4th YUIMA Users Workshop (January 29, 2019)
Program

13:30-14:00 Yuta Koike (Graduate School of Mathematical Sciences, University of Tokyo)
On implementation of high-dimensional covariance estimation in YUIMA package

14:00-14:30 Shoichi Eguchi (Center for Mathematical Modelling and Data Science, Osaka University)
Improvement of the functions for statistical inference in YUIMA

14:30-15:00 Yuma Uehara (Risk Analysis Research Center, Institute of Statistical Mathematics)
Jump detection on YUIMA package

15:00-16:00 Discussion

Abstracts

Yuta Koike (Graduate School of Mathematical Sciences, University of Tokyo)

Title: On implementation of high-dimensional covariance estimation in YUIMA package

Abstract: First, we overview several R packages for high-dimensional covariance estimation. Next we discuss how to implement high-dimensional non-synchronous covariance estimation by combining those packages with the cce function implemented in the yuima package.

Shoichi Eguchi (Center for Mathematical Modelling and Data Science, Osaka University)

Title: Improvement of the functions for statistical inference in YUIMA

Abstract: In R package yuima, there are several functions for statistical inference of stochastic differential equations, which includes "qmle" for parameter estimation and "IC" for model selection. However, these functions still have room for improvements. In this talk, we will explain the specifications of qmle and IC and propose the improvements of these functions.

Yuma Uehara (Risk Analysis Research Center, Institute of Statistical Mathematics)

Title: On detection of jumps in YUIMA

Abstract: In this talk, we briefly introduce two jump detection methods: the one is based on Jarque-Bera normality test and the other one is based on rank statistics. After that, we explain the functions under development which execute the methods on YUIMA package.