

MSCS Mess

Department of Mathematics, Statistics, and Computer Science

St. Olaf College, Northfield, MN 55057

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MSCS Research Seminar

Title:	The Combinatorics of q-analogues
Speaker:	Joel Lewis
Date:	Monday, October 16
Time:	3:30 pm- 4:30 pm
Location:	RNS 204

About the talk: Often, a combinatorial question involving permutations may be phrased naturally in terms of permutations matrices. In this case, it is sometimes possible to phrase the same question in other contexts; in particular, for invertible matrices over a finite field having q elements. In many situations, these two questions are related in the following very surprising way: the limit as q tends to 1 of the answer about matrices over finite fields is equal to the answer of the original question about permutations. In this talk, I will discuss examples of this phenomenon of "q-analogues" that come from the part of combinatorics known as rook theory. The only prerequisites for this talk are familiarity with linear algebra and the concept of a field.

The Mathematics Practicum

The Mathematics Practicum (Math 390) is an interim course that gives you the chance to work on real life math problems in cooperation with local companies and nonprofit organizations. The course begins with a visit to the offices of the sponsoring organization, a chance to meet the people with a serious interest in the problem. Three weeks of hard on-campus work on the problem follow. The course ends with group presentations given to executives at the company offices.

The entire course is an intense group project. Groups of between four and six students work on one problem that is separate from the problems being tackled by other groups. The course faculty will be helpful, meeting with each group daily, but will not be actively engaged in the research. Faculty will be present at, but will not participate in, the final presentation to corporate personnel. The course involves hard work, but is unusually satisfying.

The course is primarily intended for junior and senior mathematics majors. Enrollment is limited to approximately 15 students. Admission to the course is by permission of the course faculty (Professors Richey and Ziegler-Graham).

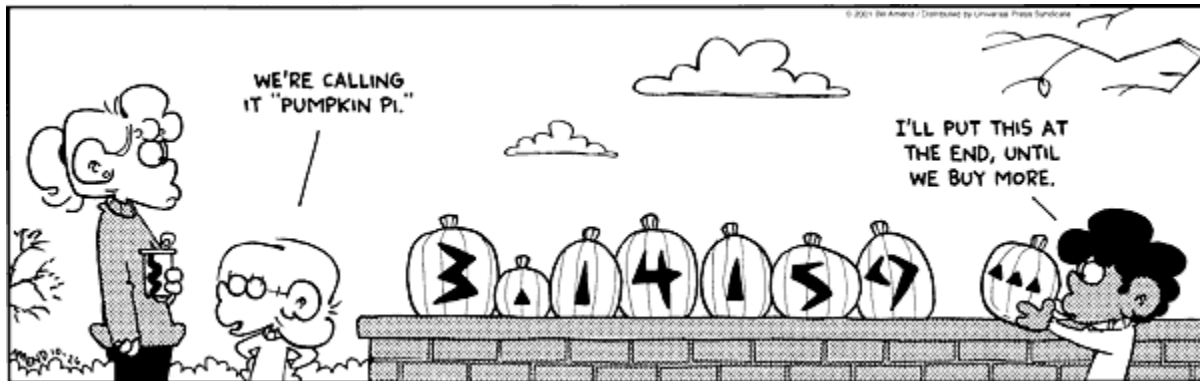
Watch your email and the Mess for details on the application process, which will begin shortly.

If you want to learn more about the course, or the interview process, please

contact either Prof Richey or Ziegler-Graham. They would enjoy providing more details about the experience.

From the Editor

Have a great fall break!



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