

Hira L. Koul

Department of Statistics and Probability

Michigan State University

Model Diagnostics via Khmaladze's Martingale Transform

A classical problem in statistics is to fit a distribution up to unknown location-scale parameters. This problem is generic to many other statistical models including the celebrated regression and autoregressive and generalize autoregressive conditionally heteroscedastic (ARCH-GARCH) models where one is testing that innovations are from a given distribution. It will be argued that the Khamaladze's martingale transformation of the residual empirical process that yields asymptotically distribution free tests for the one sample location-scale model does the same thing for a parametric heteroscedastic regression model, nonparametric regression models and for ARCH-GARCH models.

This talk is based on some ongoing joint work with Estate Khmaladze.

**Friday, October 23, 2009 at
11:30 am in B760 EH**

**Coffee and Cookies will be
served at 11:15 am in the
Statistics Lounge, 450 West Hall**