

## Matrix Eigenvalues

## 1 Why

TODO

## 2 Definition

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

 $Ax = \alpha x$ 

for