You are cordially invited to the 252nd meeting as scheduled below.

Date: December 4, 2009 (Fri) 15:00 –
Place: RERF Auditorium

Speaker: Kengo Kato, Ph.D.
Assistant Professor, Department of Mathematics, Graduate School of Science, Hiroshima University

Title: “On estimation of the asymptotic covariance matrix in quantile regression”

Abstract:
Since the seminal work of Koenker and Bassett [Regression quantiles, Econometrica 46 (1978) 33-50], quantile regression has been used in many research areas. The main obstacle in conducting statistical inference using quantile regression lies in the fact that the asymptotic covariance matrix of the quantile regression estimator contains the conditional density of the error term. In this talk, we first review quantile regression and several estimation methods of the asymptotic covariance matrix. We then show asymptotic normality of Powell’s kernel estimator of the asymptotic covariance matrix and derive the optimal bandwidth that minimizes the approximate mean squared error of the kernel estimator.