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Analysis of the source data for designing the linear filter of a signal with constrained variances of derivatives. (English. Russian original) [Zbl 1062.94515](#)

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Summary: Parametric design of the linear filter using the minimal a priori information about the class of inputs defined by a set of numbers – maximal values of the variances of derivatives – is considered. A technique for calculating the guaranteed precision of filtering the signal buried in wideband noise and optimal filter parameters is proposed. The level of information reliability of the source data is also studied.

MSC:

[94A12](#) Signal theory (characterization, reconstruction, filtering, etc.)

[93E11](#) Filtering in stochastic control theory