

# Errata for the Ph.D. thesis “Algorithms for quadratic matrix and vector equations”

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- In point 2 of Theorem 2.3, one needs to assume additionally that  $M$  is either irreducible or singular
- Some theorems in Chapter 3 need corrections. Namely, irreducibility or nonsingularity of  $F'_{x^*}$  need to be added to the hypotheses of Theorems 3.5 and 3.9, and the proofs of Theorems 3.2 and 3.6 need modifications. We refer the reader to the updated version of [Pol10c] (available on the same arXiv.org page) for a revised version of the material present in this chapter.
- in the paragraph “concrete cases” of Section 3.5, the algorithms *order* and *depth* are described incorrectly. The *depth* algorithm is given by  $P = 0, b_1 = 0$ , while *order* is given by either  $P = 0, b_2 = 0$  or the same choices but starting from  $\tilde{b}$  instead of  $\tilde{b}$ .
- in Theorem 4.5,  $\lim_{t \rightarrow 1}$  should be  $\lim_{t \rightarrow 1^-}$
- in Section 4.7, “may transform the *depth* algorithm into the *order* one and vice versa” should be instead “may switch among the two versions of the *order* algorithm, transforming one into the other and vice versa”.
- in the last line of the first displayed equation after (10.8),  $[I_{k_j}, 0_{k_j+1}]$  should be  $[I_{k_j+1}, 0_{k_j}]$ .