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THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

PhD Student Seminar

Asymptotic Inference of the ARMA Model with Time-Functional Variance Noises

By

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Abstract

This talk will consider the autoregressive and moving average(ARMA) model with time-functional variance (TFV) noises, called the ARMA-TFV model. We first establish the consistency and asymptotic normality of its least squares estimator(LSE). Based on the theory, the Wald test and a portmanteau test are constructed for variable selection and model checking, respectively. A simulation study is carried to assess the performance of our approach in finite samples and two real examples are given. It should be mentioned that the process from the ARMA-TFV model is not stationary and the technique in this study is non-standard and may provide some insights for future research in this direction. This talk is based on a joint work with Shiqing Ling and Enwen Zhu.

Date : 27 April 2023 (Thursday)
Time : 3:00pm
Venue : Room 2503 (Lifts 25/26)

All are Welcome!