

PHYSICAL MATHEMATICS SEMINAR

MOTION FROM ASYMMETRY: FROM MOTOR PROTEINS TO MICROFLUIDIC PUMPS THROUGH SEPARATION TECHNIQUES

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ABSTRACT:

I will review how simple symmetry breaking principles can be used to propose simple yet physically sound models the isothermal motion of molecular motors in the cell. The same principles yield a paradigm for directed transport in the absence of macroscopic gradients that can be implemented for transport or separation in microfabricated structures. Eventually similar ideas were applied to suggest original low voltage electric micropumps for microfluidics.

TUESDAY, MARCH 29, 2005

2:30 PM

Building 2, Room 338

Refreshments at 3:30 PM in Building 2, Room 349.



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