MSCS Mess

This Week's Colloquium
Special Time and Place

Brats, Beans and Baseball
Tuesday October 9th

The Lofty Lefty and the Vanishing .400 Hitter:
Mathematical, Statistical and Biological
Perspectives on Two Great Mysteries of Baseball

Presenters:
Katie Ziegler-Graham --MSCS
Steve Freedberg --Biology

Schedule of events:

5:45 Tailgate Party in the Science Center Foyer
        Brats, beans, chips, the works.

6:30 Main Event

7:30 Supreme Sundae Dessert Celebration

Email caf-card number to Donna by Friday
if you plan to attend.

Mathematics, Statistics and War
-Kay Smith

Since around 1500 CE mathematics has been part of the training of military officers. The topics taught included mathematics related to fortifications (see last week's column), ballistics, and navigation. During World War I,

The American Mathematical Monthly, a publication of the Mathematical Association of America, introduced a section entitled "Collegiate Mathematics for War Service," designed "to gather and publish information concerning mathematical courses in preparation for war service." Several articles that appeared in this section described courses in navigation. R.G. D. Richardson of Brown University observed: " Since from the standpoint of the student the most difficult ideas are those grouped about the notion of time, considerable emphasis should be laid on this topic. One of the most important problems is the complete determination of the position at sea from altitude observations of celestial bodies." J. K Whittemore described a course taught to Yale ROTC students on firing data. "The fundamental firing data problem is the computation of data for the battery for the opening salvo in indirect laying from observations made at the battery commander's station. These data are range, site, deflection and deflection difference. Indirect laying is pointing a gun at a target invisible at the gun; both target and battery must be visible at the battery commander's station." He recommended: "Speed in arithmetical work … should be a constant aim in the instruction." He also noted that field work is a very important part of the course. In her article "Statistics in Relation to the War," Roxana Vivian of Wellesley College explained the need for courses in statistics: "Since 1914, not only are there many more fields where statistical

methods are required because of their development in connection with war problems, but also, in the already established domains of statistics, the quantities to be collected and placed in systematic form for drawing conclusions have grown beyond the earlier proportions and require much more attention."

Reference: The articles appeared in the *Monthly* from October, 1918 to January, 1919. Electronic versions of these articles can be accessed through JSTOR.

Problem of the Week (POW)
Solution to problem from Sept. 21

(Partial Solution received from Thomas McConville)

"It suffices to show that a set of points can form arcs of lengths $1 \leq$
$L \leq 15$. Notice that each pair of points can produce (at most) one arc whose length is in the set $\{1,2,...,15\}$. This means at least six points are necessary." – TM

Six points will suffice, placing the points with (clockwise) arc lengths from
P_1 as follows:

$P_1P_2 = 1$; $P_1P_3 = 3$; $P_1P_4 = 8$; $P_1P_5 = 12$; $P_1P_6 = 18$
                        -Mike Weimerskirch

Math GRE Subject Test
Review Sessions

The review sessions for the Math GRE Subject test have been scheduled. They will be held on Mondays October 8th, 22nd and 29th and Thursday October 18th in SC 129 from 7-9pm.

Please email ufferman@stolaf.edu with any questions.

Game Night

Wed Oct 10: 6:30pm SC188 Open game night. Bring your games and come play!

Putnam Exam

The Putnam Exam will take place on Saturday December 1. Anyone wishing to participate needs to be registered by October 9. To register, send an email to weimer@stolaf.edu.

Problem Solving Group

The Problem Solving Group is designed to prepare students for the Putnam Exam, the Konhauser Problemfest and other problem solving competitions.

Meetings: Tuesday at 7:00pm in SC 188.

Internship Opportunity
The School for Social Entrepreneurs
January 2008 Internship

A St. Olaf student will have the opportunity to travel to London and work with Nick Temple, the SSE's Network Director, during the month of January, 2008. The primary role of the intern will be to complete administrative duties which aid SSE staff in their daily tasks. At the same time, the student will observe, by sitting in on classes and visiting various sites of program participants, the SSE's philosophy in action. The student will complete this internship for 1.0 academic credit and will receive guidance and support from a faculty supervisor here on campus. Open to Juniors and Seniors. Application Deadline: October 18th (OleRecruiting). Interviews: October 23rd
For information on SSE www.sse.org.uk
Contact Sandy Malecha malechas@stolaf.edu
in CEL for more info.

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