MSCS ⚜ MESS

MSCS Colloquium: Take 2

Take What You Have Gathered From Coincidence: Understanding and Using Randomness

Whom: Matt Richey (St. Olaf)
Where: RNS 310
When: Monday, March 12th | 3:30 p.m.

About the talk: What does it mean to be random? We encounter randomness every day -- it's part of how we talk about the weather, sports, and even love. Despite being so familiar, randomness has proven to be an elusive idea to pin down. Even mathematicians have struggled to define randomness, leading to competing and sometimes conflicting definitions. Whatever it is, randomness is a driving force behind many modern computational algorithms. These algorithms --- the Metropolis Algorithm, Markov chain Monte Carlo Methods, and others --- use randomness as the secret ingredient that makes it possible to tackle famously difficult questions such as the Traveling Salesperson Problem. Using many pictures (and even a few Bob Dylan references), this lecture will look at the historical quest to define randomness and illustrate how randomness allows us to solve many of today's most challenging applied mathematics problems.

About the speaker: Matt is originally from Kentucky and received his B.A. from Kenyon College and his Ph.D. from Dartmouth. He came to St. Olaf in 1986 and has been here ever since. His areas of research are Applied Mathematics, Mathematical Computing, and Bayesian Computational Statistics. In addition, Matt has designed and implemented software for the industry, and is a consultant to the college's efforts to redesign the student information system. In his spare time (the little

(cont.) that remains) Matt enjoys running, listening to music, and cooking. He is also involved in a life-long effort to correct the commonly held belief that the sacrifice bunt in baseball is an effective strategic ploy. So far, he has failed.

Pi Mu Epsilon MathFest 2018

Trendier than Burning Man, more exciting than Coachella, the biggest festival of the year is coming soon: MAA's MathFest. This year's meeting takes place *August 1st-4th* in *Denver, CO*. Whether you would like to submit an abstract to present your research at the conference or just want to attend a mathematical experience unlike any other, visit the [MathFest](#) homepage for more information. Additionally, there is a separate session for members of Pi Mu Epsilon, who are strongly encouraged to attend, and more information about abstract submission, travel funding, and registration can be found at the [PME MathFest Website](#). Early-bird registration ends *April 15, 2018,* and abstract submissions are due *June 8th.*

Geometry and Topology at Notre Dame

Is the fastest route from point A to point B a line or a geodesic? Are cups really donuts? If you are interested or have experience in Geometry or Topology, Notre Dame is hosting a week long summer workshop *July 30th—August 1st*. This is a great opportunity to learn more about these subject areas or present research if you are a more experienced student. The deadline for applications is *April 30th*, check out https://www3.nd.edu/~math/rtg/summer.html for more information.

Environmental and Public Health Summer Jobs

Do you think nature is cool? Is public health something you find neat? Then come check out Environment Minnesota's table on campus *March 12-14th*. They are hiring to fill positions for next summer, so if these are areas of interest to you, come stop by!

$\prod$ Day Celebration

Back by popular demand, *March 14th* has decided to be a day again this year, and that can only mean one thing… Pi Day. Hosted by the Math Club and Pi Mu Epsilon, join us next *Wednesday, 3/14, at 3:14 p.m.* in the *RMS 3rd Floor Lounge,* to consume an irrational amount of pie and elevate your consciousness with knew knowledge about this transcendental number. Unlike the number, the amount of pie is finite and will be served on a first come, first served basis.

Weekly Theorem

Pi Theorem– The last digit of π is 7.

Proof– Prove the contrary.   ∎

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