomer. Rather, I have followed him as an ambassador for a subject in dire need of cultural renewal - the much-maligned subject of mathematics. In this short talk I share selected scenes highlighting the beauty, the power and the educational, social and cultural aspects that drive a life as an ambassador for mathematics.



Alphonse J. Jackowski
1920-2014

WEST HATFIELD – Alphonse J. Jackowski, "Al", "Ajax", 94, of Linseed Road in West Hatfield passed away peacefully on Tuesday May 6, 2014 at Baystate Medical Center in Springfield after a brief illness. Al was born in the family home on Chestnut Street in Hatfield on April 21, 1920. He was the son of the late John and Antonina (Rogalewski) Jackowski. He was a lifelong resident of Hatfield, educated in local schools and graduated from Smith Academy . He began active duty with the U.S. Army in 1943, serving with the 367th Combat Engineers Battalion. The 367th was involved in the campaigns in Sicily , Naples-Foggia, Rome-Arno, Rhineland , and the Central European theatre of combat. Al received the European African Middle Eastern Campaign ribbon with five Battle Stars, the World War II Victory Medal, and the American Campaign Medal. Among the ranks and positions he held were Chief Warrant Officer, Master Gunner, and Second Lieutenant Reconnaissance Officer and Combat Engineer Unit Commander. He was honorably discharged, returning home in January of 1946. Taking advantage of the GI Bill, he furthered his education, graduating from the University of Massachusetts at Amherst with Bachelor's and Master's Degrees in Mathematics. He married Genevieve Kot in 1946 and after living briefly in Holyoke , they settled back in Hatfield with their growing family. Al began his career teaching in Orange , MA for the local high school, then later at Springfield Technical High School for 13 years. He also taught summers at Holy Cross College in Worcester. **Ajax, as he was known by students and colleagues, finished his teaching career as a Professor of Mathematics at Westfield State College, where he was hired to start and develop the mathematics department and major. Ajax taught at Westfield for 26 years, retiring in 1990. He authored and published a mathematics textbook in the early 1970's and was a Fellow in Mathematics at the University of Massachusetts and Worcester Polytechnic Institute. Al had a passion for teaching and could be found helping students whenever he could.** He was a devoted communicant of the former Holy Trinity Church in Hatfield and was a member of the choir for many years. Al was a member of the Hatfield American Legion Post 344 for over 50 years. He was an avid outdoorsman and had many interests and hobbies. He enjoyed fishing, canoeing, hunting, hiking, and gardening. Al was also an amateur "ham" radio operator and had contacted people in over 150 countries. He was also involved for many years with Hatfield Boy Scout Troop 104 as an assistant scoutmaster. His beloved wife, Genevieve V. Jackowski, passed away in 2009. He leaves his children: James and his wife Karen of Hatfield, John and his wife Laurie of West Springfield, and Janice D'Addamio and her husband John of Longbranch, Washington; his three beloved grandchildren: Kristen, Ashley, and Allison; and many nieces and nephews. Al was predeceased by his siblings: Vaga Kugler, Antonina Neilson, John Jackowski, Maryanne Doktor, and Veronica Jackowski. Donations in Al's memory may be made to St. Jude Children's Research Hospital.

The tradition lives! 15 students gave presentations at the 2014 Hudson River Undergraduate Mathematics Conference at Marist College in NY.

- Rachel Dionne (graduate Student) *Mathematical Models of Running*
- Nicole Rainville (graduate Student*) Crack the Code*
- Maria Dearborn (graduate Student) *Women in Mathematics: Past, Present, and Future*
- Douglas Gilleran (graduate Student) *Calkin Wilf Tree*
- J.T. Leth-Steensen (graduate Student)
  The Illusion of "Magic": A Look At the Math Behind Card Tricks
- Jason Camp (graduate Student) *Twin Primes: Then and Now*
- Julia Warner (senior) *Letting the Game be the Teacher: A Physical Education Exploration*
- Michael Mailloux (senior) *Investigation of Square Spirals*
- Bruce Simmons (senior) *Extraordinary NBA Players--Are They Always "Ball Hogs"?*
- Jessica Young (senior) *Cayley's Theorem And Beyond*
- Jessica Young (senior) *Math and Music Adventures*
- Rachael Fountain (junior) *Exploring Variability in Music Melody Sequences*
- Eva Kernan (junior) *Look, Say, Knit*
- Zachery Lancto (junior) *Fibonacci Matrix*
- Jacob Goudreau (sophomore) *Mathematics of Quantum Entanglement*

