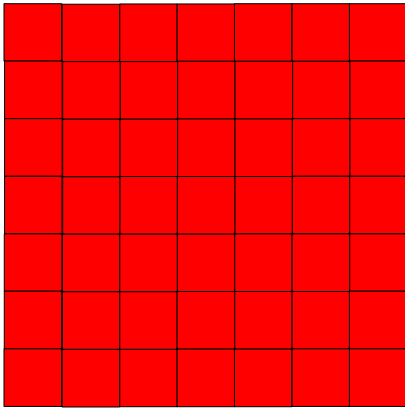


Métodos Computacionais em Física

Aula 13

Sistemas Lineares

O problema



*

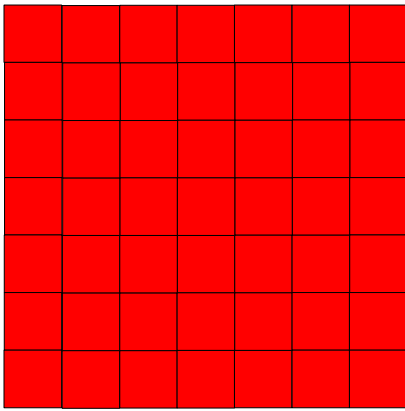


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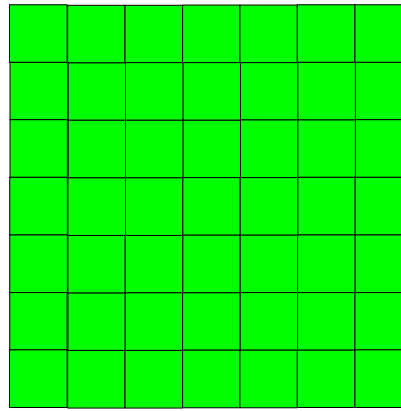


$$A * x = b$$

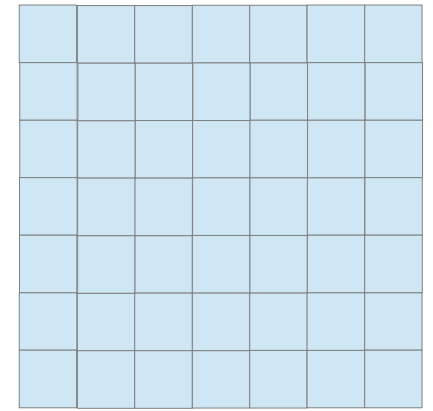
O problema



X

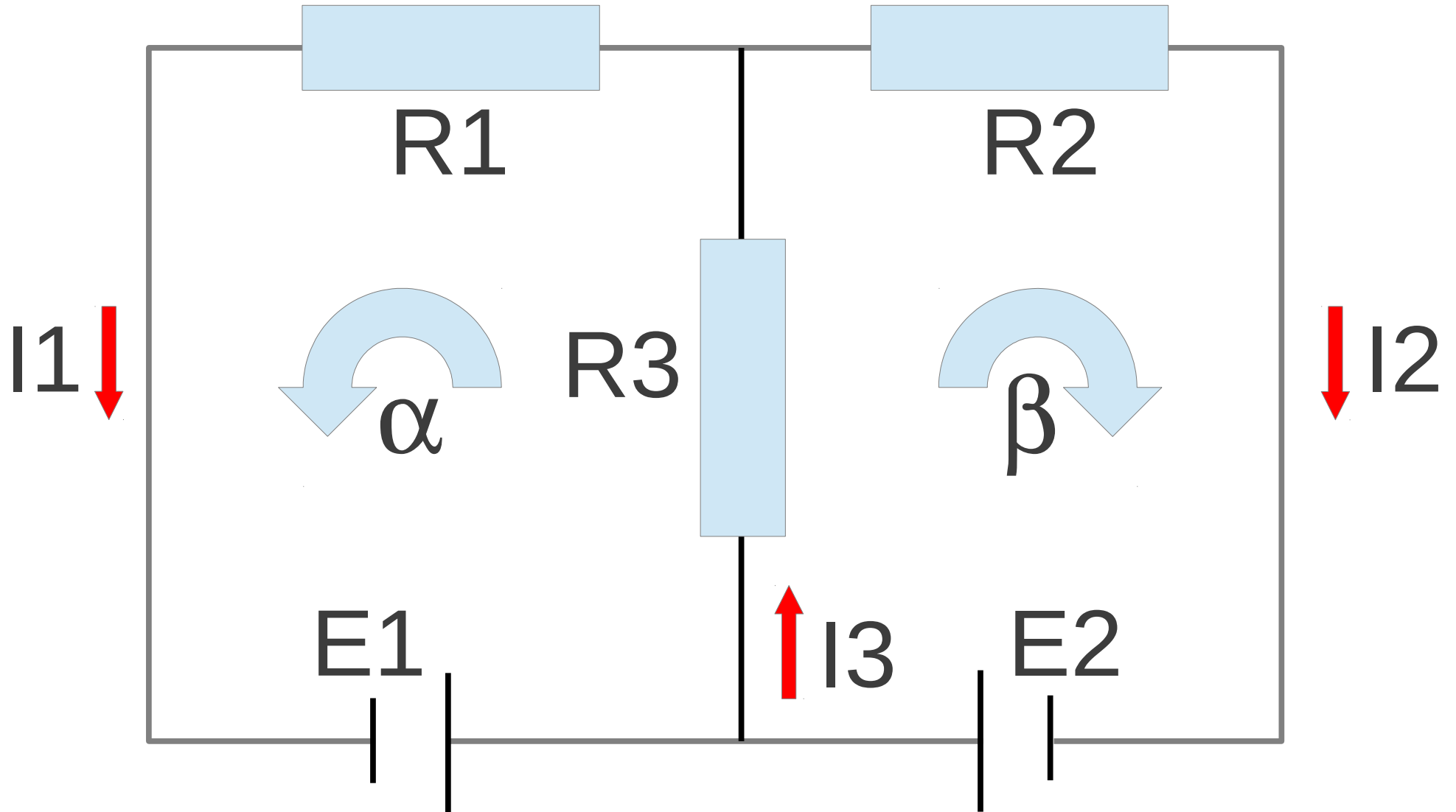


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$$AX=B$$

Aplicação: Circuitos



$$R_1 I_1 + 0 I_2 + R_3 I_3 = E_1$$

$$0 I_1 + R_2 I_2 + R_3 I_3 = E_2$$

$$I_1 + I_2 - I_3 = 0$$

| | | | | | |
|----|----|----|---|----|----|
| R1 | 0 | R3 | | | |
| 0 | R2 | R3 | * | I1 | E1 |
| 1 | 1 | -1 | | I2 | E2 |
| | | | | I3 | 0 |

Utilizando BLAS e LAPACK

- Escreva um programa que utilize a rotina DGESV.