

**Marko Jakovac:** *Secure sets in graphs*  
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The concept of a secure set is a generalization of defensive alliances in graphs. Defensive alliances are related to the defense of a single vertex. However, in a general realistic settings, a defensive alliance should be formed so that any attack on the entire alliance or any subset of the alliance can be defended. In this sense, secure sets represent an attempt to develop a model of this situation. Given a graph  $G=(V,E)$  and a set of vertices  $S$  subset of  $V$ , the set  $S$  is a secure set if it can defend every attack of vertices outside of  $S$ , according to an appropriate definition of »attack« and »defense«. The minimum cardinality of a secure set in  $G$  is the security number  $s(G)$ . In this talk several results will be presented on the security number of graphs and graph products.