On the Well-Covered Dimensions of Various Individual Graphs and Graph Families

Isaac A. Birnbaum

November 16, 2009

For any graph G and field $\mathbf{F}$, the well-covered dimension $wcdim\,(G, \mathbf{F})$ is the dimension of the vector space over $\mathbf{F}$ formed by the set of all well-covered weightings f of G. In this session, we shall compute the well-covered dimensions of various individual graphs and graph families. We shall also show that for certain individual graphs and graph families, such as the crown graphs, the well-covered dimension can change with respect to the characteristic of the field chosen.

This research was completed over the summer and fall semesters of 2009 under the supervision of Dr. Oscar Vega at California State University, Fresno.