1116-VF-1968 **Dalal Alrowaili*** (daa2v@mtmail.mtsu.edu), **Dong Ye** and **Xiaoya Zha**. *Finding all small induced cycles in polynomial-time.* Preliminary report.

Let G be a graph. A cycle of G is induced if it has no chords. In computational chemistry, graphs serve as abstract models for molecules. Small induced cycles of graphs are referred to rings of molecules, which have important physical meanings in Chemistry. In this talk, we develop a polynomial time algorithm to find all small induced cycles in a given graph. (Received September 21, 2015)