

Testing nonparametric hypothesis with the small type I or type II error probabilities

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We consider the problem of nonparametric signal detection in the Gaussian white noise. For this model we point out asymptotically minimax lower bounds for type I and type II error probabilities in the moderate deviation zone. The lower bounds cover all range of possible variations of type I and type II error probabilities and were obtained for the logarithmic and strong asymptotics. On the base of these bounds we deduce easily the asymptotically minimax lower bounds for nonparametric confidence estimation in the moderate deviation zone.