

## Accepted Manuscript

Vibration analysis of Euler–Bernoulli nanobeams embedded in an elastic medium by a sixth-order compact finite difference method

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PII: S0307-904X(15)00543-0  
DOI: [10.1016/j.apm.2015.08.019](https://doi.org/10.1016/j.apm.2015.08.019)  
Reference: APM 10708



To appear in: *Applied Mathematical Modelling*

Received date: 6 September 2013  
Revised date: 4 June 2015  
Accepted date: 26 August 2015

Please cite this article as: S.A. Mohamed , R.A. Shanab , L.F. Seddek , Vibration analysis of Euler–Bernoulli nanobeams embedded in an elastic medium by a sixth-order compact finite difference method, *Applied Mathematical Modelling* (2015), doi: [10.1016/j.apm.2015.08.019](https://doi.org/10.1016/j.apm.2015.08.019)

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**Highlights**

- Vibration analysis of a nonlocal Euler–Bernoulli beam embedded in an elastic medium.
- Pasternak elastic foundation model - Nonlocal differential elasticity of Eringen.
- Sixth-order accuracy schemes for governing equation and boundary conditions.
- The proposed 6<sup>th</sup> order scheme is simple and outperforms similar existing methods.
- Parametric study for nonlocal parameter, slenderness ratios, and boundary conditions.

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