## Accepted Manuscript

Modelling and characterization of a pneumatically actuated peristaltic micropump

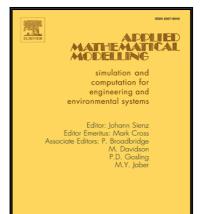
T.N. Gerasimenko, O.V. Kindeeva, V.A. Petrov, A.I. Khaustov, E.V. Trushkin

PII:S0307-904X(17)30517-6DOI:10.1016/j.apm.2017.08.008Reference:APM 11919

APM 11919

To appear in: Applied Mathematical Modelling

Received date:13 December 2016Revised date:26 July 2017Accepted date:3 August 2017



Please cite this article as: T.N. Gerasimenko, O.V. Kindeeva, V.A. Petrov, A.I. Khaustov, E.V. Trushkin, Modelling and characterization of a pneumatically actuated peristaltic micropump, *Applied Mathematical Modelling* (2017), doi: 10.1016/j.apm.2017.08.008

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

- Mathematical model of a pneumatically actuated peristaltic-like micropump is proposed
- Volumetric flow rate is calculated basing on pump membranes deformation
- The model doesn't require solution of Navier-Stokes equation
- Only physical parameters of the pump are used in the model
- The model is in a close agreement with experimental results

Download English Version:

## https://daneshyari.com/en/article/5470747

Download Persian Version:

https://daneshyari.com/article/5470747

Daneshyari.com