

Particle-based mesoscale model for simulations of cells in flow

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ABSTRACT

We will present a new experimentally validated particle-based model for simulations of cells in flows. Our method and software allow to study cells passage in microvasculature and microfluidic devices, opening the route to better understanding of cell mechanics as well as aiding microfluidic device design optimization. Impact of viscous and elastic properties as well as different cell components such as nucleus and cytoskeleton on cell deformation in microfluidics will be discussed.