



**Department of Mathematics and Statistics**

**COLLOQUIUM**

**Tuesday, September 22<sup>nd</sup>, 2015**

4:00 – 5:00 pm, Adel Mathematics Bldg., Room 164  
(refreshments at 3:45)

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**On Halfspace Depth Trimmed Mean**

Abstract: Although various depth weighted means have been studied in the literature, all studies invoked the condition that the weight function is continuously differentiable in its domain and thus excluded some important cases such as the unweighted depth trimmed mean, in which the weight function is a step function. Here we study the halfspace depth trimmed mean with the condition released. The influence function of the halfspace depth trimmed mean and the asymptotic distribution of its sample version are obtained. The asymptotic efficiency of the sample halfspace depth trimmed mean is also studied. The striking finding is that the sample halfspace depth trimmed mean is very efficient for low dimensions and is not efficient for high dimensions.

Algebra Combinatorics Geometry and Topology (ACGT) Seminar meets every Tuesday, 12:45 – 1:45 pm, AMB 164.

Applied Math Seminar (AMS) will meet occasionally on Thursdays, 12:45 – 1:45 pm, AMB 164, as announced.

Friday Afternoon Undergraduate Mathematics Seminar (FAMUS) meets Fridays, 3pm, AMB 164.