Numerical simulation of cell/cell and cell/particle interaction in microchannels[1] TSORNG-WHAY PAN, LINGLING SHI, ROLAND GLOWINSKI, Department of Mathematics, University of Houston, Houston, TX 77204 — A spring model is applied to simulate the skeleton structure of the red blood cell membrane and to study the red blood cell rheology in Poiseuille flow with an immersed boundary method. The lateral migration properties of many cells in Poiseuille flow have been investigated. We also have combined the above methodology with a distributed Lagrange multiplier/fictitious domain method to simulate the interaction of the red blood cells and neutrally buoyant particles in a microchannel for studying the margination of particles.

Tsorng-Whay Pan
Department of Mathematics, University of Houston, Houston, TX 77204

Electronic form version 1.4