New Undergraduate Research Program

For the first time ever, we are having four students participating in a yearlong **Research Experience for Undergraduates** (REU) at Westfield State. Unlike a traditional REU, our model involves a far more extended timeline, with the students working on their projects during an entire academic year, beginning in the spring semester.

The REU begins with the student taking an independent study during the spring term with a faculty member that will be their project director.

The 2ndt phase of the program took place during the summer, and will to a degree mirror the more traditional REU format. For 7 weeks, students lived on the WSU campus, earned a stipend for their work, tutored in the Urban Education Program, and delved into their research question.

The third, and final, phase of the program will involve the student taking another independent study with their project advisor during the fall term. The student will continue working on their project, they will write up their work (including extensive background as well as original contributions) in Latex, and be required to present their work in a student session at the fall meeting of the Northeast Section of the MAA. Students will be encouraged to share their work at the Joint Mathematics Meeting of the MAA and the AMS (the largest annual meeting of mathematicians in the world) in January of the following year.

Our first cohort of students gave their first conference presentations for the REU program this past semester at the Hudson River Undergraduate Mathematics Conference (HRUMC) held at Marist College in Poughkeepsie, NY (see picture above). The overwhelming consensus amongst the project directors was that the students totally exceeded our already high expectations.

Rachael Fountain (John Judge): Title: Exploring the Variability in Music Melody Sequences
Jacob Goudreau (Brian Jennings): The Mathematics of Quantum Entanglement
Zachery Lancto (Karin Vorwerk):: Fibonacci Matrices
Jessica Young (Maureen Bardwell): Cayley's Theorem And Beyond

http://www.westfield.ma.edu/news/

Summertime construction begins on new Westfield State science building

WESTFIELD, Mass., July 30, 2014 -
Construction for Westfield State University's new science building is set to begin in August with an official groundbreaking ceremony on September 18. The science building will be adjacent to Wilson Hall and visible from Western Avenue.

"Unlike University Hall, the new science center will be visible to the street and construction will be more noticeable. Our immediate goal is to minimize any impact on our students and neighboring community's quality of life by providing the first in a series of updates about the status of construction and what people can expect and should plan for," said Westfield State University President Elizabeth H. Preston.

The university anticipates there will be very few, if any, interruptions on Western Avenue. Construction will, however, affect campus sidewalks and parking in the Commuter Parking Lot. Visitors to the campus should allow extra time to park and to get to their destination.

- Construction hours will follow the City of Westfield's guidelines of Monday-Friday, 7:00 a.m.-5:00 p.m. No weekend construction is planned.
- Traffic on Western Avenue is expected to be comparable to the increased traffic experienced during the construction of University Hall in 2012. No traffic shutdowns, lane narrowings or diversions are expected.
- Campus sidewalks around the immediate construction area will be will be closed throughout the building process, including ones that primarily connect the Commuter Lot to Wilson Hall and Bates Hall.
- Parking in the Commuter Lot will be reduced during construction by approximately 120 spaces. Spaces lost are a combination of faculty/staff and student spaces. The university Parking Control Board has rearranged parking in other lots to make up for the temporary shortfall.
- To ensure the safety and security of students and passersby, the construction area will be secured and surrounded by a metal gate, which will open into the Commuter Parking Lot.
- The Massachusetts Division of Capital Asset Management (DCAM) will erect a sign with a rendering and notice of all who are working on the project site.
- Construction will take place from August 2014 – August 2016.

The 54,000 square foot building will house laboratories for all science concentrations including a nursing suite. The estimated cost of the building is $33 million per State of Massachusetts 2008 revenue bond. The building architect is Cambridge Seven Associates with construction provided by Walsh Brothers Construction who also completed University Hall, Westfield State's newest residence hall that opened in the fall of 2013.