

# MATHEMATICS OF OPERATIONS RESEARCH



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## Optimal Auction Design

Roger B. Myerson

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### Abstract

This paper considers the problem faced by a seller who has a single object to sell to one of several possible buyers, when the seller has imperfect information about how much the buyers might be willing to pay for the object. The seller's problem is to design an auction game which has a Nash equilibrium giving him the highest possible expected utility. Optimal auctions are derived in this paper for a wide class of auction design problems.

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