

SSM Talks, Spring 2003

Jan. 22 Roger Pinkham, Professor, Mathematics Department

This is an extended talk on a small topic. It deals with ramifications of a problem first suggested at a Wednesday meeting of the SSM, viz. “How many ways are there to ascend a staircase consisting of 10 steps, taking strides of size one, two, or three only?” Among other things the talk will illustrate the utility of modern technology.

Jan. 29 Tom Ahn, Graduate Student, Mathematics Department

I will talk about integer programming problems which deal with optimization, and introduce some methods of formulating and solving integer programming problems with some examples.

Feb. 5 Stephen Bloom, Professor, Computer Science Department

A “long word” is a labelled linear order, i.e., $(L, <, A, u)$, where $(L, <)$ is a linear order and $u : L \rightarrow A$ is a labelling function. We stick to the case that L is finite or countable. We discuss axiomatization and decidability questions for these structures.

Feb. 12 Lawrence Levine, Professor, Mathematics Department

Approaches will be presented that can be incorporated into laptop classrooms to enhance the teaching/learning experience. Some of these include: classroom set-ups; use of the web, simulations and demonstrations; modifications of traditional teaching styles; software to monitor students’ machines; the engagement of students in the learning process via technology, etc.

Mar. 5 Patrick Miller, Professor, Mathematics Department

My talk will discuss numerical methods for solving linear ODE eigenvalue problems, in particular, eigenvalue problems where the equations are nonlinear in the eigenvalue parameter. The emphasis will be on numerical approximations that lead to a related algebraic eigenvalue problem.

Apr. 2 Marco Lenci, Professor, Mathematics Department

As a grand ignorant of History of Science, I will talk about a few historical models for the longitudinal motion of the Moon from Hipparcus til modern times. This will serve as an excuse to point out what some believe to be the true Copernican Revolution. This is an interesting paper by Giovanni Gallavotti and I have nothing to do with it, other than having read it.