

MATH 4050/8056: LINEAR ALGEBRA

TR 1:00–2:15pm | DSC 254 | Dr. Ying Hu

Topic description:

Linear Algebra is vital in theoretical mathematics and an extremely powerful tool in almost **every single** discipline of engineering and science.

From **Matrix Calculus**, To **Robotics!**

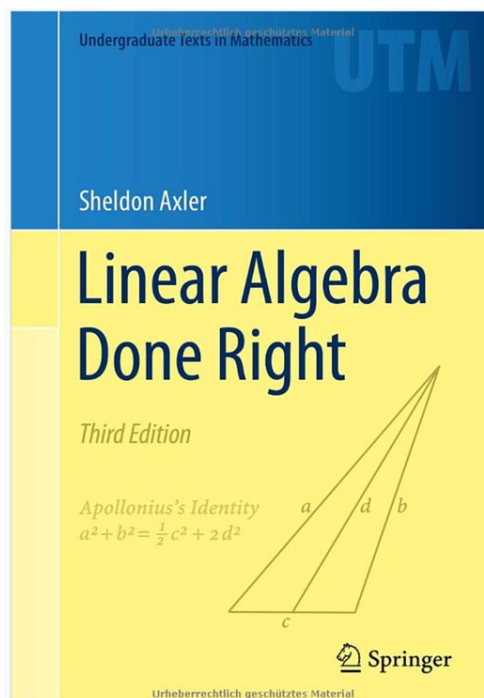
From **Control Systems**, To **Computer Graphics!**

From the **Singular Value Decompositions** to the **Principal Component Analysis!**

From **Systems of Linear Equations**, To **Systems of Differential Equations!**

Deep usages of linear algebra are in subjects including:

- Machine Learning and Deep Learning,
- Computer Graphics,
- Control Systems,
- Game Development.
- and more



This is linear algebra **done right!**

We will cover **topics:**

Vector Spaces, Linear Maps, Eigenvalues and Eigenvectors, Inner Product Spaces, Operators on Inner Product Spaces, Operators on Complex Vector Spaces, Trace and Determinant

Pre-requisites: *MATH 2050; MATH 2030 or MATH 2230 or equivalent; or permission*



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