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Errata (April, 2025)

With regret, I have to mention the following errors:

- p. 58: Last formula, "$q(x) = \frac{c_A(x)}{x-r} = \prod_{j=2}^{N}(\lambda_k(A) - x)$" should be "$q(x) = \frac{c_A(x)}{x-r} = \prod_{k=2}^{N}(\lambda_k(A) - x)$"
- p. 292: in the last formula, the summation index should be another letter than k in order not to confuse with A^k:
$${}_kD = \frac{\sum_{j=1}^{N}\left(v_j^T A^k u\right)^2 \rho_j}{u^T A^{2k} u} = \frac{\left(v_1^T A^k u\right)^2}{u^T A^{2k} u}\rho_1 - \sum_{j=2}^{N}\frac{\left(v_j^T A^k u\right)^2}{u^T A^{2k} u}|\rho_j| \leq \frac{\left(v_1^T A^k u\right)^2}{\sum_{j=1}^{N}\left(v_j^T A^k u\right)^2}\rho_1$$
- p. 307: the display
$$y = \alpha_1 \begin{bmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{bmatrix} + \alpha_2 \begin{bmatrix} 0 \\ 1 \\ \vdots \\ 0 \end{bmatrix} + \alpha_n \begin{bmatrix} 0 \\ 0 \\ \vdots \\ 1 \end{bmatrix}$$
should be
$$y = \alpha_1 \begin{bmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{bmatrix} + \alpha_2 \begin{bmatrix} 0 \\ 1 \\ \vdots \\ 0 \end{bmatrix} + \cdots + \alpha_n \begin{bmatrix} 0 \\ 0 \\ \vdots \\ 1 \end{bmatrix}$$
- p. 333: footnote, "...one way as sum of two squares." should be "...one way as a sum of two squares."
- p. 361: "...the first orthogonality relation (A.124) becomes..." should be "...the second orthogonality relation (A.126) becomes...".
- p. 406: in Lemma 14: "... the zeros
$$z_1 = \frac{A}{2}\left(1 + \sqrt{1 - \frac{4}{AB}}\right) \text{ and } z_1 = \frac{A}{2}\left(1 - \sqrt{1 - \frac{4}{AB}}\right)$$

should be

$$z_1 = \frac{A}{2}\left(1 + \sqrt{1 - \frac{4}{AB}}\right) \text{ and } z_2 = \frac{A}{2}\left(1 - \sqrt{1 - \frac{4}{AB}}\right)$$

- p. 454: line 9 from bottom: "... we arrive at Shur's inequality,..." should be "... we arrive at Schur's inequality,..."
- p. 495: "...after replacing x_1 and x_2." should be "...after replacing x_1 and x_0."