Student Seminar

Pi Mu Epsilon
& GAMECOCK MATH CLUB

Envy-Free Division

by David Galvin, Professor
University of Notre Dame

David Galvin

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.

Bio: David Galvin grew up in Ireland, but have now spent more than half my life in the US. He came here to go to graduate school, at Rutgers, after which he spent time at Microsoft, IAS and UPenn before settling down at Notre Dame. His research interests are in graph theory, combinatorics and discrete probability. When David is not in the office or a classroom, he enjoys hiking, opera and relaxing at home with his wife and their many cats and one dog.

Friday 15th April 2022 at 4pm
In Person!! in COL 1015

For more info visit PME/GMC on FaceBook and at `http://people.math.sc.edu/pme/`