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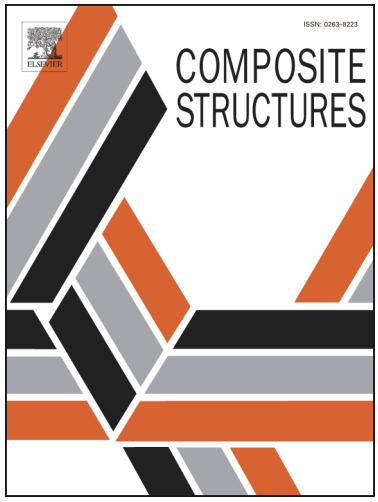

A multi-parameter model for stiffness prediction of composite laminates with out-of-plane ply waviness

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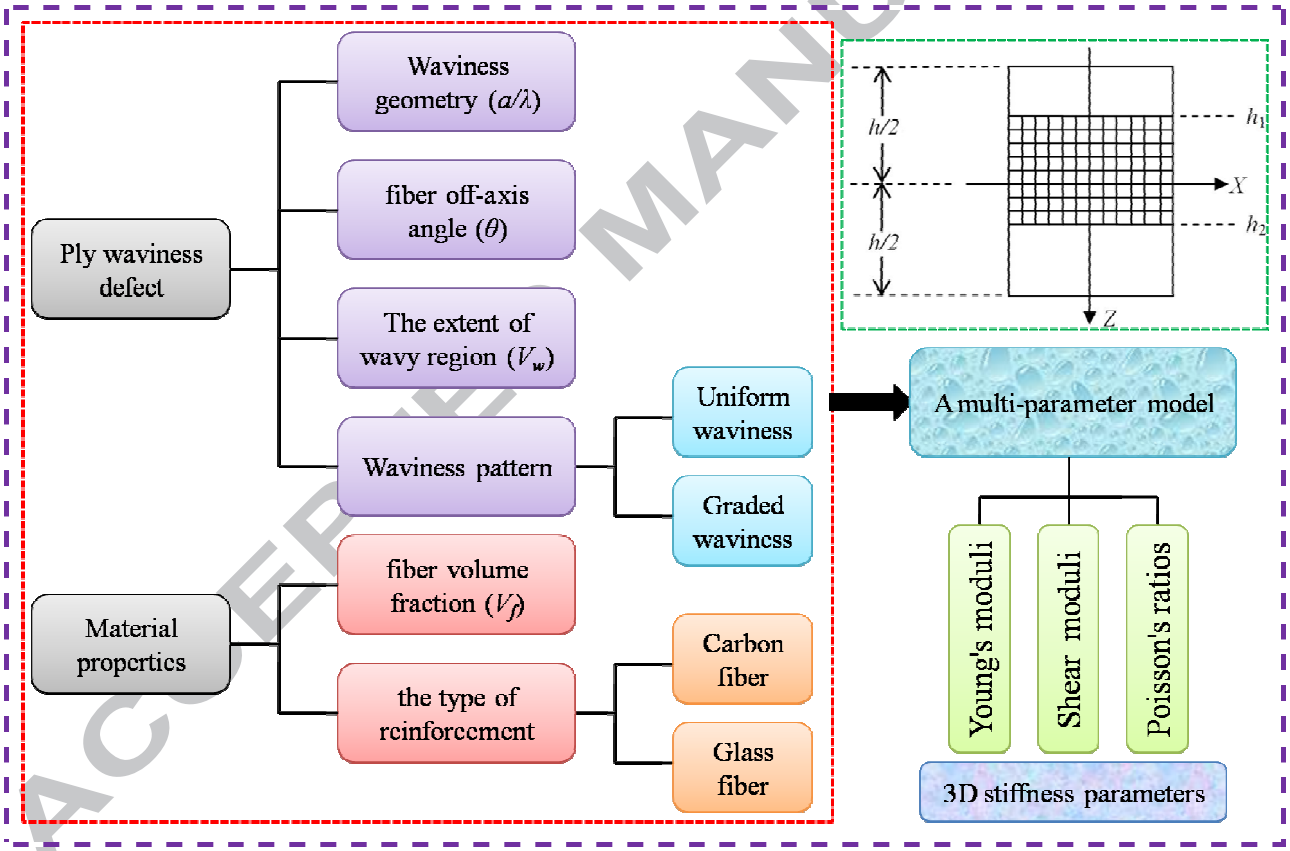
Highlights

- A multi-parameters model associated with waviness defect and material properties is developed and formulated.
- The three-dimensional stiffness parameters of wavy composite laminates are investigated systematically.
- The negative in-plane Poisson's ratio is found for CFRP with ply waviness, which provides a possible, new technique to design the auxetic materials.
- The effects of waviness defect on composite laminates are determined quantitatively.



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