

VCU Discrete Mathematics Seminar

When are Cayley graphs Cartesian products?

Prof Wilfried Imrich
Montanuniversität Leoben (Austria)

Wednesday, Mar. 23
1:00-1:50

Zoom! @ <https://vcu.zoom.us/j/92975799914>
password=graphs2357



The talk considers the question when a Cayley graph is a Cartesian product. Because a graph G can be a Cayley graph with respect to different groups one has to investigate the relationship of such groups with the automorphism groups of the factors of G .

It is shown that a finite Cayley graph G is a Cartesian product if and only if all prime factors of G with respect to the Cartesian product are Cayley graphs. Furthermore, all weak Cartesian products of infinitely many Cayley graphs are Cayley graphs, but there are Cayley graphs that are weak Cartesian powers of asymmetric graphs, that is graphs that are not Cayley.

For the DM seminar schedule, see:

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