

Title: Paradoxical decompositions, amenable groups, and a chameleon.

Abstract: Infinite sets have always fascinated mathematicians for their paradoxical properties. For example, Galileo noted that there is a one to one correspondence between the natural numbers and all square numbers. Another famous example is the Banach-Tarski paradox, seemingly playing havoc with the notion of volume. In this talk we will take a group theorist's perspective on notions such as paradoxical decompositions, leading us to the study of amenable groups. We will give a survey of these concepts and describe a vexatious open question.