



ANNOUNCES A  
COLLOQUIUM

## Dr. Anand Vidyashankar

*George Mason University*

will speak on

### Efficiency, Robustness, and Regularization via Disparities

**Time: 3:30 PM – 4:30 PM**

**Date: Friday, October 28, 2011**

**Place: Alter Hall 746**

#### Abstract

The problem of simultaneous estimation and model selection, when the number of parameters increases with sample size, has received much attention in recent literature. Most of the existing results have focused on likelihood-based methods and hence are not robust to model misspecifications. This talk introduces disparity based inference for non-linear regression problems when the dimension of the parameter space is fixed and when it increases with the sample size. It will be shown that the disparity based estimators are both robust and asymptotically efficient at the true model. As a corollary it will follow that, when the dimension of the parameter space increases with the sample size, appropriately regularized disparity estimators will possess an oracle property. The proofs rely on new uniform L1-consistency results for kernel density estimators and large deviations of minimum disparity estimators. Extensions that yield robust and asymptotically efficient posterior inference in the context of Bayesian inference will also be presented.

Guest Parking Available in the **Liacouras Garage**  
(Located on **15th Street between Montgomery and Cecil B. Moore Avenues**)