From the publisher’s description: New to the fourth edition:

- Ten new application sections.
- A new section on change of basis. This concept now appears in several places.
- Chapters 14–16 on higher dimensions are notably revised.
- A deeper look at polynomials in the gallery of spaces.
- Introduces the QR decomposition and its relevance to least squares.
- Similarity and diagonalization are given more attention as are eigenfunctions.
- A longer thread on least squares, running from orthogonal projections to a solution via SVD and the pseudoinverse.
- More applications for PCA have been added.
- More examples, exercises, and more on the kernel and general linear spaces.
- A list of applications has been added in Appendix A.

See the reviews of the first and third editions in [Zbl 1064.15001; Zbl 1278.15002].

MSC:

15-01 Introductory exposition (textbooks, tutorial papers, etc.) pertaining to linear algebra
15A15 Determinants, permanents, traces, other special matrix functions
15A18 Eigenvalues, singular values, and eigenvectors
15A12 Conditioning of matrices
65D18 Numerical aspects of computer graphics, image analysis, and computational geometry
65D17 Computer-aided design (modeling of curves and surfaces)
68P10 Searching and sorting
65F05 Direct numerical methods for linear systems and matrix inversion
65F15 Numerical computation of eigenvalues and eigenvectors of matrices
65F20 Numerical solutions to overdetermined systems, pseudoinverses

Full Text: DOI