1077-05-2136 **Frank A. Firke*** (`firkef@carleton.edu`), **Evan D. Nash** and **Peter M. Kosek**. *Extremal Graphs Without 4-Cycles.*

Determining the largest number of edges in a C_4-free graph on n vertices is a problem that remains unsolved for general n. However, we extended previous work by Füredi to prove an upper bound for the number of edges in a C_4-free graph on $q^2 + q$ vertices for q even. This upper bound is achieved if and only if there is an orthogonal polarity graph of a projective plane of even order q. (Received September 21, 2011)