

Time: Tuesday May 3rd, 2011 4:00pm
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Single Particle Tracking; The Analysis of Trajectories

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Single particle tracking (SPT) is the observation of the motion of individual particles within the cell. By tagging the particles with optical labels (gold label, 40 nm), two-dimensional trajectories can be observed. Analysis of the trajectories of particles at high spatial and temporal resolution using video enhanced contrast microscopy provides a powerful approach to characterizing the mechanisms of particle motion in living cells.

In this talk, I will analyze the molecular movement of the leukocyte function-associated antigen. I will try to fit the movement of the particle into random walk model. I will also apply the variance first passage time method, used in animal movement, to single particle tracking data to understand the heterogeneity of the cell membrane. I will discuss the results in particle movement by presenting some work from my current experiment.