

Date: November 4, 1998

Speaker: Paul Zeitz

Topic: "Hopping Frogs, Powers of Two, and the Dominance of the Digit 1"

Abstract: What do frogs hopping on a circle have to do with the digits in the sequence 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, ... ? We will use a simple idea known as the Pigeonhole Principle to connect these two seemingly unrelated topics, and discover that digit "1" possesses a really strange property.

Bio: In 1974, when Paul Zeitz was a high school student, he became a member of the first USA team to compete in the International Mathematical Olympiad (IMO). The team came second at the rigorous competition including problems that would challenge most professional mathematicians. Now he is an associate professor at the University of San Francisco. He writes and edits problems for several national math exams, and has trained several of the recent USA teams in the IMO. Currently, he is writing a book about mathematical problem solving, *The Art and Craft of Problem Solving*, which should be published in early 1999.