



# Second African Conference on Fundamental and Applied Physics ACP2021

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Type: **Invited Talk**

## ASP COVID-19 Data Analysis Results

*Friday, 11 March 2022 14:30 (25 minutes)*

We studied the COVID-19 pandemic evolution in ten African Countries, namely Benin, Cameroon, Ghana, Kenya, Madagascar, Mozambique, Rwanda, South Africa, Togo, and Zambia. For each country considered, we modeled simultaneously the data of the active, recovered and death cases. In this study, we used a year of data since the first cases were reported. We estimated the time-dependent basic reproduction numbers,  $R_0$ , and the fractions of infected but unaffected populations, to offer insights into containment and vaccine strategies in African countries. We found that  $R_0 \leq 4$  at the start of the pandemic but has since fallen to  $R_0 \sim 1$ . The unaffected fractions of the populations studied vary between 1–10% of the recovered cases. The results are published in the Scientific African, <https://doi.org/10.1016/j.sciaf.2021.e00987>. We are continuing the study by including impacts of vaccination campaigns, and new countries such as Nigeria. In this talk, I will present the study and the results.

### Abstract Category

**Presenter:** MABOTE, Toivo Samuel (Universidade Eduardo Mondlane, Mozambique)

**Session Classification:** ASP, ASFAP