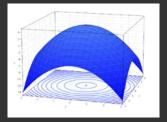
## **Tutorial 6 - Eigenvalues and Eigenvectors**

**COMP1046 - Maths for Computer Scientists** 

Dr. Ferrante Neri / Dr. Tony Bellotti





## Eigenvalues and eigenvectors

Question 1.

Find the eigenvalues, eigenvectors and eigenspaces for the endomorphism,  $f: \mathbb{R}^3 \to \mathbb{R}^3$ ,

$$f(x,y,z) = (2x + 3y - z, 4y + 2z, z - y).$$

1

## Eigenvalues and eigenvectors

## Question 2.

Find the eigenvalues, eigenvectors and eigenspaces for the endomorphism,  $f: \mathbb{R}^4 \to \mathbb{R}^4$ ,

$$f(w,x,y,z)=(-2w-y,\ 4w+2x-2y+z,\ w,\ 4w+4y+2z).$$

2