

# GRADUATE SEMINAR

Isaac Kwaku Kwarteng

## Confidence Ellipses under the Inverse Gaussian Distribution

*MSc Student supervised by Arzu Sardarli and  
Andrei Volodin*

**Thursday, November 12th**

1:30- 2:30 PM

Math Lounge (CW307.20)

**Abstract:** The Inverse Gaussian Distribution has various applications in solving everyday problems. In this study we focus on confidence region under the Inverse Gaussian Distribution and uses it to construct confidence ellipses of parameters.

The thesis comprises of two parts, the theoretical and the computational. The theoretical part centers on how to operate a classical estimation method using the method of maximum likelihood and the computational focuses on how to construct asymptotic confidence ellipses for parameters of the Inverse Gaussian Distribution.