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Title: Design and analysis of a multi-notched flexure hinge for compliant mechanisms

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Highlights

- A new multi-notched flexure hinge for compliant mechanisms is proposed.
- The configuration of the multi-notched hinge is obtained by using topology optimization.
- The final model of multi-notched flexure hinges is developed by post-processing technical after topology synthesis.
- The dimensionless empirical equations for stiffness, rotational precision and stress of the multi-notched flexure hinges are established based on the FEA results.
- Comparisons of the multi-notched hinges with other flexure hinges are performed in terms of stiffness, rotational precision and stress levels.

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