Séminaire TEST

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Abstract

We study the problem of online adaptive forecasting for locally stationary Time Varying Autoregressive processes (TVAR). The Normalized Mean Least Squares algorithm (NMLS) is an online stochastic gradient method which has been shown to perform efficiently, provided that the gradient step size is well chosen. This choice highly depends on the smoothness exponent of the evolving parameters. In this contribution, we show that a sequential aggregation of several NLMS estimators at various gradient step sizes is able to adapt to an unknown smoothness, resulting in an online adaptive predictor which is optimal from the minimax point of view.