

Errata for the thesis “*Numerical methods for Sylvester-type matrix equations and nonlinear eigenvalue problems*”

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- **page 21**, “general block-triangularization.” should be “general block-diagonalization.”.
- **page 23**, “citeAntoulas:2005:Approximation” should be “[5]”.
- **page 23**, “ $\mathbb{R}^{x \times nr}$ ” should be “ $\mathbb{R}^{n \times nr}$ ”.
- **page 31**, the equation

$$“ Y_{k,\ell} = \frac{\tilde{C}_{k,\ell}}{[\Lambda_A]_{k,k} + [\Lambda_B]_{\ell,\ell}} ”$$

should be

$$“ y_{k,\ell} = \frac{\tilde{C}_{k,\ell}}{[\Lambda_A]_{k,k} + [\Lambda_B]_{\ell,\ell}} ”.$$

- **page 38**, “... were stable...” should be “... are stable...”.
- **page 42**, “... right-hand side operator in (2.10)...” should be “... left-hand side operator in (2.10)...”.
- **page 45**, the equation “ $g^{(k)} \neq 0$ ” should be “ $g^{(k)}(\lambda_0) \neq 0$ ”.

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- **page 51**, three instances of the expression “ $m_1 + m_2 + \dots m_d$ ” should be “ $m_1 + m_2 + \dots + m_d$ ”.
- **page 57**, “...the result reduces to what is already known, i.e., for commuting matrices the standard extended Krylov subspace provides a suitable approximation basis.” should be replaced by “...the result reduces to what is already known, i.e., a variant of the space suggested in [16, Section 5.2].”
- **page 59**, the inequality “ $\|\Psi_{j-1}\|_F \leq \|\bar{Y}_{j-1}\|_F = \dots$ ” should be “ $\|\Psi_{j-1}\|_F \leq \|\Upsilon_{j-1}\|_F = \dots$ ”.
- **page 59**, “... and from non-negativity we conclude...” should be “... and from monotonicity we conclude...”.
- **page 60**, the equation “ $AX + XA^T + \sum_{i=1}^m N_i X N_i^T = CC^T$ ” should be “ $AX + XA^T + \sum_{i=1}^m N_i X N_i^T + CC^T = 0$ ”.
- **page 61**, “begnining” should be “beginning”.
- **page 69**, the expression

$$\text{“} \sum_{i=0}^k a_i M^{(i)}(\lambda) v_i \text{”}$$

should be

$$\text{“} \sum_{i=1}^k a_i M^{(i-1)}(\lambda) v_i \text{”}.$$

- **page 70**, the expression “ $(X, S) \in \mathbb{C}^{n \times m} \times \mathbb{C}^{m \times m}$ ” should be “ $(V, S) \in \mathbb{C}^{n \times m} \times \mathbb{C}^{m \times m}$ ”.
- **pages v, 43–45, 50, 65, 67, 70, 194, and 198**, “a NEP” should be “an NEP”.