

MSc PROGRESS REPORT

(STELLENBOSCH UNIVERSITY)

Name of student: Zenabu Suboi

Student number: 22326979

Degree: MSc (Mathematics) - Full time

Supervisor: Prof. Wim Delva

Co-supervisor: Dr Marijn C. Hazelbag

Title of research project: A comparison of Approximate Bayesian Computation (ABC) methods for model calibration.

Year of registration: 2019

Expected submission date: October 2020

Research aims and plan for the past six months:

1. Compare two of the Approximate Bayesian Computation methods (Sequential and Rejection ABC) using a simple SIR model.
2. Attend workshops and short courses required for the thesis

Progress over the last six months: Very Good.

1. Compared the two Approximate Bayesian Computation methods (Sequential and Rejection ABC) using a simple SIR model.
2. Attended three workshops (MMID, MMED and SACEMA Research days) and three courses.

Reasons for unsatisfactory progress: N/A

Research aims and plan for the next six months:

1. To Include other methods in the comparison such as;
 - Bayesian Maximum Likelihood Estimation
 - Least squares method
 - Maximum likelihood Estimation method
2. To Start writing up my thesis
3. Learn methods for parallel computing
4. Possibly publish in collaboration with Amazon web services

Supervisor's Comment:

Zenabu is working well, I don't expect any delays.

Will the degree be completed in the period as originally planned? If not, furnish reasons: Yes, the degree will be completed in the period as originally planned.

Student's signature: ... *z.f.fc* ...

Date: 16-10-2019



Supervisor's signature:

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Date: 16-10-2019