PHYSICAL MATHEMATICS SEMINAR

SAILING ON DIFFUSION

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ABSTRACT:

Buoyancy-driven flows, which are fluid flows driven by spatial variations of fluid density, play many key roles in the environment. Examples include winds in valleys and on glaciers, mineral transport in rock fissures, and ocean boundary mixing. To date, however, all investigations of buoyancy-driven flow have considered flow induced by a fixed boundary that influences fluid density (e.g. by heating or cooling). We have discovered that buoyancy-driven flows provide a previously unrecognized means of propulsion for freely-floating objects, and we demonstrate this new concept to surprising effect in a series of laboratory experiments.

TUESDAY, OCTOBER 27, 2009
2:30 PM
Building 2, Room 105

Refreshments at 3:30 PM in Building 2, Room 290
(Math Department - Common Room)

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