

ENVY-FREE DIVISION

Thursday, February 22, 2018
5:00PM in 101 Jordan Hall

David Galvin
University of Notre Dame



Can a group of friends cut up a cake, so that no one is envious of another person's portion? Can three people who've just leased a three-bedroom apartment assign rooms and rent, so that no one feels like someone else has gotten a better deal?

In both cases, there are many hard-to-quantify factors, such as the desirability or otherwise of frosting on a slice of cake or a bay window in a bedroom. Forest Simmons and Francis Su found a way of using Sperner's lemma, an 90-year-old result in topology, to answer these questions positively, via a very simple process. I'll describe the process.

