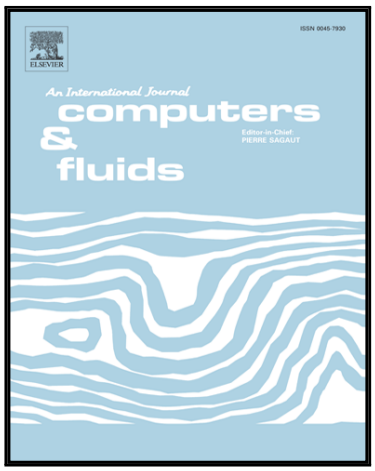
Accepted Manuscript



Explanation of differences in experimental and computational results for the preferential concentration of inertial particles

Thorsten Wittemeier, John S. Shrimpton

PII: S0045-7930(18)30182-8
DOI: 10.1016/j.compfluid.2018.03.078
Reference: CAF 3839

To appear in: *Computers and Fluids*

Received date: 25 January 2017
Revised date: 23 March 2018
Accepted date: 28 March 2018

Please cite this article as: Thorsten Wittemeier, John S. Shrimpton, Explanation of differences in experimental and computational results for the preferential concentration of inertial particles, *Computers and Fluids* (2018), doi: 10.1016/j.compfluid.2018.03.078

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

Highlights

- We used numerical simulations to investigate local properties of particle clusters.
- Our results agree with experimental findings on local particle concentrations.
- One-way coupled simulations are sufficient to explain non-linear effects.
- We have established a new Reynolds number scaling relation for the D measure.
- The Stokes number dependence of clustering can depend on the particle load.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/8942095

Download Persian Version:

https://daneshyari.com/article/8942095

Daneshyari.com