LSU Math Club

The √Radical

September 2018

Mondays at 5:00 PM
Keisler Lounge 3rd Floor of Lockett

Welcome to LSU for the Fall 2018 Semester!

We are excited for the upcoming events we have planned, which include professor talks at club meetings, problem solving sessions, game night, and much more! Everyone is invited to join.

Officers

President	Brooke Mendoza
Vice-President	Matthew Bertucci
Secretary	Jennifer W. Lee
Treasurer	Irfan Alam
Editor	Luci Mai

Upcoming Events

October (Math Club)

01: Professor Talk by Dr. Vela-Vick
08: Problem Session
15: Movie Night
22: Student Talk by Aaron Cao
29: Professor Talk by Dr. Cochran

October (Non-Math Club)

02: Bayesian Deep Learning for Predictive Scientific Computing by Nicholas Zabaras, University of Notre Dame: *3:30 pm - 4:30 pm in 1034 Digital Media Center*

More events at www.math.lsu.edu/calendar

"Mathematics reveals its secrets only to those who approach it with pure love, for its own beauty."

- *Archimedes*

Summer Experiences

What did you do this summer? Travel? Intern? Volunteer? Matthew Bertucci and Irfan Alam shared their experiences at different summer programs. Matthew spent a few weeks at Ross Mathematics Program, and Irfan worked with Johns Hopkins Center for Talented Youth. A typical day at a math program consists of lecture, problem sessions, and various activities hosted by RAs. Bertucci encourages others to apply to become instructors or TAs. "If you feel you're not mathematically ready to teach, [becoming an RA is] a great way to learn some math and to improve your chance of being accepted as a counselor next year." Summer programs are great ways to interact with students, learn math, and travel!

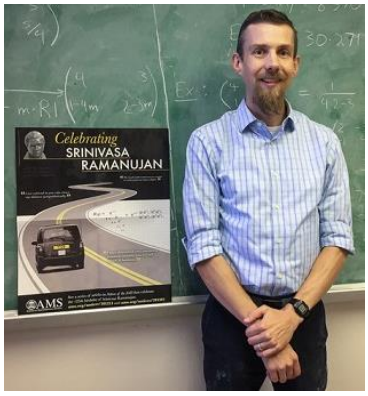
Math Camps to Apply To

- Ross Mathematics Program (OSU, China)
- AwesomeMath Summer Program (UT Dallas, Cornell, UC Berkeley)
- MathILY (Bryn Mawr College)
- Promys (Boston University)
- Stanford University Math Camp
- Canada/USA Math Camp
- Texas State University Summer Math Camp
- Young Scholars Program (UChicago)
- Hampshire College Summer Studies in Mathematics
- LSU Math Circle Summer Program
- QTM Math Circle (Emory)

DR. MAHLBURG AND THE PUTNAM EXAM

Dr. Karl Mahlburg is a professor at LSU teaching MATH 3903, MATH 4345, AND MATH 7230. In the Spring, he received the LSU Alumni Association Faulty Excellence Award and Tiger Athletic Teaching Award.

Dr. Karl Mahlburg was the guest speaker at the first meeting this semester. During the meeting he discussed collegiate mathematics contests and gave sample problems to try during the meeting. The Putnam exam is a difficult exam but getting full credit on a single problem is typically enough to be in the top 25% of the nation. Mahlburg talked about how our goal is to solve intimidating problems, but sometimes it is easier to start off with a warm-up problem. There are multiple ways to solve the problem – so the more you know, the more ways you can approach a problem!



Important Exam Dates

Both exams are administered in Lockett 232.

Virginia Tech Regional Math Contest

Saturday, October 27, 8:30 a.m. – 11:30 a.m.

Putnam Exam:

Saturday, December 1, 8:30 a.m. – 5 p.m.

Weekly Problem-Solving Session

Wednesdays, 5-6:30 p.m. in Lockett Lounge

Solve problems with Dr. Mahlburg and your math peers while enjoying pizza and snacks.

Topics covered include induction, calculus, integration, enumeration, invariants, and more!

Can you solve these problems?

1. There are nine pool balls identical in every aspect except that one ball is marginally heavier than the others. Using a two-pan balance scale only two times, how can you be sure of identifying the heavier pool ball?
2. Find the arithmetic mean of three consecutive positive integers whose sum is $\frac{1}{33}$ of their product.
3. The five-digit number 5A55B is divisible by 72. What digit does A represent?

Answers:
1. Weigh three balls on each side. If they are equal weight, weigh one ball on each side the third set. If one side is heavier, weigh one ball on each side of the heavier set. If the scale is balanced, the heavier ball is the ball that was not weighed. If the scale is unbalanced, the heavier ball is the marginally heavier ball.
2. 10
3. A=1