

Inspiring Science: CEMPS Inaugural Lecture

Pumps, Maps and More Pea Soup

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Thursday 26th September 2019

Refreshments will be available from 5.30pm

Lecture abstract:

Air pollution is a major risk factor for global health, with both ambient and household air pollution contributing substantially to the overall global burden of disease. Recently, there have been significant advances in the methods that are available to quantify air pollution-related indicators to track progress towards the Sustainable Development Goals and to expand the evidence base of the impacts of air pollution on health. These advances have been a result of the explosion in the availability of environmental data, increases in computing power and a growing public interest in the effects of environmental pollution. Using illustrative examples, from outbreaks of cholera in London in the 1850s through episodes of smog in the 1950s London to global air pollution in present day, we explore the advances in data science, statistics, epidemiology and computational methods that now provide the meaningful insight required by individuals, businesses and policy-makers to mitigate the effects air pollution on our health and well-being. Specifically, the quantification of the risks associated with air pollution has led to the development and implementation of air quality standards, together with the policies required for their enforcement, in many parts of the world. However, air pollution constitutes a major, and in many areas, increasing threat to public health: over 90% of the world's population are exposed to levels substantially above WHO Air Quality Guidelines with the populations of many low- and middle-income countries continuing to experience increased levels of pollution in their the air that they breathe.

