



## **SHORT COURSE IN SPATIAL MODELLING**

Training in GIS software and analysis.

Part of MSc in Biostatistics (CUHAS)

Dates: Monday 25<sup>th</sup> November to Friday 29<sup>th</sup>

November 2024

Facilitators: Jim Todd (SSACAB/CUHAS), Eustasius Musenge (SSCAB/Witwatersrand University) & Aweke Mitku (SSCAB/Witwatersrand University)

Location: CUHAS Floor 5 (St John Paul room)

Refreshment and lunch provided

Deadline for application Friday 15<sup>th</sup> November.

DAY/DATE	Start at 08:00, breaks for tea and lunch. Finish around 15:30
MONDAY 25/11/2024	Getting started with ArcGIS & QGIS Working with layers & producing a spatial reference system Geo-Referencing internal and external data Preparing, projecting and presenting data as maps
TUESDAY 26/11/2024	Exploratory Spatial data handling: Importing, cleaning, managing and analysing spatial data Geographically Weighted Regression using ArcGIS guided example LISA Regression using GeoDA guided example
WEDNESDAY 27/11/2024	Analysing spatial data in R Installing R packages (starts Monday), Spatial regression for CAR and SAR models for Continuous outcomes using RMarkdown
THURSDAY 28/11/2024	Spatial regression modelling for Binary and Count outcomes
FRIDAY 29/11/2024	Project work: Applying the concepts to your own data and presenting maps and results

**Application for the course should send an email to Jim Todd ([jim.todd@lshtm.ac.uk](mailto:jim.todd@lshtm.ac.uk)). All applicants should be familiar with regression and statistical analysis.**

**Applicants from outside of CUHAS/MITU/NIMR may be asked to pay TShs 200,000/- to attend.**

**Participants are encouraged to come with their own data to use in the practicals. Those without data will be given selected health data from Tanzanian regions.**

### **Prior to the workshop:**

Participants should be familiar with statistical regression, data management and maps used in publications and presentation. The objective of the course is to provide training in the tools available to produce some of the results and maps.

All participants will get a certificate of attendance on completion of the full course.

