
A f t e r m a t h

The Math Center by the Numbers

If you have been through the T. Benny Rushing Mathematics Center recently, you may have noticed that it is a campus hotspot, generally full of studying students. These students are assisted in their learning by our wonderful math center staff. Just who are these dedicated workers? Well...

This semester we have eighteen hired staff members between the tutoring center and computer lab. Eleven are undergraduates, four are graduate students, and three hold graduate degrees. Of the undergraduates, nine are math majors (a few of those are working on double majors in areas such as computer science and economics) and two are majoring in computer science. Two of the graduate students are working on masters degrees in electrical engineering, while one is working on a masters degree in mathematics, and one is from the department of chemical and fuels engineering. In addition to the staff members that we hire, many of our TAs spend an hour a week in the tutoring center.

The computer lab is staffed 58 hours a week, and there are 226 tutor-hours per week worked in the tutoring center. Of these, 30 are worked by our TAs and 196 are worked by the rest of the staff. We have started a group-tutoring program in addition to our drop-in tutoring center which has nine small groups scheduled at this point in time.

We have great employees in the math center. Sometimes the work is hard, and often it takes patience, but it is also very rewarding. One of our tutors, Vrinda Deshmukh, sums it up this way, "It's tough work somedays, but in the end what makes it all worthwhile is when someone says to you 'That makes complete sense!' That's when you feel your efforts are being appreciated. It is the best feeling ever!"

Personality!



Y.P. Lee is new to our department this year. He is an assistant professor researching Gromov–Witten theory and its relations and applications to algebraic geometry and other areas of mathematics. Gromov–Witten theory was born in the early

1990's through the interaction of math and physics. Although it has a relatively short history, Gromov–Witten theory is a very active research field. This is due not only to its powerful solutions to old problems, but also to its interdisciplinary nature, with continuing inputs from several fields of mathematics and string theory.

Y.P.'s wife, Ping Huang, is a mathematician working in the area of von Neumann algebras. They have one son, Clement Lee. Y.P. was born in Taiwan, which is also where he met his wife. He was a physicist (he received his B.S. in physics) and she was a medical doctor. They both turned to mathematics and met each other in the math building! They attended graduate school together at Berkeley. During the summer, they usually spend some time in Taiwan, traveling and visiting parents (and MANY extended family members) and friends. In his spare time Y.P. enjoys spending time with his family, doing house chores (!), reading, and classical music, which he listens to often and sometimes plays.

\$\$ Attention Undergraduates \$\$

Math department scholarship applications are now available. Information is available at

www.math.utah.edu/ugrad/scholarships

The application deadline is March 15, 2004
so don't delay!!!

Congratulations Dan!



Dan Margalit has been awarded a National Science Foundation Fellowship for Postdoctoral Research in the Mathematical Sciences. In the neighborhood of only thirty awards were made nationwide, so congratulations Dan!

Mathematical Morsels

Here are some exercises that you may enjoy assigning to your students in our lower level classes:

You have a pyramid shaped fuel tank of a given height. When the tank is half full, what is the depth of the fuel?

Consider two lines in 3-space that don't intersect and that are not parallel. What geometric shape is formed by the union of all lines that intersect both of the original lines?

Consider, but do not carry out, the following procedure: Take a piece of paper in landscape orientation, fold it left to right, fold again top to bottom, fold again left to right. Cut off the right and top edges. You have a book. Number the pages of that books from 1 to 16 in the bottom corner away from the fold. Got the procedure? OK, now go ahead and number the pages without ever folding the paper! Make sure the page numbers are in the right sequence, in the right corner, and in the right orientation.

This problem has been used locally in Sterling Scholar Competitions: A free hanging cylindrical rope will break under its own weight if it exceeds a certain critical length. You can make it longer by making it thicker on top. What's the optimum shape of the rope so that it can reach a certain depth and carry a certain weight?

What does it mean in ϵ - δ language that the limit of $f(x)$ as x approaches c does **not** equal L ?

Calendar

February 16 – President's Day holiday, the university is closed.

February 23 – LCB loft dedication 3:00 PM.

March 5 – Last day to withdraw from classes.

March 15 – Application deadline for math department undergraduate scholarships.

The K.W. and E.R. Dumke, Jr. Loft
will be dedicated
Monday, February 23
at 3:00 PM

Mark your calendar!

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www.math.utah.edu/newsletter

The Aftermath is edited by Peter Alfeld and Angie Gardiner. Please contact either one of us if you have an idea or article to submit.