Accepted Manuscript

Hydrodynamic interaction of elastic membranes in a stenosed microchannel

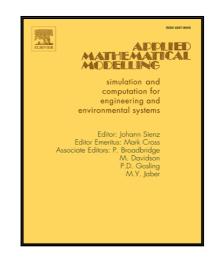
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PII: \$0307-904X(17)30595-4 DOI: 10.1016/j.apm.2017.09.042

Reference: APM 11987

To appear in: Applied Mathematical Modelling

Received date: 29 September 2016
Revised date: 5 September 2017
Accepted date: 14 September 2017



Please cite this article as: As'ad Alizadeh, Abdolrahman Dadvand, Hydrodynamic interaction of elastic membranes in a stenosed microchannel, *Applied Mathematical Modelling* (2017), doi: 10.1016/j.apm.2017.09.042

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Highlights

- The dynamics of elastic membranes in a stenosed microchannel is studied by a combined LB-IB method.
- Influences of shear elastic modulus and bending modulus on the membrane behavior are evaluated.
- By increasing the elastic modulus, the deformation and speed of the membrane decrease.
- As the rigidity of the membranes increases, pressure in the stenosis section increases.
- The results were found to be in good agreement with available numerical data.

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