

2012 Special Program in Applied Mathematics and Applied Mechanics

*Immersed boundary methods for simulating inextensible vesicle
dynamics*

2012 - 04 - 11 (Wed.)

15:00 - 17:00

308, Mathematics Research Center Building (ori. New Math. Bldg.)

In this talk, we will present immersed boundary methods for simulating the dynamics of inextensible vesicles. In particular, we shall provide different numerical schemes that include the penalty and the fractional step methods. The numerical results will include the 2D and 3D axis-symmetric cases and the case of the vesicle enclosing a solid particle. The vesicle dynamics include tank-treading to tumbling motions will be investigated in different physical setups.



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