

## Accepted Manuscript

Forced vibration analysis of a Timoshenko beam featuring bending-torsion on Pasternak foundation

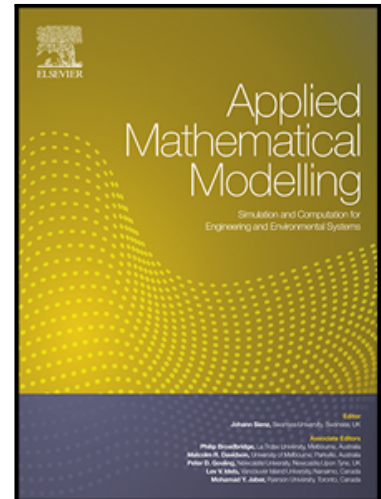
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PII: S0307-904X(18)30471-2  
DOI: <https://doi.org/10.1016/j.apm.2018.09.029>  
Reference: APM 12481

To appear in: *Applied Mathematical Modelling*

Received date: 29 April 2018  
Revised date: 14 September 2018  
Accepted date: 26 September 2018

Please cite this article as: M. Ghafarian , A. Ariaei , Forced vibration analysis of a Timoshenko beam featuring bending-torsion on Pasternak foundation, *Applied Mathematical Modelling* (2018), doi: <https://doi.org/10.1016/j.apm.2018.09.029>



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## Highlights

- Orthogonality conditions of mode shapes of a Timoshenko beam on a Pasternak foundation are obtained.
- The system response for DTF and STF and their differences are assessed.
- The related time functions in DTF and STF are almost identical for transverse displacement and bending angle.
- The differences between DTF and STF in the torsion angle are significant.
- Applying DTF is recommended when bending-torsion coupling is of concern.

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