

1154-60-203

**Cory Ball\*** (cball2015@fau.edu), cball2015@fau.edu, and **Hongwei Long**. *The Volatility Change-Point Problem for Diffusion Processes*.

In a 2008 paper, De Gregrio and Iacus estimated the volatility change point of a stochastic process under the assumption of equality of the Euler approximation. In the paper, they falsely claim the equivalence of two estimators. In this talk, we approach the problem without the assumption of equality of the Euler approximation. Instead, we consider two separate cases. The first case has a volatility function that is bounded away from zero, and the second case assumes ergodicity. In both cases, we are able to show consistency and determine asymptotic behavior. Finally, simulations indicate that the proposed estimator is more accurate than that of De Gregrio and Iacus. (Received September 05, 2019)