

GRADUATE SEMINAR

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Type II generalized crack distribution and the EM Algorithm

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Date: July 20, 2022

Time: 3:30 – 4:30 pm

Location: Math Lounge
and

<https://uregina-ca.zoom.us/j/94125367372>

Abstract: The Birnbaum-Saunders distribution has seen several extensions, yet with its application restricted to reliability and survival analysis. Although some extensions allow for higher flexibility but due to the thin-tailedness inherited from the standard normal of their base density, it limits their application for heavy-tailed data modelling. An extended version, the so-called Type II Generalized crack distribution contains an additional shape parameter built on an appropriate base density which provides a sufficient level of flexibility to fit heavily tailed data. In this seminar, I will review the Type II Generalized crack distribution, and discuss some distributional properties in connection with some base density function. I will describe the EM algorithm in general for parameter estimation and develop the algorithm specifically to the finite mixture model.

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