

Stanford University
Department of Statistics

DEPARTMENTAL SEMINAR

4:30pm, Tuesday, October 9, 2018
Sloan Mathematics Center Room 380C

Refreshments served at 4pm in Sequoia Lounge.

Speaker: Kristian Lum, *Human Rights Data Analysis Group*

Title: **Statistical challenges in casualty estimation**

Abstract:

An accurate understanding of the magnitude and dynamics of casualties during a conflict is important for a variety of reasons, including historical memory, retrospective policy analysis, and assigning culpability for human rights violations. However, during times of conflict and their aftermath, collecting a complete or representative sample of casualties can be difficult if not impossible. One solution is to apply population estimation methods — sometimes called capture-recapture or multiple systems estimation — to multiple incomplete lists of casualties to estimate the number of deaths not recorded on any of the lists. In this talk, I give an introduction to the procedures by which population estimation is performed in the context of conflict mortality, which mainly consists of a record linkage step followed by capture-recapture estimation. I then describe some of my recent work in this area, which is directed at elucidating the limitations of these statistical methods and proposing variants with better properties. I will conclude with a discussion of open questions in this challenging area of applied statistics.