

On the exact MLE in linear models with mixed Brownian motion

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Abstract

In this talk we revisit the parameter estimation problem in continuous time linear models, driven by the additive mixture of Brownian noises with the Hurst parameters $1/2$ and $H \in (1/2, 1)$. The exact expression for the MLE is derived in terms of the solution to the Wiener-Hopf equation on a finite interval and the large sample asymptotic is shown to be related to a certain singular perturbation problem.