

# Unathi Koketso Skosana

Department of Physics, Stellenbosch University

[Website](#)

[Github](#)

[ukskosana at gmail dot com](mailto:ukskosana@gmail.com)

## WORK

Intern     Research intern, IBM Research Africa, 2022–

## EDUCATION

PhD        Quantum computing applications and optics, Stellenbosch University, 2022–

MSc.       Quantum computing applications and optics (*cum laude*) [link](#), Stellenbosch University, 2020–2022

Hons.      Theoretical Physics (*cum laude*), Stellenbosch University, 2019

BSc.        Theoretical Physics (*cum laude*), Stellenbosch University, 2016–2018

## PREPRINTS N' PUBLICATIONS

2021        Unathi Skosana and Mark Tame “Demonstration of Shor’s factoring algorithm for  $N = 21$  on IBM quantum processors”. In: *Sci Rep* (Aug 2021). DOI: [10.1038/10.1038/s41598-021-95973-w](https://doi.org/10.1038/s41598-021-95973-w). arXiv: [2013.13855](https://arxiv.org/abs/2013.13855) [[quant-ph](#)]

2021        Unathi Skosana and Mark Tame “On the advantages of relative Toffoli gates”. Submitted to *SAIP2021* conference [7011.3773](#)

## TALKS N' POSTERS

2021        “On the advantages of relative phase Toffolis” SAIP2021. 28 July

2019        “Modeling of Measurement-based Quantum Computing on IBM Q Experience Devices” Quantum Africa V conference. 5 Sept

2019        “Modeling of Measurement-based Quantum Computing on IBM Q Experience Devices” WitsQ Summer School. 10 Dec

## GRANTS N' RECOGNITION

2022        [Qiskit Advocate](#), Qiskit

2020–       Masters Research Grant, CSIR

2020        Recognized as a undergraduate top achiever by the physics department at Stellenbosch University

- 2019      Merit Bursary, Stellenbosch University  
2018      Undergraduate Fund, SKA Undergraduate Programme

### **SELECTED PROJECTS**

- 2021      [Hyperentangled-photons-masters-experiment](#)

### **SERVICE**

- 2018-      Teaching assistant for physics 114/144 at Stellenbosch University