Optimization of Communication Systems
EE 669

Chathuranga Weeraddana

March 2022

Reading Assignment: from [Califiore-14]

Section 3

Section 3

- 3.1.2: Matrix products
- 3.1.3: Block matrix products
- 3.1.4: Matrix space and inner product

Section 3

- 3.2.3: Range, rank, and nullspace
- 3.2.4: The fundamental theorem of linear algebra

Section 3

- 3.3.5: Eigenvectors and eigenvalues

Section 3

- 3.5.2: Singular value decomposition (SVD)
- 3.5.3: Eigenvalue decomposition for diagonalizable matrices

Section 4

Section 4

- 4.1.2: Quadratic functions

Section 4

- 4.4.1: Definition of Positive semidefinite matrices (PSD)
- 4.4.2: Eigenvalues of PSD matrices
- 4.4.5: Positive-definite matrices and ellipsoids