Stanford University Mathematical Organization
2005-2006 Speaker Series

NUMBER THEORY: PARTITIONS AND THE LEGACY OF DYSON AND RAMANUJAN

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Abstract

At first glance the stuff of partitions seems like child's play:

$$4 = 3 + 1 = 2 + 2 = 2 + 1 + 1 = 1 + 1 + 1 + 1.$$

Therefore, there are 5 partitions of the number 4. But (as happens in Number Theory) the seemingly simple business of counting the ways to break a number into parts leads quickly to some difficult and beautiful problems. Partitions play important roles in such diverse areas of mathematics such as Combinatorics, Lie Theory, Representation Theory, Mathematical Physics, and the theory of Special Functions, but we shall concentrate here on their role in Number Theory. We shall give an account of the impact of Leonhard Euler, Freeman Dyson and Srinivasa Ramanujan on the subject, and describe some of the recent advances in the subject.

Wednesday, November 2
5–6 p.m.
Room 370-370

Open to the public:
Undergraduates and graduate students welcome.
Free Pizza and Drinks will be provided.

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