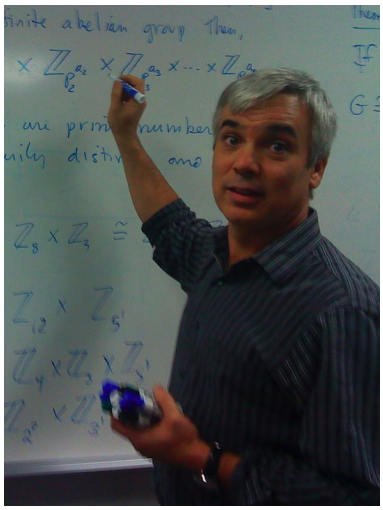
VCU Discrete Mathematics Seminar

Not every graph has a robust cycle basis

Prof Richard Hammack
VCU!

Wednesday, Feb. 22
1:00-1:50
4119 Harris Hall (conference room)



The **cycle space** of a graph G is the vector space (over the 2-element field) whose vectors are the eulerian subgraphs of G, and addition is symmetric difference on edges. One can always find a basis of cycles. Such a basis is called a **cycle basis** for G. Since their vectors carry combinatorial information, cycle spaces have many applications, and different kinds of cycle bases cater to different kinds of problems.

A lot of recent attention has focused on so-called *robust* cycle bases. Robust cycle bases are known to exist only for a few classes of graphs. The cases of the complete bipartite graphs $K_{n,n}$ are discussed—and tantalizingly open problems.

This is joint work with Paul Kainen (Georgetown University).

For the DM seminar schedule, see:

`http://www.people.vcu.edu/~clarson/DM-seminar.html`