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## **Math Colloquium Talk**

**Title:** Asymptotic Properties of the QMLE in a Log-linear RealGARCH Model with Gaussian Errors

**Speaker:** Dr. Caiya Zhang, School of Computer and Computing Science, Zhejiang University City College

**Time and Date:** 4:00PM on Friday, September 28, 2018

**Room:** SE 215

### **Abstract:**

To incorporate the realized volatility in stock return, Hansen et al. (2012) proposed a RealGARCH model and conjectured some theoretical properties about the quasi-maximum likelihood estimation (QMLE) for parameters in a log-linear RealGARCH model without rigorous proof. Under Gaussian errors, this paper derives the detailed proof of the theoretical results including consistency and asymptotic normality of the QMLE, hence it solves the conjectures in Hansen et al. (2012). This work is jointly authored with Kaihong Xu and Lianfen Qian.

### **Speaker Brief Bio:**

Dr. Caiya Zhang is a professor and chair at the Department of Statistics of Zhejiang University City College, China. Her research interests are statistical inference for multivariate distribution, parameter estimation for financial econometric models and survival Cox models. As the leader of various fund projects, she undertook the National Natural Science Foundation, the Natural Science Foundation of Zhejiang Province, and the Humanities and Social Sciences Fund of the Ministry of Education. She has published more than 30 papers in statistical journals.

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