Accepted Manuscript

Isogeometric analysis of minimal surfaces on the basis of extended Catmull-Clark subdivision

Qing Pan, Timon Rabczuk, Chong Chen, Guoliang Xu, Kejia Pan

PII: S0045-7825(18)30164-6
DOI: https://doi.org/10.1016/j.cma.2018.03.040
Reference: CMA 11846

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

Received date : 12 June 2017
Revised date : 6 January 2018
Accepted date : 27 March 2018

Please cite this article as: Q. Pan, T. Rabczuk, C. Chen, G. Xu, K. Pan, Isogeometric analysis of minimal surfaces on the basis of extended Catmull-Clark subdivision, *Comput. Methods Appl. Mech. Engrg.* (2018), https://doi.org/10.1016/j.cma.2018.03.040

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.

ACCEPTED MANUSCRIPT

Highlight

1. Demonstrate the discretization workflow of isogeometric analysis based on extended Catmull-Clark subdivision (IGA-CC) approach which can be naturally integrated into the framework of standard finite element method (FEM).
2. Establish the inverse inequalities and the approximation properties for the limit form of extended Catmull-Clark subdivision which are similar to those for FEM.
3. Present the detailed convergence study for the minimal surface models discretized by the fashion of IGA-CC approach.
4. Numerical tests are carried out with comparison to classical FEM based on the linear elements.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/6915416

Download Persian Version:

https://daneshyari.com/article/6915416

Daneshyari.com