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Jonathan Cutler* (jonathan.cutler@montclair.edu) and **A. J. Radcliffe**. *Minimizing the independence polynomial over regular graphs.*

Davies, Jenssen, Perkins, and Roberts recently proved that the independence polynomial of a d -regular graph is maximized by disjoint copies of $K_{d,d}$. This built on work of Kahn, Galvin and Tetali, and Zhao. The proof of Davies et al. used linear programming bounds on a cleverly chosen random variable. In this talk, we use this method to give lower bounds on the independence polynomial of regular graphs. These give new bounds on the number of independent sets in triangle-free graphs. (Received August 29, 2016)