



Pi Mu Epsilon

& GAMECOCK MATH CLUB

Student Seminar

Decomposition of λK_v into Multigraphs with Four Vertices and Five Edges

by Sarah Malick

This paper is motivated by a survey on the existence of G-designs by Adams, Bryant and Buchanan, where they gave the spectrum of the decomposition of complete graphs into graphs with small numbers of vertices. We give difference family-type constructions to decompose λ copies, where $\lambda \geq 2$, of the complete graph K_v into several multigraphs on four vertices and five edges including so called 2-petal graphs and box-edge graphs.

Thur. 17th Nov. 2011

seminar at 3:30_{pm} in LC 310

pizza at 4:30_{pm} in LC 311

Sarah is a student at the Academic Magnet High School in North Charleston, SC. This paper is joint work with Prof. Dinesh G. Sarvate of the College of Charleston Mathematics Department. Sarah thanks the College of Charleston for providing a summer research grant. Sarah recently presented this paper at the 25th Midwest Conference on Combinatorics, Cryptography, and Computing, at which USC Profs. Czabarka and Székely also presented their research.

For more info visit us on FaceBook and at <http://www.math.sc.edu/~pme/>.