



# Advanced Linear Algebra for Engineers with MATLAB

*Sohail A. Dianat, Eli Saber*

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- Discusses linear operators, eigenvalues, and eigenvectors, and explores their use in matrix diagonalization and singular value decomposition
- Extends presented concepts to define matrix polynomials and compute functions using several well-known methods, such as Sylvester's expansion and Cayley-Hamilton
- Introduces state space analysis and modeling techniques for discrete and continuous linear systems, and explores applications in control and electromechanical systems, to provide a complete solution for the state space equation
- Shows readers how to solve engineering problems using least square, weighted least square, and total least

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- Offers a rich selection of exercises and MATLAB® assignments that build a platform to enhance readers' understanding of the material

Striking the appropriate balance between theory and real-life applications, this book provides both advanced students and professionals in the field with a valuable reference that they will continually consult.

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