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Martin A Zinkevich* (maz@cs.ualberta.ca), Department of Computing Science, University of Alberta, 9111 116 Street, Edmonton, Alberta T5B0N1, Canada. *Online Convex Programming: A Survey.*

Convex programming involves a convex set $F \subseteq \mathbf{R}^n$ and a convex cost function $c : F \rightarrow \mathbf{R}$. The goal of convex programming is to find a point in F which minimizes c . In online convex programming, the convex set is known in advance, but in each step of some repeated optimization problem, one must select a point in F before seeing the cost function for that step. This can be used to model factory production, farm production, and many other industrial optimization problems where one is unaware of the value of the items produced until they have already been constructed. In this talk, I will discuss several algorithms that have been developed to minimize regret in online convex programming problems. (Received September 27, 2005)