

## Accepted Manuscript

An integrated framework of exact modeling, isogeometric analysis and optimization for variable-stiffness composite panels

Peng Hao, Xiaojie Yuan, Chen Liu, Bo Wang, Hongliang Liu, Gang Li, Fei Niu



PII: S0045-7825(18)30231-7  
DOI: <https://doi.org/10.1016/j.cma.2018.04.046>  
Reference: CMA 11897

To appear in: *Comput. Methods Appl. Mech. Engrg.*

Received date: 20 May 2017  
Revised date: 5 January 2018  
Accepted date: 27 April 2018

Please cite this article as: P. Hao, X. Yuan, C. Liu, B. Wang, H. Liu, G. Li, F. Niu, An integrated framework of exact modeling, isogeometric analysis and optimization for variable-stiffness composite panels, *Comput. Methods Appl. Mech. Engrg.* (2018), <https://doi.org/10.1016/j.cma.2018.04.046>

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:

1. An integrated optimization framework for variable-stiffness panels is developed, in which both high-order continuity and analytical sensitivity can improve the convergence rate of optimization.
2. An enhanced optimization framework is further established based on a novel multi-start gradient-based strategy, in order to improve the global optimization capacity of gradient-based optimization.
3. The combination of exact modelling, analytical sensitivity, space tailoring method, constraint aggregation and parallel computing techniques can provide better optimum design with significant less computational cost.

Download English Version:

<https://daneshyari.com/en/article/6915352>

Download Persian Version:

<https://daneshyari.com/article/6915352>

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