

VCU Discrete Mathematics Seminar

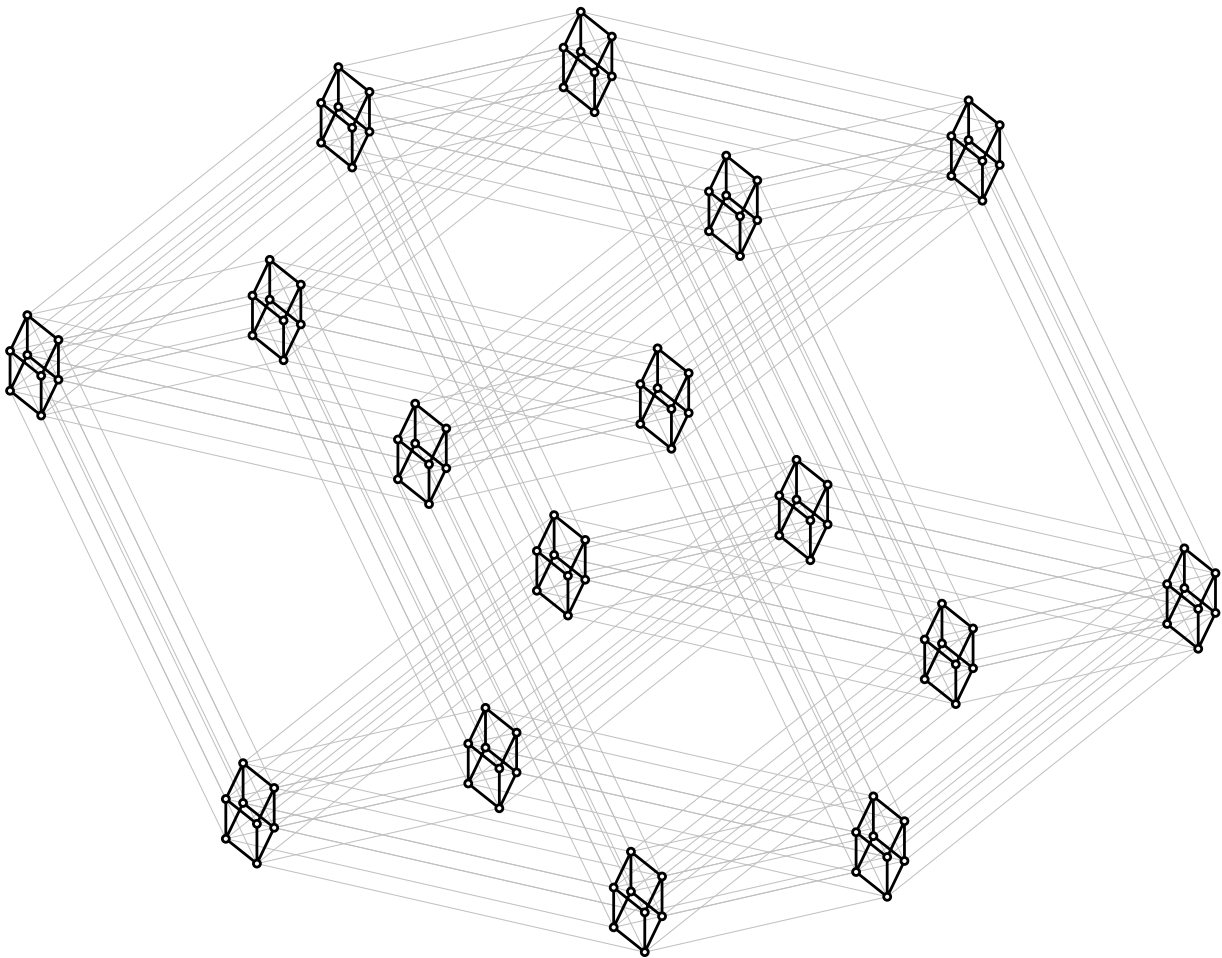
Sphere decompositions of hypercubes

Prof Richard Hammack, VCU

Wednesday, Feb. 13

1:00-1:50

4145 Harris Hall



Even-dimensional hypercubes have vertices of even degree. Thus Euler's theorem says that their edges can be partitioned into sets that induce cycles, that is, 1-spheres. To what extent does this generalize? For what dimensions can we partition the faces of a hypercube into sets that induce 2-spheres? A necessary condition is that the hypercube be odd-dimensional. Sufficient conditions are more murky. We will survey what is known and what is not known.

For the DM seminar schedule, see:

<http://www.people.vcu.edu/~dcranston/DM-seminar>