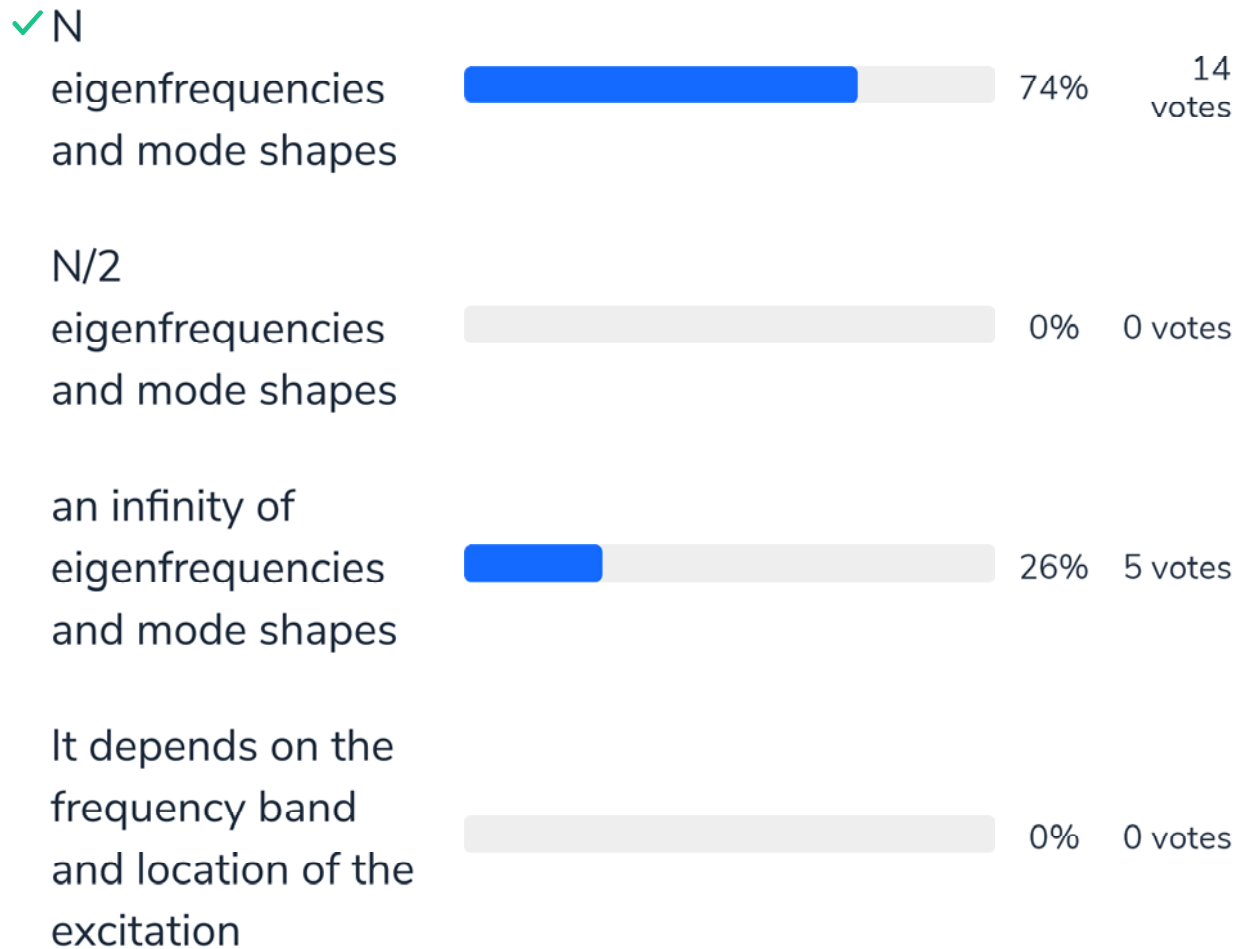


# DOS2020\_Finite\_Element

Number of participants: 21

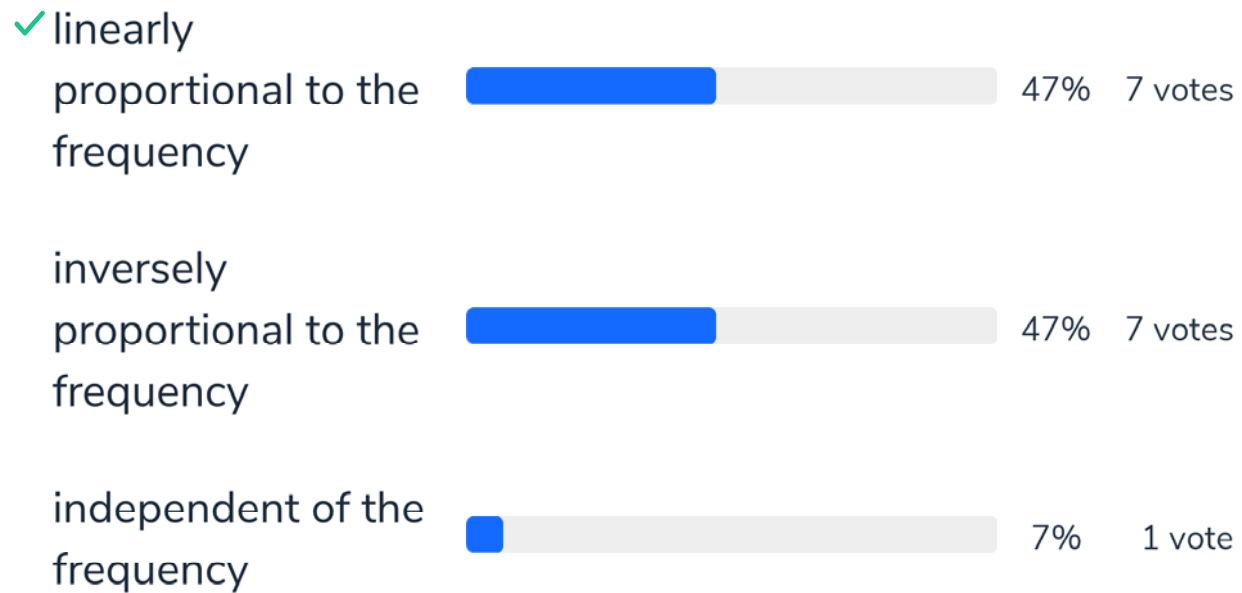
1

## A finite element model with $N$ degrees of freedom has



2

For a global viscous damping model, the modal damping coefficient is



3

## The use of a material loss factor for damping leads to modal damping coefficients

which depend linearly on the frequency



✓ which are constant with the frequency



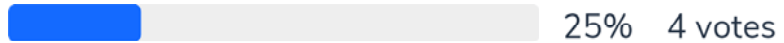
which evolve with the square of the frequency



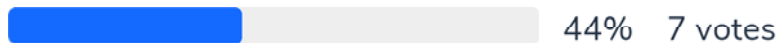
4

## When using local damping models

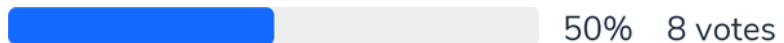
the damping matrix in the modal domain remains diagonal



✓ the damping matrix in the modal domain is not diagonal



✓ the damping matrix can be made diagonal if the damping is small



damping can be neglected when solving the equations of motion



5

If a structure is made of a single material with a loss factor  $\eta=0.02$ , the modal damping coefficient for all modes is equal to

