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An extended edge-based smoothed discrete shear gap method for free vibration analysis of cracked Reissner-Mindlin plate

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Highlights

- An XES-DSG3 element is proposed for free vibration analysis of cracked plates.
- The strain gradient matrices with enriched functions are smoothed.
- The present method takes advantage of both SFEM and XFEM.
- The discrete shear gap method is employed to eliminate the shear-locking.
- The computational accuracy of XES-DSG3 is insensitive to mesh distortion.

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