R–Package `robKalman` — R. Kalman's revenge ... or Robustness for Kalman Filtering Revisited

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Building up on talks on this issue at UseR conferences 2006 and 2008, we report on progress made in the development of package `robKalman`. Focus of this talk will be

(a) an OOP-layer of S4–classes and –methods on top of the already existing functions which allows for quite flexible "generic" user interfaces

(b) enhanced functionality covering

- (robust) Kalman smoothing
- (robust) estimation of (hyper–)parameters
- IO-robustness, i.e., enhanced tracking features

(c) interfacing functions to other packages providing infrastructure for (multivariate) time series and implementations to state space models and the (classical) Kalman Filter/Smoother.

(d) report on some experience with collaborative package development under `r-forge`

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