

### Additional remark

From the discussions on the page 10

it actually follows that in the considered

case  $(A - \lambda I)^2 w = 0$  for any  $w$ , i.e.

any  $w$  is a generalized eigenvector of order 2.

Therefore instead of step 2 of the algorithm

(see page 9) we can take any  $w$  which

is not collinear to  $v$  from step 1 and let

$$v_1 = (A - \lambda I)w$$

Then we can proceed as in the previous

page with  $v_1, w$  instead of  $v, w$ .

(The advantage of this is that instead

of solving the system  $(A - \lambda I)w = v$

we just evaluate  $(A - \lambda I)w$  for the chosen  $w$ )