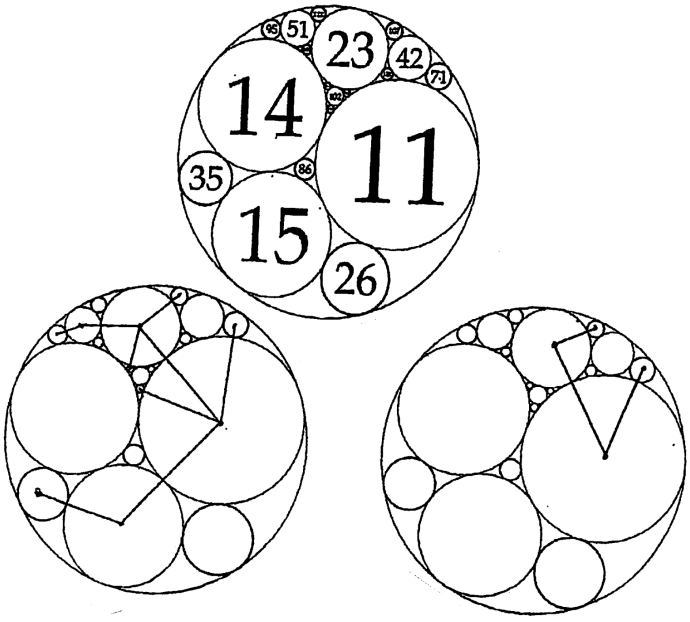
Chelluri Lecture

A special Oliver Club offered in memory of Raju Chelluri

Peter Sarnak, Princeton University

The Matrix Groups and Diophantine Analysis

The general Ramanujan Conjectures for congruence subgroups of arithmetic groups and approximations that have been proven towards them are central to many modern diophantine applications. Recently some robust "softer" tools have been developed and results established which deal with very general subgroups of the group of n by n integer matrices with determinant equal to 1 or –1, which go by the name "thin matrix groups." We will describe some one of these tools ("expanders") and review some novel diophantine applications of this theory. We also discuss the ubiquity of these thin matrix groups.



Aimed at a general mathematical audience.

Following the lecture, a musical performance and reception will be held at A. D. White House.

Thursday, April 18, 2013 at 4:30 PM in 251 Malott Hall

The Chelluri Lecture series is offered in memory of Thyagaraju (Raju) Chelluri, a brilliant student, gifted scholar, and wonderful human being who graduated magna cum laude in mathematics from Cornell in 1999 and was awarded a Ph.D. posthumously from Rutgers University in 2004.