

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES
VIRTUAL COLLOQUIUM

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<https://ccsu.webex.com/meet/gotchev>

WELL-DOMINATED GRAPHS

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Abstract: A graph is called well-covered if all maximal independent sets have the same cardinality. The problem of classifying all well-covered graphs was quite popular back in the mid-80s. In 1993, Finbow, Hartnell, and Nowakowski identified a class of well-covered graphs, denoted \mathcal{PC} , and proved that any well-covered graph of girth at least 5 is in \mathcal{PC} . They also defined a well-dominated graph to be a graph where every minimal dominating set has the same cardinality. Surprisingly, every well-dominated graph is also a well-covered graph. In this talk, we discuss the relationship of well-covered graphs and well-dominated graphs, known results about well-covered graph products, and we construct well-dominated graphs of girth 4 based on graphs in \mathcal{PC} .

This is joint work with Sarah Anderson at St. Thomas University, Bert Hartnell at St. Mary's University, and Doug Rall at Furman University.

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