

# Second price auctions are not truthful: an extensive study of optimal bidding strategies

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Truthful auctions play a key role in the economics of the Internet industry. While classical theory suggests “optimal” bidding strategies and associated optimal auctions for sellers, we show that these results become misleading when sellers learn from the buyers’ data to optimize their auctions (e.g. computing monopoly price based on previous bids of the buyer). Using a functional analytic rather than game theoretic approach to our problems, we show this by proposing several explicit methods to improve the performance of a bidder in classical and widely used auctions such as second price auctions.

**Références**