



# MSc/PhD Research Opportunity

Quantitative population ecology at  
the University of the Witwatersrand

$$\hat{\varphi}_i = \frac{\exp(\hat{\beta}_0 + \sum_j \hat{\beta}_j x_{ji})}{1 + \exp(\hat{\beta}_0 + \sum_j \hat{\beta}_j x_{ji})}$$

The aim of this project is to develop analysis methods that assist with estimation and modelling of wildlife populations. Successful candidates will work with **statistical models** to estimate abundance, survival, recruitment, and space use. We seek post-graduate students with an interest in and aptitude for quantitative methods in population ecology.

## Requirements:

- highly motivated and independent;
- interest in methods of statistical population analysis and population ecology;
- experience with or an interest to learn Bayesian analysis and the computer programming necessary to run such analyses, primarily in R and WinBUGS;
- the ideal candidate has formal training in both biological (ecology, zoology, wildlife conservation) and mathematical (calculus, statistics, computers) sciences;
- for the MSc project: BSc Hons in a biological or mathematical field;
- for the PhD project: MSc in a biological or mathematical field;
- to receive qualifying degree by the time of enrolment at Wits;
- valid driver's licence (equivalent to South African code B).

Bursary support — The successful applicant will receive a bursary of R60 000 for MSc students and R80 000 for PhD students. Candidates are also strongly encouraged to apply for the University of the Witwatersrand Postgraduate Merit Award (<http://www.wits.ac.za/postgraduate/studentfinance>) and other bursaries for which they might be eligible.

The closing date is 31 October 2015. Interested individuals should send a letter of intent, CV (including names and contact details of three references), copies of mark transcripts, and an example of their writing (e.g. honours thesis, publications from MSc thesis) to Jason Marshal ([jason.marshal@wits.ac.za](mailto:jason.marshal@wits.ac.za)), School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Private Bag 3, Wits 2050; or Fitsum Abadi Gebreselassie ([fitsum.gebreselassie@wits.ac.za](mailto:fitsum.gebreselassie@wits.ac.za)), School of Statistics and Actuarial Science, University of the Witwatersrand, Private Bag 3, Wits 2050.

