

INFORMATION MODELLING IN STATISTICS.
SEMIMARTINGALE WITH SMALL NOISE AND ROBUST
PARAMETER ESTIMATION

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Abstract

In the present paper multidimensional continuous semimartingale with small noise is considered. The problem of constructing robust estimates of a multidimensional unknown parameter in drift term of semimartingale is posed. Introducing the notions of CULAN (consistent uniformly linear asymptotically normal) estimates, shrinking contamination neighborhoods, gross error model and gross error sensitivity, the Hampel optimization problem is set. While solving the last problem, the optimal bias-robust (B -robust) estimates are constructed.

Key words and phrases: semimartingale with small noise, robust estimates.

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