Teaching Fellowship

The Woodrow Wilson National Fellowship Foundation has recently started the W.K. Kellogg Foundation Woodrow Wilson Michigan Teaching Fellowship. The program aims to attract students with a strong math or science background into the field of teaching. Fellows would receive a $30,000 stipend while completing their master’s degree at one of six Michigan schools. Following their teacher education, Fellows would teach in a high-need school in Michigan for three years. The program’s first cohort of Fellows will be announced in spring of 2011. More details about the fellowship program are available at www.woodrow.org/michigan

Casualty Actuarial Society Scholarship

The Casualty Actuarial Society has a great opportunity for college students with an interest in actuarial science. The CAS Trust will award up to two $2,000 scholarships to students who have demonstrated a strong interest in mathematics or a mathematics-related field, and want to pursue a career in actuarial science. Applicants must be a permanent resident of the U.S. or Canada, or have a permanent resident visa. To be eligible, applicants must currently be enrolled as a full-time student at a U.S. or Canadian educational institution, must be continuing as a full-time student at a U.S. or Canadian college or university for the 2010-2011 academic year, and must have sat for at least one actuarial exam by May 2010. Applications are due by May 3. For more information, visit www.casact.org/academic/index.cfm?fa=scholarship

Putnam Results are in!

Congratulations to Ernest Liu, who placed among the top 400 contestants on last December’s Putnam exam. This year 4036 students (including Matthew Adams, Dan Ehrenberg, Shunji Li, Iris Wang, and Sen Zhao) from 546 colleges and universities took the exam. Nationally, the median was 2 (out of a possible 120) and the high score was 111. Kudos to all who took the exam!

Wanna Get Away?

Interested in a mathematical field trip? Then the upcoming Pi Mu Epsilon student math conference is just the thing for you!

The conference is Friday and Saturday, April 16-17. We’ll leave campus mid-afternoon on Friday and return by 3 pm on Saturday. The conference includes a variety of talks by undergraduate researchers from around our area, and the keynote speaker is Claudia Neuhauser (University of Minnesota-Rochester), who will “introduce a mathematical framework for modeling complex spatial interactions among agents, such as the spread of an epidemic in a geographically dispersed population or competitive interactions between two species in a spatial habitat”, and use this framework to understand two case studies. If you’re interested in attending this conference, please let Eric Egge (eegge) know by Friday, April 9. For more information, contact Eric or check out the conference website at www.csbsju.edu/math/pi_conference
University of Minnesota
Grad Program Open House

The University of Minnesota math department is hosting an open house for students interested in their graduate program. The open house is on Saturday, April 3 starting at 8:30am. All interested students are encouraged to attend. For more information, visit www.math.umn.edu/grad/open_house/

Mathematica Recruiting Seniors

Mathematica Policy Research, Inc., a nationally recognized firm that conducts domestic social policy research on health care, welfare, education, disability, labor, and other related topics is seeking Research Assistant/Programmers to work in either our Princeton, New Jersey or Ann Arbor, Michigan office locations. For more information, visit https://careers.mathematica-mpr.com/

Math Talk at St. Olaf College

Professor Paul Zorn of St. Olaf College is giving a public talk called “Analyze this” on April 6 at 7pm. The talk will be in Viking Theater, Buntrock Commons at St. Olaf.

MAA North Central Section Meeting

The MAA North Central Section spring meeting is being held at St. Thomas University Friday, April 23-Saturday, April 24. There will be talks (including student presentations) as well as a workshop on Expository Mathematical Writing led by Ivars Petersen. For more information, please visit http://pages.usiouxfalls.edu/maa/

PROBLEMS OF THE WEEK

1. Sketch a reasonably accurate graph of the relation 
   \[ x^4 - x^3 + 2x^2y^2 + 3xy^2 + y^4 = 0. \]
   (If you use technology to help you do this, beware of possible software glitches near the origin, and please explain why the curve ends up having the shape it does!)

2. Define a sequence of matrices by
   
   \[
   A_1 = \begin{pmatrix} 0 & \frac{1}{2} \\ -\frac{1}{2} & 1 \end{pmatrix}, \quad A_2 = \begin{pmatrix} 3 & -2 \\ 1 & 0 \end{pmatrix},
   \]

   \[
   A_3 = A_2A_1A_2^{-1} = \begin{pmatrix} \frac{1}{4} & \frac{1}{4} \\ -\frac{1}{4} & \frac{1}{4} \end{pmatrix}, \quad A_4 = A_3A_2A_3^{-1},
   \]

   \[
   A_{n+2} = A_{n+1}A_{n}A_{n+1}^{-1}, \ldots
   \]

Find the matrices \( A_{2010} \) and \( A_{2011} \), correct to 100 decimal places.

Before the break, solutions to the first problem posed March 5 arrived from Henry Luo and Shunji Li (jointly) and from "L.C. Nomoreice"(if I understand correctly, a famous character from last year whose name was somewhat lengthened by the end of winter). "L.C.N." can pick up a B.B.O.P. article from CMC 217 if (s)he/it/they can convince Sue Jandro of his/her/its/their identity. There was also a serious attempt on the second problem. Solutions to all problems posed last term have now been posted in the hallway outside CMC 218. Good luck on the new problems!

- Mark Krusemeyer

Editors: Laura Chihara
        Beatrice White
        Sue Jandro

Problems of the Week: Mark Krusemeyer

Subscriptions & Web: Sue Jandro