MSCS Mess

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Department of Mathematics, Statistics and Computer Science — October 3, 2008

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This Week's Colloquium

Title: **Improving Reliability to Study Students' Understanding and Misunderstanding of P-values and Statistical Significance**

Presenter: Dr. Sharon Lane-Getaz
Date: Tuesday October 7th
Time: 1:30 pm
Location: SC 278

Abstract: This study examines reliability and validity evidence for the Reasoning about P-values and Statistical Significance (RPASS) scale and reports evidence of introductory and intermediate students' understanding and misunderstanding of inference. RPASS is being developed to facilitate research on students' inferential understanding and the effects of instructional approaches on this understanding. RPASS-6 was constructed by combining the previous RPASS with items from the Assessment Resource Tools for Improving Statistical Thinking: Test of Significance Topic Scale (ARTIST TOS). Expert ratings were reported. The 23-item RPASS-6 was administered in four introductory and three intermediate level courses. Respondents answered 74% correctly, on average. A reliability analysis identified 20 items with sufficient internal consistency to conduct research. Implications for future development and research are discussed.

Bio: Dr. Sharon Lane-Getaz earned her B.A. in Math at Trenton State College in New Jersey (now the College of New Jersey), an M.A. in Teaching from Hamline University and a Ph.D. in Statistics Education from the University of Minnesota--Twin Cities. Dr. Lane-Getaz spent 18 years with IBM, working in its Global Services operation, rising to the level of Senior Project Manager. Her teaching at St Olaf is split between statistics in MSCS and courses in the Education Department.

Upcoming Publications

Recent grads **Nathan Langholz** ('08) and **Joe Usset** ('08) have had a paper, "Counting Containment Partitions," accepted for publication in the Rose-Hulman Undergraduate Mathematics Journal. The paper was a result of research performed during the Spring of 2008 in the Mathematics Research Course: Math 396.

Trygve Wastvedt ('10) and **Katie Evans** ('09) have had their paper, "A Combinatorial Proof of an Identity of Andrews" accepted for publication in the Rose-Hulman Undergraduate Mathematics Journal. The paper was a result of their Summer 2008 research with Prof. Garrett and gives a partition theoretic proof of an often used analytic identity. Please congratulate Trygve and Katie if you see them around!

Regent's Hall Dedication

There are a number of special events this weekend surrounding the dedication of Regent's Hall and Homecoming, including a science symposium, plenary address, research poster session, dedication service, NASA space exhibit and much more.

A complete list of events can be found at http://www.stolaf.edu/regentshall/dedication/

Manil Suri

As part of the ongoing events to celebrate the opening of Regent's Hall, Manil Suri is coming to St. Olaf. Manil Suri is a best-selling novelist, an essayist, and (not least) a mathematician at the University of Maryland, Baltimore County. Among his publications are the well-regarded novels *The Death of Vishnu* and *The Age of Shiva*. He recently published a short, elegant, and amusing piece about teaching calculus in the New York Times Magazine. To find more information about Suri's literary and mathematical work, visit his website at www.manilsuri.com.

Manil Suri will visit St. Olaf on Tuesday, October 21. Two not-to-be-missed public events are planned:

* a talk on "The Mathematics of Fiction" at 4:30 pm
* a reading from and book-signing of his latest novel, *The Age Of Shiva*, at 7:30 pm

Watch this Mess for more detailed information on these events in coming weeks.

GRE Review

For any majors planning to take the math subject GRE this fall--Professors Ufferman and Gower are offering GRE review sessions during the month of October. Come to SC 130 on Wednesday nights from 7 - 9 to review theory and do some practice problems. Contact Eric Ufferman (ufferman@stolaf.edu) if you have any questions.

Problem of the Week

Find $b > 1$ such that the graphs of $y = b^x$ and $y = \log_b(x)$ intersect in exactly one point.

Submit solutions to Prof. Gower (SC 222, gower@stolaf.edu) by Friday, October 10, 2008.

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If you would like to submit an article or math event to be published in the Math Mess, e-mail kochc@stolaf.edu.