The Division of Economics and the Economic Growth Centre cordially invite you to a seminar by Professor Jeffrey S. Racine

Speaker: Professor Jeffrey S. Racine  
Senator William McMaster Chair in Econometrics;  
Professor, Department of Economics;  
Professor, Graduate Program in Statistics, Department of Mathematics and Statistics  
McMaster University

Topic: “Infinite Order Cross-Validated Local Polynomial Regression”

Chairperson: Assistant Professor Feng Qu  
Division of Economics  
School of Humanities & Social Sciences

Date: Monday, 24 February 2014

Time: 2:30 pm – 4:00 pm

Venue: HSS Meeting Room 5 (HSS-04-89)  
Nanyang Technological University  
School of Humanities and Social Sciences  
14 Nanyang Drive  
Singapore 637332

About the Speaker:

Jeff Racine is Senator William McMaster Chair in Econometrics and Professor of Economics, McMaster University.

His bio can be found: [http://www.economics.mcmaster.ca/faculty/racine](http://www.economics.mcmaster.ca/faculty/racine)

Abstract:

Many practical problems require nonparametric estimates of regression functions, and local polynomial regression has emerged as a leading approach. In applied settings practitioners often adopt either the local constant or local linear variants, or choose the order of the local polynomial to be slightly greater than the order of the maximum derivative estimate required. But such ad hoc determination of the polynomial order may not be optimal in general, while the joint determination of the polynomial order and bandwidth presents some interesting theoretical and practical challenges. In this paper we propose a data-driven approach towards the joint determination of the polynomial order and bandwidth, provide theoretical underpinnings, and demonstrate that improvements in both finite-sample efficiency and rates of convergence can thereby be obtained. In the case where the true data generating process (DGP) is in fact a polynomial whose order does not depend on the sample size, our method is capable of attaining the √n rate often associated with correctly specified parametric models, while the estimator is shown to be uniformly consistent for a much larger class of DGPs. Theoretical underpinnings are provided and finite-sample properties are examined.

Reservation:

Admission is free. Please reply to Christina, e-mail: achristina@ntu.edu.sg or Tel: 6790-5689 to confirm your attendance.