

NERC-funded Research Experience Placement (REPs) Summer 2025

Project title

Modelling air quality in urban megacities

Lead supervisor

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Project description

Air pollution is a global crisis with disproportionate impacts on the vulnerable and marginalized sectors of society. There remains significant uncertainty on the causes and mechanisms of air pollution, which prevent targeted and effective mitigation measures being implemented. This project will focus on air pollution in a megacity and use observational data and a perturbed parameter ensemble modelling approach to quantify and constrain sources of uncertainty and as a result use modelling to investigate mitigation actions.

Project restrictions

Students should be familiar with programming in Python.

Working arrangements

This is a pure modelling project and the modelling is performed using open source software that can be compiled and run on any standard spec computer.