

# Robust discretization of the Reissner–Mindlin plate with Taylor–Hood FEM

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A shear-locking free finite element discretization of the Reissner–Mindlin plate model is introduced. The rotation is discretized with piecewise polynomials of degree  $k + 2$  while the degree  $k \geq 0$  is used for the displacement gradient. The method is closely related to the (generalized) Taylor–Hood pairing. In this case the general theory of saddle-point problems with penalty cannot exclude that the convergence speed for the rotation is limited by the lower rate expected for the displacement. However, in this talk, it is shown that the rotations are approximated at optimal order of accuracy.