

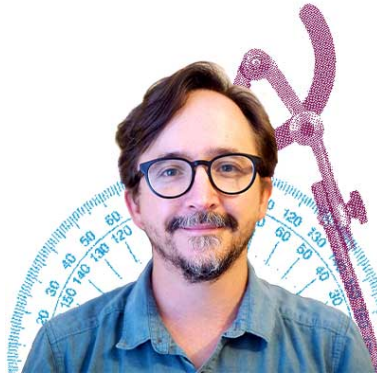
VCU Discrete Mathematics Seminar

Maximally even subsets of graphs

**Prof Brent Cody
(VCU!)**

Wednesday, Nov. 15
1:00-1:50 EST

In person! in 4145 Harris Hall, and Zoom @
<https://vcu.zoom.us/j/92975799914>
password=graphs2357



Maximally even sets, which traditionally are certain collections of vertices of cycles that are “spaced out as evenly as possible,” arose as part of Clough and Douthett’s study of musical scales and pitch classes in the 90s. As shown by Clough, Douthett, Toussaint and others, maximally even sets manifest in musical traditions across cultures in the form of interesting scales and rhythms. In a remarkable turn of events, Clough and Douthett’s research in music theory has found relevance in mathematics, computer science, mathematical physics and even in the design of particle accelerators.

In this talk, we will use the concept of electric potential energy from physics together with some ideas from graph theory to study maximally even sets in contexts which were not previously possible. We will go beyond the well-known one-dimensional maximally even sets into higher dimensional and more geometrically complex territory.

This is joint work with Neal Bushaw, Alexander Johnson and Chris Leffler.

For the DM seminar schedule, see:

<https://go.vcu.edu/discrete>