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E Czabarka* (czabarka@math.sc.edu). *Graph orientation lower bounds for crossing numbers*. Preliminary report.

There are several lower bound techniques for crossing numbers - Euler formula, Leighton's bound, etc. These frequently give better bounds on a suitable subgraph. The best such subgraph can be found by linear optimization. Interestingly, finding this bound is equivalent with finding a certain orientation on a graph. Joint work with D. Bokal, M. Bracic and L.A. Szekely (Received January 18, 2015)