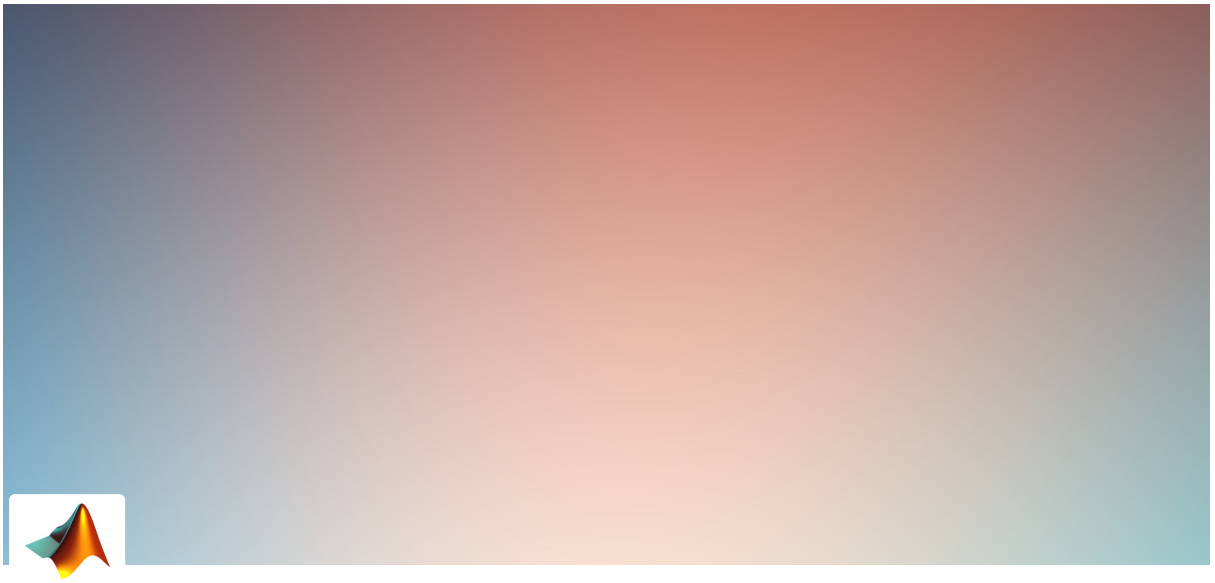

线性方程式与线性系统

Notebook | MATLAB

https://youtu.be/TWVXIgA106c?si=b-oXUDEKUgYPK0Ir

Solving Linear Equations解线性方程

💡 **方法：**

1. Sueecesive elimination (through factorization)消去法
2. Cramer’s method 克莱默法则

Gaussian Elimination- rref()

$$\begin{cases} x + 2y + z = 2 \\ 2x + 6y + z = 7 \\ x + y + 4z = 3 \end{cases} \Rightarrow \left[\begin{array}{ccc|c} 1 & 2 & 1 & 2 \\ 2 & 6 & 1 & 7 \\ 1 & 1 & 4 & 3 \end{array}\right]$$

```
A = [1 2 1;2 6 1;1 1 4];
b = [2; 7; 3];
R = rref([A b])
```

```
>>1   0   0   -3
   0   1   0   2
   0   0   1   1
```

x=-3; y=2; z=3

LU Factorization