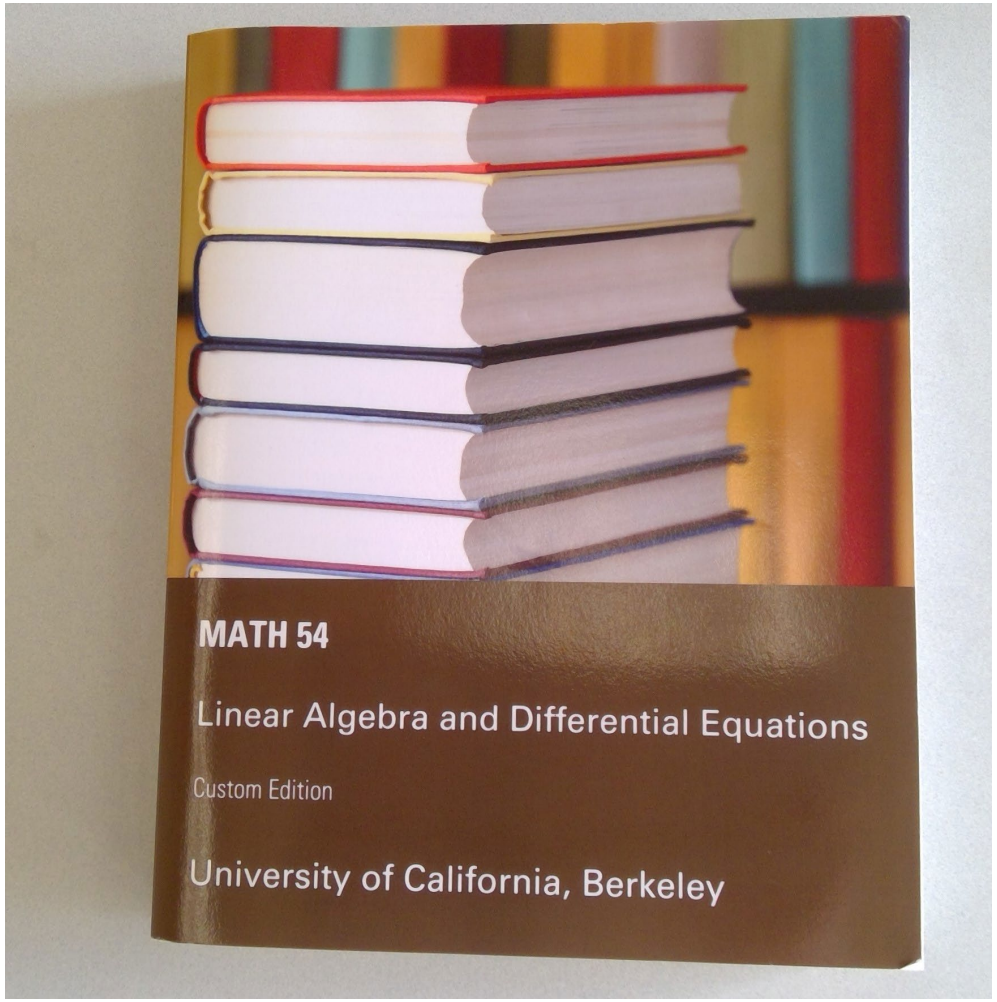
General information for MATH 54

Lin Lin.林霖

https://math.berkeley.edu/~linlin/

Course website: Github

https://github.com/lin-lin/math54



Two parts: Lay, Linear Algebra
Nagle-Saaf-Snider (NS&S), differential equation

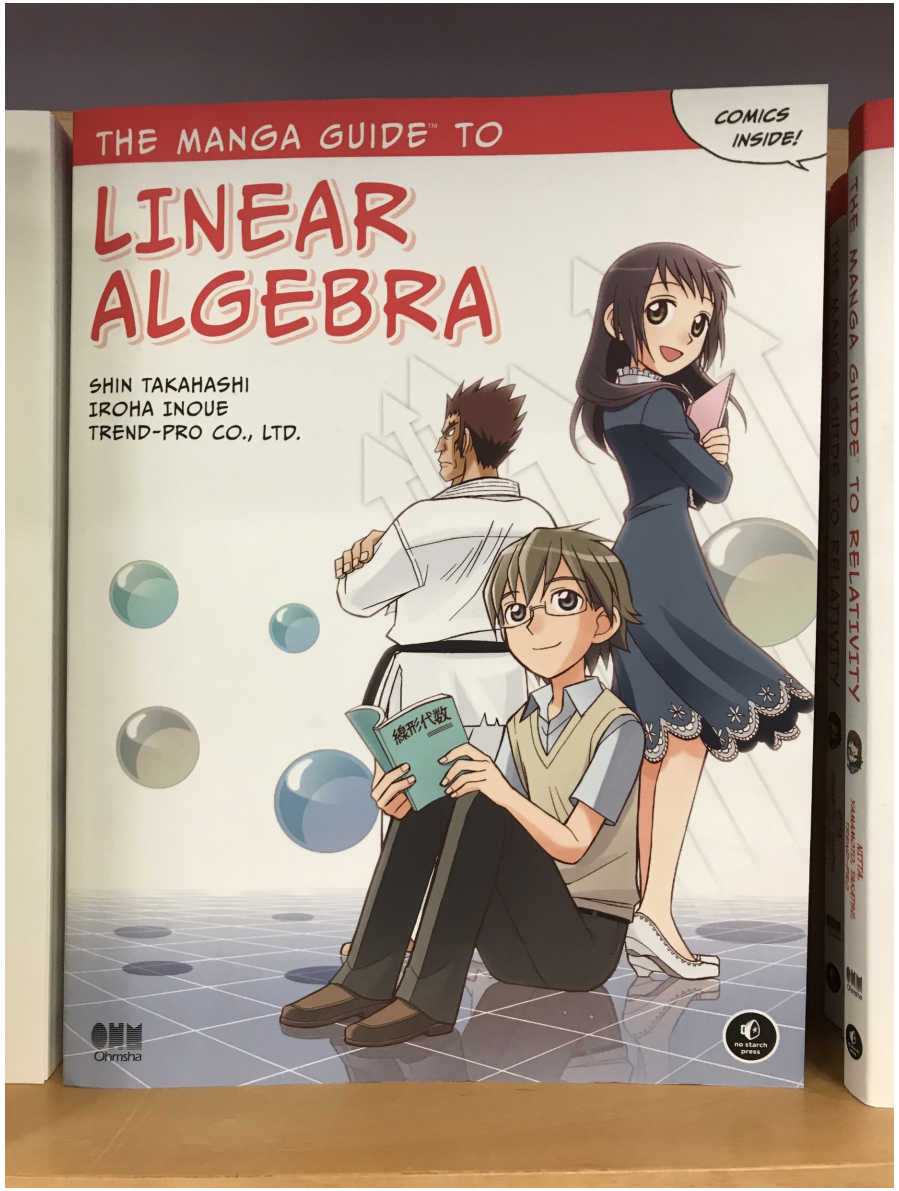
Alternative textbooks:

Linear algebra and its applications, 5th edition
by David C. Lay.

Fundamentals of differential equations, 9th edition by
R. Kent Nagle, Edward B. Saff and Arthur David Snider.

Previous versions of the custom edition, or the separate textbooks as above ***may work, but it is your responsibility to make sure that you are doing the correct problem sets for your homework.***

