



## Data@breakfast Webinar Series

You are invited to the next data breakfast by

**Dr Makhamisa Senekane**  
University of Johannesburg

Friday, 05 March 2021 Time: 07h30 - 08h30

### **A Hands-on Introduction to Quantum Information Processing**

**Abstract:** Quantum Information Processing (QIP), which is also dubbed as the second quantum revolution, uses quantum mechanical concepts such as superposition, entanglement, and interference in order to process information. Some of the sub-fields of QIP include quantum cryptography, quantum computing, quantum games, and quantum communication. In this talk, I will focus on the introduction to various sub-fields of quantum information processing. Furthermore, I will cover the hands-on implementation of quantum information processing, using Python programming language and Google Colab platform.

**Bio:** Makhamisa Senekane is a Senior Researcher in the Institute of Intelligent Systems at the University of Johannesburg. Prior to that, he worked as a Lecturer in the Department of Physics and Electronics at the National University of Lesotho. He has obtained his PhD in Physics from the University of KwaZulu-Natal, his MSc.Eng in Electrical Engineering from the University of Cape Town, and his B.Eng in Electronics Engineering from the National University of Lesotho. He has recently published a book titled “Hands-On Quantum Information Processing with Python”.

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