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Erratum to "A note on overshoot estimation in pole placements"

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There is a mild flaw in the statement of Proposition 2.1 in the above paper (cf. [1]). We restate it as follows.

Proposition 1 Let $A \in \mathbb{R}^{n\times n}$ and $B \in \mathbb{R}^{n\times m}$ be two matrices such that the pair (A, B) is controllable. Then for any $\lambda \geqslant 1$, there exists a matrix $K \in \mathbb{R}^{m\times n}$ such that

$$\| e^{(A+BK)t} \| \leqslant M\lambda^L e^{-\lambda t}, \quad \forall\, t \geqslant 0, \qquad (1)$$

where $L = (n-1)(n+2)/2$ and $M > 0$ is a constant, which is independent of λ and can be estimated precisely in terms of A, B and n.

The proof of Proposition 2.1 in [1] is only valid for the case when $\lambda \geqslant 1$ (instead of the original version of $\lambda > 0$), because the eigenvalues $\lambda_1, \cdots, \lambda_n$ were chosen to satisfy $\lambda_1 \leqslant -1$, and $\lambda_k \leqslant \lambda_1$ for $k \geqslant 1$. For more details, we refer the reader to the discussions that followed formula (10) in [1].

A main motivation of the work in [1] was for us to develop the results in [2]. As in most applications of overshoot estimation for pole placements, the parameter λ in [2] was chosen as a number of large value. Hence, the correction does not affect our results in [2].

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