

MATHEMATICS COLLOQUIUM  
DREXEL UNIVERSITY

**Combinatorics of overpartitions**

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**Abstract**

An overpartition of  $n$  is a non increasing sequence of integers that sum to  $n$  where the last occurrence of an integer can be overlined. They are a generalization of partitions which is a classical combinatorial object studied by Euler and then, among others, Sylvester, Ramanujan, Mac Mahon, and Andrews. Like partitions, overpartitions have some amazing properties and connections with several branches of mathematics: combinatorics, basic hypergeometric series, number theory, representation theory, mathematical physics ... The story of overpartitions is just starting. They were defined to understand the combinatorics of basic hypergeometric identities. But different approaches now show that classical results on partitions are special cases of results on overpartitions. I will focus on combinatorial properties of overpartitions and will survey some recent and ongoing work with Lovejoy (CNRS), Yee (Penn State), Mallet (Versailles), Hitczenko (Drexel), and Goh (Drexel).

Tuesday, May 10, 2005, 3:30 - 4:30pm, Korman 247  
(coffee/tea at 3:15)

Faculty *and* students are invited to attend