

Wednesday Oct 15, 5:30p Lunt 105

Fall 2025 Undergraduate Colloquium



Wouter Van Limbeek (UIC)

The Banach-Tarski paradox, pyramid schemes, and non-amenable groups

Abstract: In 1924, Banach and Tarski proved the following amazing theorem: You can cut up a ball in Euclidean space into some finite number of pieces and reassemble these pieces in such a way that you get two copies of the original ball! We will discuss the proof of this crazy result, what this has to do with a deep notion in group theory called amenability, and why we have not solved the problem of world hunger by doubling and redoubling apples, oranges, potatoes and other spherical foodstuff. No background required except mathematical curiosity.

