

Stanford University Mathematical Organization (SUMO) Speaker Series

May 7, 2018

6-7pm, Ricker Dining Hall

Brouwer's Fixed Point Theorem and Fair Division

Prof. Jan Vondrak

Abstract

Brouwer's theorem states that any continuous map from the n -dimensional ball to itself has a fixed point. This classical result has a surprising number of applications. In this talk, I will talk about several applications in the area of fair division. How should roommates decide who gets which room and how much they should pay? How should you cut a cake so that no child complains? Time permitting, I will also sketch a proof of the theorem itself.