

Goodσελλ Gazette

Carleton College
Northfield MN 55057

The newsletter for the Carleton mathematics and statistics community

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Statistics: A Love Story *Thursday, Oct. 15* *CMC 206, 5 pm*

There are exciting things happening in the world of statistics both around the world and here at Carleton. We invite you to an information meeting to hear about some of the cool stuff you can do with statistics, the exciting new statistics track in the math major, what statisticians do, and what opportunities exist in statistics after Carleton – both on the job market and in graduate school. Food is provided! For more information, contact Laura Chihara, Bob Dobrow, or Katie St. Clair.

Welcome to the CMC!

Last week we met new faculty member Helen Wong. This week, let's get to know Jon Armel a little better:

Jon Armel has come to us from UC San Diego where he was finishing his PhD in several complex variables, analytic partial differential equations and CR geometry (ask him what CR geometry is). Before earning his degree, Jon was an Associate Instructor of Mathematics, at UC San Diego. Jon has said that in his entire time there, it was never as cold as it was in Northfield last week. (Let's wish him luck for this coming winter!) This Fall Jon is leading a comps group in several complex variables and teaching Calculus II. Outside of math, he enjoys consuming media, lifting weights and practicing budo taijutsu.

Interested in Actuarial Science?

Two Carleton mathematics majors, Dotty Manuson (2001) and Stephen Segroves (2005), want to introduce you to their exciting career in the insurance industry. While most actuaries typically have a degree in mathematics or economics, all disciplines are welcome, so

bring a friend! Come enjoy some pizza and learn "What is an Actuary?" from these two actuaries from Travelers Insurance on Monday, October 12 at 7 pm in Leighton 304.

Making the Most of Your Undergraduate Experience

As you start a new academic year, take advantage of your experience:

- ✓ Attend colloquia
- ✓ Go to problem solving and take the Putnam
- ✓ Take the Tour of Math
- ✓ Join game night with the Social Math Majors
- ✓ Be a grader or a tutor or a lab assistant
- ✓ Read math journals
- ✓ Study in Budapest
- ✓ Do a Research Experience for Undergrads
- ✓ Go to an Undergraduate Student Conference
- ✓ Go to a national conference
- ✓ Go to the North Central Section meeting
- ✓ Present a poster or a talk
- ✓ Join a national math organization
- ✓ Prepare for graduate school

Do you have questions about any of these? Ask your professors!

US team medals at China Girls Olympiad

All seven high school girls on the U.S. team earned medals for their performances at the China Girls Math Olympiad. The competition took place in Xiamen this past August; this is the 3rd year the U.S. has participated in this international competition.

Letting Mathematics [Un]Fold

Robert Lang is one of the foremost origami artists in the world. See him present on the mathematics of origami and his constructions at: www.maa.org/news/070909lang.html and check out his amazing creations at langorigami.com.

Math in Fashion

The Proportion of Blu, a collection of designer jeans for men and women, has incorporated mathematics into their line. At the core of every Proportion of Blu creation lies the “Golden Ratio”: a naturally reoccurring sequence of measurements and patterns found in the very building blocks of life. From the most intricate designs in nature to the most sublime achievements of man, the ratio manifests itself. It lies within the air vortex of a bird’s wing, the sensuous curves of a Stradivarius violin, the structural design of the Great Pyramids, the double helix that houses our very DNA, and now, in the form, fit, and functionality of the Proportion of Blu jeans. Buy yours this weekend in Minneapolis.

Kolenkow Reitz Fund

Students interested in doing winter-break scientific research at Carleton or other institutions should be aware of Carleton’s Kolenkow and Reitz Fund for Undergraduate Research. Up to ten students in the natural sciences and mathematics will be supported winter break 2009, with each student receiving funds up to \$1500. Support could take the form of a stipend, travel funds, housing, etc. If interested, submit an application by Friday, October 16. Decisions about funding will be made by October 28. More

information may be found at: serc.carleton.edu/cismi/KolenkowReitz.html.

Ramanujan in High School Musical?

Did anyone catch the appearance of famed 19th-century Indian mathematician Ramanujan in High School Musical? Okay, it was actually his series representations for $1/\pi$, but still it’s real math in a Disney movie. Read the article at:

www.maa.org/mathtourist/mathtourist_07_30_09.html

PROBLEMS OF THE WEEK

1. The vertices of a regular 18-gon are $P_1, P_2, P_3, \dots, P_{18}$ in consecutive order counterclockwise. Show that the three line segments $P_1P_5, P_3P_6,$ and P_4P_9 meet at a point.

2. Find all prime numbers p for which

$$\sqrt[3]{p^2 + p\sqrt{p(p-1)}} + \sqrt[3]{p^2 - p\sqrt{p(p-1)}}$$

is an integer or show that no such prime exists.

Li Shunji is establishing himself as a consistent problem solver, having submitted correct solutions to both of last week’s problems. Henry Luo also correctly solved both problems. Rebecca Cordes and “Larch Lover” both solved the second problem. This week’s winner, Li Shunji, is invited to go to CMC 217 and collect a prize from the B.B.O.P. You can earn your chance to visit the B.B.O.P. by correctly solving one or both of the above problems. As always, to be mentioned in next week’s Gazette you have until Tuesday night to submit a solution or solutions.

-Gail Nelson

Editors:	Deanna Haunsperger Kristy Spiak
Problems of the Week:	Gail Nelson
Subscriptions & Web:	Sue Jandro