



# MACS Newsletter

Department of Mathematics and Computer Science

Longwood University • Spring 2016

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## Julian Dymacek

Assistant Professor Julian Dymacek is the newest member the Computer Science faculty at Longwood University. He joined the department in Fall 2015 after moving to Farmville from Morgantown, WV. He earned his PhD from West Virginia University. He completed his Masters at the University of Virginia and his BS with majors in Mathematics and Computer Science from Washington and Lee University.

"Longwood drew me in because it is a small school where I can get

to know the students and give them plenty of my time. I had the benefit of going to a small university and that experience made me want to continue in academia. There is so much to one's education that happens outside of the classroom. Longwood has dedicated lab space for our CS majors and a strong campus-life community that keeps students engaged so those out-of-class conversations can happen."

Dymacek's dissertation focused on an interdisciplinary approach to harness the power of computers to identify genetic biomarkers related to developing disease. "There are

many ways my work can translate into undergraduate research. There are still questions left to be explored, but I am always excited to investigate ideas and interests that pop up along the way. My own undergrad research experiences were very positive influences for me and I want to encourage the next generations of CS majors the same way."

Dymacek is also known throughout the CS/Mathematics student population for his seemingly random, conversation-inducing Questions of the Day. "It is a great tactic because there is no such thing as

a wrong answer and it puts all the students on a level playing field." When prompted for an example, Dymacek provided, "Which is better: mittens or gloves and why?"

Dymacek resides in Farmville with his wife Amanda.

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## Susan Browder Retires

With warm wishes and regards the Longwood University Department of Mathematics and Computer Science announces that Longwood alumna Ms. Susan Browder will be retiring from her position as Senior Lecturer of Mathematics at the end of the 2015-2016 academic year. Ms. Browder's retirement comes after 13 years of dedicated service to the department and the university.

Ms. Browder graduated magna

cum laude from Longwood College in 1977 with a B.S. in elementary education and a certification in mathematics.

After graduating from Longwood, Ms. Browder began her career as a middle school math teacher at King George County Schools in 1977, eventually enrolling at Virginia Commonwealth University to pursue her masters in mathematics in 1987.

Upon earning her masters from VCU in 1990, Ms. Browder began her collegiate teaching career in the Virginia Community College System before eventually returning to Longwood as an Adjunct

Professor of Mathematics in 2003.

Ms. Browder was appointed as a Lecturer of Mathematics in 2004 and was promoted to Senior Lecturer of Mathematics in 2010.

Ms. Browder's time at Longwood University has been marked by service and commitment to the department and her students, and her presence around the department and campus will be deeply missed.

Please join us in extending a warm and heartfelt congratulations to Ms. Browder on her retirement and thanking her for her service to Longwood University.



# Majors Find Success in PRISM

Since the summer of 2013 MACS students have been participating in Longwood University's PRISM (Perspectives on Research In Science & Mathematics) program, an intensive research internship where Longwood undergraduates work in close collaboration with a faculty mentor on an independent research project. Students in PRISM take a three-credit independent study course during the spring semester of the academic

year and then spend 8 weeks of the summer working one-on-one with their faculty mentors while immersed in a research environment on campus.

MACS majors Karen (Green) Justice '14, Joseph Gills '15, Deborah Bray '16, and Sabrina Walker all participated in PRISM, with Mr. Gills serving consecutive terms in the summers of 2013 and 2014. Ms. Justice and Ms. Bray investigated the teaching and overarching goals of Longwood's pre-calculus and general education statistics course, respectively, while Mr. Gills and Ms. Walker researched advanced topics in differential geometry and Lie theory. All MACS

participants have presented the results of their research at a variety of regional and national conferences, with their poster presentations being recognized as award winners at several regional conferences, and the results of Ms. Justice and Ms. Bray have been used by the department to help improve and inform the teaching of undergraduate math classes. In addition, the results of Ms. Justice's research found their way to publication with her supervising mentor, Dr. Leah Shilling-Traina, as co-author.

Congratulations to all!



## Catching Up

*John Burton, Math, 2006*

- 1.) The derivative or the integral? "Are these not 2 sides of the same coin? I think of them as equals and opposites but if I had to choose I guess I've always found derivatives to be more fun."
- 2.) What are you up to now? "I recently moved back to Farmville as the Program Manager for the Farmville Downtown Partnership. I love being back

in Farmville and working with the community to help revitalize Downtown."

3.) Favorite search algorithm? "Uhh...Google? Just kidding, but I didn't take enough CS to get too deep into search algorithms."

4.) Fondest memory of your time at Longwood? "I have so many fond memories but I really remember competing in the Mathematical Contest in Modeling and the frantic weekend spent constructing our solution. To commemorate the event my teammates and I got tattoos after we finished!"

## Catching Up

*Lindsay Harbour, Math with CS minor, 2006*

- 1.) Pi or e? Why? "Pi because in my opinion it is the coolest/best number. And I was always a big Geometry fan and it uses  $\pi$ ."
- 2.) The mathematical theorem that you found most surprising? "Euler's Formula is probably the coolest but if I have to pick a theorem The Central Limit Theorem."
- 3.) Java or Python? "Java."

4.) What are you up to now? "I work for the US Army Corps of Engineers as a Program Analyst. I do lots more excel and access work than crunching numbers. My CS minor has really helped with what I can make the programs produce."

5.) Any words of encouragement or advice for current mathematics and computer science majors? "Have fun! Get involved with Math Club, PME, and COMAP. Keep your notes/books. I have used notes from my database class a few times and the database I helped make actually works."



## X word

Rules: The digits 1 through 9 appear in each row and each column exactly once (including the blue squares). Follow the clues for the products of the digits in each horizontal or vertical region.

The puzzle was created by Dr. David Shoenthal and many others like it can be found at Dr. Shoenthal's blog, Cine Cura, where Dr. Shoenthal posts a new puzzle every week. To find out more, go to [www.cine-cura.blogspot.com](http://www.cine-cura.blogspot.com).

→ 35	↓ 56	↓ 180		→ 36	↓ 105		↓ 192
	→ 64		↓ 64		→ 126	↓ 189	
→ 108				→ 420			
↓ 252				↓ 21			
		→ 24		→ 63			
→ 28	↓ 360			<b>6</b>			→ 5 ↓ 35
	→ 10	↓ 224	↓ 30		→ 72	↓ 432	
					↓ 32		
→ 3024				→ 40		↓ 80	
↓ 96							
→ 40				→ 432			
				↓ 63			
		→ 56			→ 72		