

## Accepted Manuscript

An edge-based smoothed finite element method for nonlinear magnetostatic and eddy current analysis

She Li , Xiangyang Cui

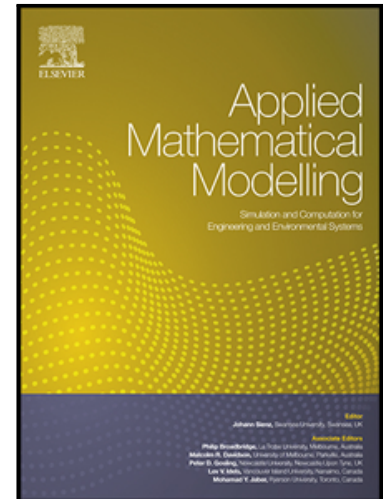
PII: S0307-904X(18)30248-8  
DOI: [10.1016/j.apm.2018.06.003](https://doi.org/10.1016/j.apm.2018.06.003)  
Reference: APM 12302

To appear in: *Applied Mathematical Modelling*

Received date: 18 August 2017  
Revised date: 7 May 2018  
Accepted date: 4 June 2018

Please cite this article as: She Li , Xiangyang Cui , An edge-based smoothed finite element method for nonlinear magnetostatic and eddy current analysis, *Applied Mathematical Modelling* (2018), doi: [10.1016/j.apm.2018.06.003](https://doi.org/10.1016/j.apm.2018.06.003)

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.



## Highlights

- The Smoothed Galerkin Weak form is presented based on edge-based smoothing domains.
- Magnetic vector potential  $\mathbf{A}$  and electric scalar potential  $\varphi$  are combined for solving Maxwell's equations.
- The simple update method with relaxation is adopted in nonlinear iteration.
- ES-FEM based on unstructured meshes improved the accuracy of standard linear FEM.
- The ES-FEM performs well in solving TEAM Workshop Problems.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/8051024>

Download Persian Version:

<https://daneshyari.com/article/8051024>

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