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Application of variational iteration method to free vibration analysis of a tapered beam mounted on two-degree of freedom subsystems

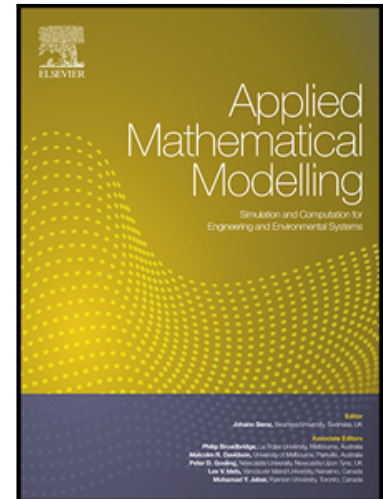
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Highlights

- Free vibration of a tapered beam mounted on two-degrees of freedom systems is studied.
- The attached systems include mass, spring and damper at both ends.
- Natural frequencies for the model are obtained using variational iteration method.
- Mode shapes are modified due to the interaction between beam's shape and subsystems.
- VIM yields identical results to the exact method by adjusting number of iterations.

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