Not a valid alternative textbook: an example



Read the course policy very carefully.

Late submission = no credit.

No make-up exams.

why take Math 54?

abstract thinking

It is easy! linear

It is powerful! Solve linear equations.

eigenvalues / eigenvectors

differential equations

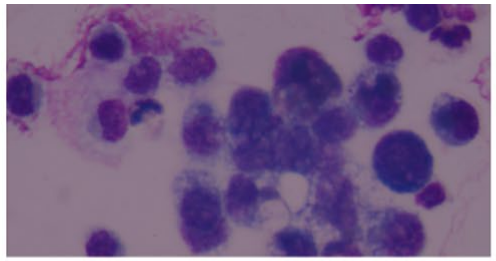
It is trendy! google search alg. / big data / machine learning

The power of abstraction

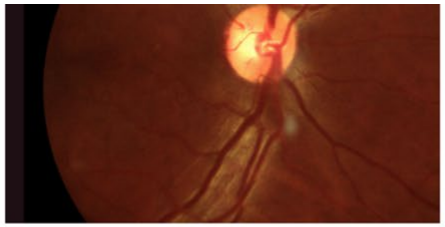
Robot Locomotion

Energy Analytics and Optimization

New York Federal Reserve Bank



Precision Medicine



Deep Learning for Medical Diagnosis

Safer Skies

Vector Spaces, Linear Transformations. Continuous the discrete. High dimension spaces. Dimension reduction.