

Dear Faculty, IGERT Fellows, IGERT Associates and Students,

You are cordially invited to attend a Seminar presented by Asong Tambo.
Please plan to attend.

Asong Tambo

IGERT Fellow

Date: Friday, May 23, 2014

Location: Bourns A265

Time: 11:00am

Faster STORM using compressed sensing

Abstract:

In super-resolution microscopy methods based on single-molecule switching, the rate of accumulating single-molecule activation events often limits the time resolution. Here we developed a sparse-signal recovery technique using compressed sensing to analyze images with highly overlapping fluorescent spots. This method allows an activated fluorophore density an order of magnitude higher than what conventional single-molecule fitting methods can handle. Using this method, we demonstrated imaging microtubule dynamics in living cells with a time resolution of 3 s.

Reference:

Zhu, L., Zhang, W., Elnatan, D., & Huang, B. (2012, July). Faster STORM using compressed sensing. *Nature Methods*, 9(7), 721-726.

