



## MATRIX EIGENVALUES

**Why**

TODO

**Definition**

Let  $A \in \mathbf{R}^{n \times n}$ . If there exists  $x \in \mathbf{R}^n$  and  $\alpha \in \mathbf{R}$  with  $|x| = 1$  such that

$$Ax = \alpha x$$

for

