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**Name:**  Dr Retha Luus

**Position:**  Senior lecturer

**Committees:** President of the Western Cape chapter of the South African Statistical Association

**Qualifications:**  PhD (Statistics), Stellenbosch University

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**Professional portfolio:** <https://sites.google.com/myuwc.ac.za/eportfolio-of-r-luus/home>

**Current modules:** BWIB 822 (first semester)

STA 221 (second semester)

COF711 (second semester)

**Research topics:**  complex sampling, statistical modelling, prediction error, resampling methods, bootstrap, weight trimming, benchmarking, high performance computing, data science

**Publications:**

1. Luus, R., Neethling, A. & De Wet, T. (2018). Prediction error estimation of the survey-weighted least squares model under complex sampling. *European Conference on Quality in Official Statistics*.
2. Luus, R. (2016). *Statistical inference of the multiple regression analysis of complex survey data*. PhD thesis, Stellenbosch University.

1. Blignaut, R.J., Luus, R., Lombard, R., Latief, A., Kotze, D.  (2013).  Maths4Stats: Opleiding vir onderwysers.  *Suid-Afrikaanse Joernaal vir Wetenskap en Tegnologie* 32(1), Art. #405, 7 pages. <http://dx.doi.org/10.4102/satnt.v32i1.405>
2. Luus, R., Neethling, A. & De Wet, T. (2012). Effectiveness of weighting and bootstrap in the estimation of welfare indices under complex sampling. *South African Statistical Journal*, **46**, 85-114.

**Short description:**

I am an academic and statistician currently doing research in survey sampling. I started my research in the area of poverty and inequality inference and have since moved on to statistical modelling in this area. I have completed a PhD with the main objective of modelling survey data and the evaluation of these models using cross-validation and resampling. In order to achieve this, I executed these studies on a Linux based PBS scheduler HPC (high performance computing) cluster using R for massive parallel runs on terabytes of data. I am part of the Data Science team at UWC and have thus extended my research into the niche "Survey Science meets Big Data" area. For more information you are invited to visit my professional portfolio site of which the link is shared on this page.