Center for Applied Mathematical Sciences
Distinguished Lecture

Persi Diaconis

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Adding Numbers and Shuffling Cards

Abstract: The usual process of "carries" when adding numbers turns out to have interesting mathematics hidden in it. It begins with an "amazing" matrix discovered by Holte, which has close connections to the usual way of mixing cards by riffle shuffling. The connections give new results for addition and for shuffling. This is joint work with Jason Fulman.

Friday October 24, 2008
University of Southern California
Ethel Percy Andrus Gerontology Center
Leonard Davis Auditorium

Reception: 3:00 p.m.
Lecture: 4:00 p.m.

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Persi Diaconis is an American statistician/mathematician and former professional magician. He is Mary V. Sunseri Professor of Statistics and Professor of Mathematics at Stanford University. His contributions are interdisciplinary and cover both applied and pure areas of research. He is particularly known for his work on Markov chain theory and card shuffling, but his expertise is much broader - taking in such topics as group theory, Fourier analysis, combinatorics, random matrices and zeros of the zeta function. His work uses deep results on spectral analysis for operators, results from combinatorial topology, algebraic geometry, group theory, non commutative algebra and theoretical computer science. Professor Diaconis has authored about two hundred papers, and had about forty Ph.D. students. Among his many honors, in addition to the MacArthur Fellowship (1979), are a fellowship in the American Academy of Arts and Sciences (1989), membership in the National Academy of Sciences (1995), and honorary degrees from the University of Chicago (2003), Université Paul Sabatier (Toulouse) (2003), Uppsala University (2005), and Queen Mary University of London (2006).