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Pedro Felzenszwalb* (pff@brown.edu), 184 Hope St, Providence, RI 02906, and **Caroline Klivans** and **Alice Paul**. *Iterated Linear Optimization*.

We introduce a fixed point iteration process built on optimization of a linear function over a compact domain. The process always converges to a fixed point and we explore the set of fixed points in various convex sets. In particular, we consider elliptopes and present an algebraic characterization of their fixed points. We will also discuss how fixed point iteration can be used for rounding the solution of a semidefinite programming relaxation. (Received January 08, 2021)