

Major comments :

I am convinced by the answers given by the authors to the questions of the three referees.
I really think the paper is worth being published in AOS.

Very minor remarks and typos :

On page 14, remark 3.3: $\Sigma = X^T X$ or X is centered.

On page 15 : "it may also be possible "

At the beginning of Section 3.3, on page 16, it should be specified that $\mathbf{E}f(X) = 0$.

On page 17, Lemma 3.2 : $\arg \min_{h_k}$ and in the proof of this lemma, in the denominator of c^* , a square has been forgotten. And s_n should be replaced by $s_n - \mathbf{E}s_n(X_k)$.

On page 26 : notation $\mathbf{1}_{(i':n)_k}$.

On page 29 : "we say that a trial is successful".

On page 30, I did not understand : "we set $K = 7$ for all the experiments", and then "We set $s = 5$ " and "the true variables are X_j for $j = 5, 6, 7, 8, 9, 10$ ".

On page 35, Theorem 8.1 : ≤ 16 instead of ≥ 16 .

On page 44 (bottom of the page) : "dependent on b ".

On page 48 , in step 1 : an index k is forgotten in the first equation.

On page 50, " we will verify that these first supposition"

On page 53 : "same reasoning show that"