

Dear Faculty, IGERT Fellows, IGERT Associates and Students,

You are cordially invited to attend a Seminar presented by Anthony Bianchi.
Please plan to attend.

Anthony Bianchi

IGERT Fellow
Electrical Engineering

Date: Friday, October 18, 2013

Location: Bourns A265

Time: 11:00am

Detecting Mild Traumatic Brain Injury Using Dynamic Low Level Context

Abstract:

Mild traumatic brain injury is difficult to detect in standard magnetic resonance (MR) images due to the low contrast appearance of lesions. In this paper a discriminative approach is presented, using a classifier to directly estimate the posterior probability of lesion at every voxel using low-level context learned from previous classifiers. Both visual features including multiple texture measures, and context features, which include novel features such as proximity, directional distance, and posterior marginal edge distance, are used. The context is also taken from previous time points, so the system automatically captures the dynamics of the injury progression. The approach is tested on an mTBI rat model using MR imaging at multiple time points. Our results show an improved performance in both the dice score and convergence rate compared to other approaches.

Attached is a reference paper.

