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Dr. Masoud Jabbari
CEng MIMechE PMSAMPE AMACerS MInterPore
Lead Guest Editor for Special Issue:
Applied Mathematical Modelling
WMG, University of Warwick
Coventry, CV4 7AL

Dear Dr. Jabbari,

I am submitting a manuscript to be considered for publication in the special issue of "Applied Mathematical Modelling" on "Transport in Porous Media" in relation to the 3^{rd} UK InterPore Conference on Porous Media and the 1^{st} Monash-Warwick PREFRAC Workshop on Hydraulic Fracturing. The abstract and presentation I made at that conference has progressed since then, and the title of my submission has changed from "A Numerical Investigation of Stochastic and Deterministic Upscaling Methods for Permeability Fields" to "A Reduced Order Model for Permeability Fields Using Singular Value Decomposition (SVD)".

I hereby confirm that the research in this work has not been published elsewhere and it has not been submitted simultaneously for publication elsewhere.

The manuscript presents a model for representing an upscaled permeability field using singular value decomposition. It compares the benefits/performance of this model to well known determinstc methods such as arithmetic and harmonic averaging techniques. The model is also compared with a stochastic probability density function (PDF) model. Then a novel control volume finite element method (CVFEM) multiphase flow simulator is used to compare simulation results from the aforementioned models. The manuscript presents and discusses the results before drawing conclusions.

I hope you find the manuscript satisfactory and accept it for publication in the journal. I thank you for your time and I look forward to further correspondence from you.

Sincerely yours,

B. Lashore

encl: Cover Letter, Highlight.tex, Manuscript(Makefile, Stochastic_Upscaling_UK_AMM_2018.tex, article_/figure1.tex, Pics Folder, references.bib, elsarticle.cls, elsarticle-harv.bst)