

## Accepted Manuscript

An efficient size-dependent computational approach for functionally graded isotropic and sandwich microplates based on modified couple stress theory and moving Kriging-based meshfree method

Chien H. Thai , A.J.M. Ferreira , J. Lee , H. Nguyen-Xuan

PII: S0020-7403(17)33201-0  
DOI: [10.1016/j.ijmecsci.2018.04.040](https://doi.org/10.1016/j.ijmecsci.2018.04.040)  
Reference: MS 4295



To appear in: *International Journal of Mechanical Sciences*

Received date: 10 November 2017  
Revised date: 4 April 2018  
Accepted date: 20 April 2018

Please cite this article as: Chien H. Thai , A.J.M. Ferreira , J. Lee , H. Nguyen-Xuan , An efficient size-dependent computational approach for functionally graded isotropic and sandwich microplates based on modified couple stress theory and moving Kriging-based meshfree method, *International Journal of Mechanical Sciences* (2018), doi: [10.1016/j.ijmecsci.2018.04.040](https://doi.org/10.1016/j.ijmecsci.2018.04.040)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Highlight**

- An efficient size-dependent computational approach for bending, free vibration and buckling analyses of FG isotropic and sandwich microplates is proposed.
- The present model uses four variables and maintains a single size-dependent effect.
- The discrete system equations via the Galerkin weak form are solved by moving Kriging meshfree method.
- A simple rotation-free technique originated from isogeometric analysis is also taken into account in solution procedure.
- The numerical results demonstrate the efficiency and reliability of the present approach.

Download English Version:

<https://daneshyari.com/en/article/7173696>

Download Persian Version:

<https://daneshyari.com/article/7173696>

[Daneshyari.com](https://daneshyari.com)