1067-AF-1534　　　**Ann N. Trenk*** (`atrenk@wellesley.edu`), Department of Mathematics, Wellesley College, Wellesley, MA 02481. *Tolerance Graphs.*

Interval graphs are important both because they arise in a variety of applications and also because some well-known optimization problems can be solved efficiently when restricted to this class of graphs. Tolerance graphs, a generalization of interval graphs, retain some of these desirable properties while encompassing a larger set of graphs.

A graph $G = (V, E)$ is a *tolerance graph* if each vertex $v \in V$ can be assigned a real interval I_v and a positive tolerance $t_v \in \mathbf{R}$ so that there is an edge between vertices x and y precisely when the length of the intersection of I_x and I_y meets or exceeds one of the tolerances t_x, t_y (that is, $xy \in E(G)$ iff $|I_x \cap I_y| \geq \min\{t_x, t_y\}$).

The nature of this definition means that many of the results about tolerance graphs involve geometric arguments. In this talk we give an overview of the work done in tolerance graphs. (Received September 21, 2010)