# Seminar Series in Statistics and Data Science

15.01.2019, 14:15 @ Erling Sverdrups plass, Niels H. Abels hus, 8th floor

Li-Chun Zhang: Graph sampling

Abstract: For a statistical approach to graphs one may choose to model the entire population graph as a random realisation, or to exploit the variation over possible sample graphs taken from a given fixed population graph. Graph sampling theory deals with the latter perspective. In this talk, we synthesise the existing fragmented theory of graph sampling. We propose a formal definition of finite-graph sampling, and provide a classification of potential graph parameters. We develop a general approach of Horvitz-Thompson estimation to T-stage snowball sampling, and present a united BIG-reformulation of so-called "network" sampling methods in the literature in terms of the outlined graph sampling theory.
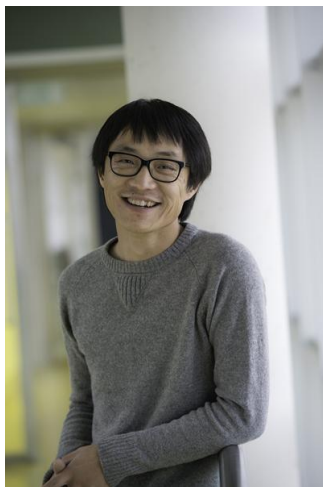
Li-Chun Zhang

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Li-Chun Zhang is Professor of Social Statistics at the Department of Social Statistics and Demography of the University of Southampton and Professor II at the Department of Mathematics of the University of Oslo.

He joined Statistics Norway as a Researcher in 1997 after he obtained his Dr. Scient. in Statistics. He became a Senior Researcher (professor equivalent) in 2006. In addition to his position at the University of Southampton (from 2012), and Professor II at the University of Oslo (from 2018), he still maintain a part-time position at Statistics Norway.

His research interests include: data integration; statistical uses of administrative sources; survey sampling; sample coordination; estimation and imputation; treatment of non-sampling errors; small area estimation; price index; statistical data editing; and statistical modelling.

Next seminar

18.01.2019 @ 14:15
Hans Rudolf Künsch (ETHZ of Zurich)

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