

Modelling in the context of African Health 2024

A joint conference of the CoE-MaSS, NITheCS and UKZN

15-17 November 2024
Riverside Hotel, Durban

BACKGROUND

The health of both humans and animals in South Africa (and Africa) has a significant impact on the development and economy of the country/continent. In this context, information on mortality and causes of death is crucial as they enable us to monitor health and set and reach development goals (such as reductions in infant mortality, child mortality and maternal mortality rates). This is also important in order to formulate evidence-based health policies. The combination of deaths arising from infectious and non-communicable diseases as well as mortality from injuries has also been described as the quadruple burden of disease that is increasingly common across Africa.

An important step in addressing this challenge is effective modelling. Modelling has been used successfully for the large part of the 20th century to aid the analysis of a variety of physical applications. As biomedical applications start to dominate the 21st century, modelling techniques are being increasingly used as a first approach in understanding processes in biology and medicine. Mathematical modelling has been successfully used in a number of areas to obtain an indication of the development of diseases, growth of infections, socio-economic impact of diseases, etc. However, there are still many opportunities in these fields that can be exploited by appropriate modelling techniques.

Following on the successful 2019, 2021 and 2023 conferences, we will bring together researchers in the Biosciences and Health Sciences (human and animal) as well as modellers from the Mathematical Sciences to foster impactful research.

The workshop/conference will be comprised of a series of plenary talks by invited experts who:

- i) have a need for modelling to aid in the understanding of the health-related research they are undertaking, and
- ii) modellers who have been successful in applying mathematical modelling techniques in the health field.

In addition, researchers and students will be allowed to present their research on modelling in the biosciences.

By bringing together this grouping of researchers, we hope to grow the network of individuals who can work together effectively to combat the challenges we face in the health/bio- sciences in Africa.

FORMAT

This will be an in-person conference with talks broadcast on Zoom for those who cannot attend in person. Presentations will include:

- Invited plenary presentations by researchers showing the value of modelling in the health arena in Africa.
- Invited plenary presentations by researchers in the health and social sciences requiring modelling.
- Research presentations (faculty and students) in African health research that use or require modelling.

TIMING

The times for the presentations will be arranged to take multiple time-zones into account.

ATTENDANCE FEES & SUPPORT

Online participants: N/A

In-person participants: R3 700

Due to funding from the CoE-MaSS, NITheCS and UKZN's Hanno Rund Fund, **registration fees and accommodation costs for non-Durban based students will be covered.**

LOCAL ORGANISING COMMITTEE

Kesh Govinder (Chair)

Danielle Roberts

Ursula Scharler

QUERIES?

Email Kesh Govinder at govinder@ukzn.ac.za

REGISTER:

<https://bit.ly/4cMblgl>



Register by 30 September 2024