

**Abstract :**

We characterize the set of extreme, monotone functions that are either majorized by - or majorize a given function  $f$ .

Our main results show that each extreme function is characterized by a countable collection of intervals such that outside those intervals the extreme function equals the originally function  $f$ , and within intervals the extreme function is constant. Further consistency conditions pin down the value of an extreme functions in each interval where it is constant.

We apply these insights to a variety of problems arising in: auction design, matching contests, Bayesian persuasion, optimal delegation, optimal stopping and choice under risk (with expected or non-expected utility