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Albert Atserias* (atserias@lsi.upc.edu). *Ramsey Theory and Constraint Propagation Heuristics*. Preliminary report.

Bounded consistency algorithms aim at detecting the unsatisfiability of a given system of constraints by propagating constraints of bounded width until some plain contradiction is inferred. An ongoing research programme aims at characterizing which constraint-languages have the property that every unsatisfiable system of constraints is refutable by such methods. An early result along these lines is the characterization of the power of the arc-consistency algorithm due to Feder and Vardi. We offer an alternative characterization of arc-consistency using Ramsey-theoretic methods that looks more amenable to generalization. (Received September 05, 2008)