Brownian Suspensions of Particles with Arbitrary Shape in Totally Confined Domains[1] BRENNAN SPRINKLE, Northwestern University, ALEKSANDA DONEV, Courant Institute of Mathematical Sciences, NEELESH PATANKAR, Northwestern University — In past work, we examined the simulation of Brownian motion of passive or active rigid bodies with arbitrary shape in unconfined domains and half space. Here we extend these techniques to fully confined domains, such as narrow channels. The additional constraints of full confinement often admit richer dynamics for active particle suspensions but simulation is substantially more expensive as the solvent must be treated explicitly. To this end, an efficient simulation algorithm will be presented, where generation of the thermal drift in this context will be the primary focus.

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