



ADVERT: BMGF-MASHA PhD BURSARIES in Mathematical Modelling for Malaria Elimination in Southern Africa

Closing date: 5 September 2022. Applications received after the closing date will not be considered.

The Modelling and Simulation Hub, Africa (MASHA), a research group at the University of Cape Town (www.masha.uct.ac.za) is offering PhD bursaries to support a Bill and Melinda Gates Foundation (BMGF) funded project entitled 'Malaria Modelling and Analytics: Leaders in Africa (MMALA)'.

With a geographic focus in Southern Africa, the overall aim of the research project is to grow local capacity for malaria model development through increasing the number of PhD-trained mathematical modellers with malaria expertise in the Elimination 8 countries working to eliminate malaria by 2030.

Candidates are sought from Angola, Botswana, Eswatini, Mozambique, Namibia, South Africa, Zambia, Zimbabwe to conduct doctoral research on projects linked to National Malaria Control Programme policy priorities. These could include, for example, using malaria modelling to estimate the path to elimination, assessing the impact of artemisinin resistance and optimising sub-national tailoring of interventions. Candidates will be enrolled in a residential three year programme at the University of Cape Town, and will benefit from advanced training in the first 6 months of the programme, with ongoing training throughout the degree.

The successful candidates will form part of an inter-disciplinary research team from the University of Cape Town, the Elimination 8 Initiative, the Clinton Health Access Initiative (CHAI), Applied Centre for Climate and Earth Systems Science (ACCESS), Oxford University and malaria experts from the region.

Required experience and skill criteria:

- Master degree in mathematics, statistics, public health, economics, computer science, or related field.
- Strong programming skills in at least one of the following languages (R, MATLAB, Python)
- Strong quantitative skills, including statistical modelling, decision science, simulation, intermediate biostatistics and mathematics
- Ability to analyse datasets and produce relevant statistics, visualisations, and interpretation.
- Knowledge of epidemiology and population health measurement
- Ability to work independently and in a team
- Ability to work under pressure and meet deadlines
- Good written and verbal communication skills in English.





Value:

In line with the funding policy of the University of Cape Town, the full-cost value of the bursary is ZAR300,000 to be increased in line with university guidance for future years. Students will be provided with a laptop for the duration of the programme. Travel to Cape Town for initial registration will be covered by the programme.

Conditions of award:

- We seek to attract students from Angola, Botswana, Eswatini, Mozambique, Namibia, South Africa, Zambia, Zimbabwe with a desired target of at least 50 % women candidates
- The successful applicant will be expected to commence in February 2023, at the start of the UCT academic year.
- Successful applicants will be based in Cape Town.
- Candidates are required to have the appropriate visa/permit to study in South Africa. For more information, visit <http://www.international.uct.ac.za/visas-immigration>

Application requirements:

Applicants should submit, *combined into a single PDF*:

- (i) a cover letter that includes a short description of their experience and research interests, and a motivation on why they want to enrol in the programme;
- (ii) a CV;
- (iii) copies of academic transcripts and certificates; and
- (iv) email addresses of at least two referees who have been directly involved in their previous postgraduate studies.

The link for applications is available at: <http://www.masha.uct.ac.za/masha/training/mmala>

Selection process:

- Only eligible and complete applications will be considered by the selection committee.
- Interviews of short-listed candidates are likely to take place in **September 2022**. Shortlisted candidates will be required to take a competency test.
- If you have received feedback within one month of the deadline, please assume your application has been unsuccessful.

Contact details for enquiries about the project and applications: Ms Fadzai Munyanyi
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