

S E M I N A R

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A Method to Model Membrane Permeability

Two 2-dimensional methods used to model Stokes flow in the presence of membranes permeable to fluid or to a concentration are presented. Both methods use superposition of regularized versions of known singular solutions; in particular, regularized source-dipoles are used to account for permeability. The methods can be combined to model membranes permeable to both, the fluid and a concentration. Numerical as well as analytical examples are used to investigate the relationship between the permeability/diffusivity of the membrane and the strength of the source-dipoles and to validate the method.

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10:30—11:30

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