An efficient size-dependent computational approach for functionally graded isotropic and sandwich microplates based on modified couple stress theory and moving Kriging-based meshfree method

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Highlight

- An efficient size-dependent computational approach for bending, free vibration and buckling analyses of FG isotropic and sandwich microplates is proposed.
- The present model uses four variables and maintains a single size-dependent effect.
- The discrete system equations via the Galerkin weak form are solved by moving Kriging meshfree method.
- A simple rotation-free technique originated from isogeometric analysis is also taken into account in solution procedure.
- The numerical results demonstrate the efficiency and reliability of the present approach.