

GRADUATE SEMINAR

How reliable are reliability analyses?

Adam Kehler (MSc student) supervised by Dr. Andrei Volodin

Date: March 27, 2017

Time: 3:00 pm to 4:00 pm

Location: Math & Stats Lounge 307.20

Abstract: Understanding the reliability of a product, structure or system is critical in determining how, and if, it should be used. There is an entire discipline dedicated to this topic called Reliability Engineering (a.k.a. Reliability Theory). Many reliability analyses are predicated on assuming an underlying distribution for a lifetime random variable. Three commonly used distributions are Gamma, Weibull, and Generalized Gaussian – all of which can be connected by the Generalized Gamma distribution.

This seminar will briefly introduce the discipline of Reliability Engineering and the role of the lifetime random variable. It will take a look at the Generalized Gamma distribution and explore the role of bootstrapping in constructing confidence intervals. This is intended to set the foundation for my MSc thesis graduate seminar next year.