

*Student
Seminar*

Pi Mu Epsilon

& GAMECOCK MATH CLUB

The *Other* 4-Color Conjecture

by David Galvin
Associate Professor, University of Notre
Dame



David Galvin

The 4-color conjecture (now theorem) — at most four colors are needed to color the regions of any map, with adjacent regions getting different colors — occupied a central place in mathematics for most of the 20th century. A less well known, but equally elementary, coloring question — what’s the smallest number of colors needed to color the points of the plane, in such a way that points at distance 1 apart get different colors — was first raised by a teenager in 1950, and remains stubbornly open after 70 years. The question has been dubbed “the *other* 4-color conjecture” by some, based on the belief that four colors should be enough. In this talk, we’ll focus on this question, some of the mathematics around it, and a recent major breakthrough (essentially the first progress since the question was first asked).

David Galvin grew up in Ireland, but has now spent close to 50% of his 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.

Friday 21st February 2020
4:00 pm
LC 310

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