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David E Brown, Department of Mathematics, Utah State University, **Arthur H Busch**,
Department of Mathematics, University of Dayton, and **Garth Isaak*** (gisaak@lehigh.edu),
Department of Mathematics, Lehigh University. *Structure of Bipartite Probe Interval Graphs.*

Probe interval graphs, originally motivated by an application in biological sequencing are a special class of interval tolerance graphs. Interval tolerance graphs have representations with each vertex assigned an interval and a tolerance with an edge between vertices exactly when the length of the intersection of their intervals is at least the smaller of the two tolerances. For probe interval graphs the only allowed tolerances are zero and infinity. Building on previous results for bipartite tolerance graphs we present a linear algorithm to recognize if a given bipartite graph is a probe graph and discuss a corresponding structural characterization.

We will in addition provide a brief overview of some other interesting results and open problems relating to tolerance graphs. (Received September 16, 2008)