Research Assistant / PhD Opportunity at Trinity College Dublin

Candidates are invited to apply to join the Centre for Transport Research in the Department of Civil, Structural & Environmental Engineering at Trinity College Dublin as a Research Assistant / PhD student, to start in September 2018 or as soon as possible thereafter.

The successful candidate will work on a research project on the health impacts of NO₂ funded by the Environmental Protection Agency.

Ideally the candidate should have an MSc/MEng/MAI level degree in engineering, statistics, environmental engineering/science, health studies or other relevant discipline.

Home/EU fees will be covered and a stipend of €16,000 per year will be paid for three years.

Project Overview

Evidence of association between ambient concentrations of NO₂ and a range of health impacts has strengthened in recent years. On average, transport is responsible for 80% of NOₓ emissions and diesel engines, in particular, generate high levels. Diesel cars have become extremely popular in Ireland since 2008 when the government changed car taxation policy to focus no longer on engine size but to CO₂ emissions of the vehicle. While anecdotal evidence suggests that diesel car sales may be slowing down, the large numbers of diesel vehicles in the existing fleet are still a cause for concern in relation to NO₂ emission levels.

Some of the key objectives of the project are:

1. Using currently available air pollution measurements and recent research results on the influence of meteorological and source parameters (including transport vehicle and population mobility demands), the project will identify a set of characteristics for the locations in Ireland that are at most risk of experiencing high levels of NO₂.
2. Using the Health Service Executive (HSE)-Primary Care Reimbursement Service (PCRS) prescribing database, the project will establish much needed baseline data linking NO₂ levels with the prescription of drugs used to treat asthma and chronic obstructive airways disease.
3. The Irish Longitudinal Study on Ageing (TILDA) database (~8,500 participants) will be explored to investigate if relationships between prevalence of respiratory symptoms in vulnerable groups e.g. the elderly and the socio-economically deprived and NO₂ levels exist, within database constraints.
4. Policies and strategies being implemented by other countries to bring NO₂ within compliance levels will be examined to explore their potential effectiveness and efficiency for implementation in Ireland.
Interested applicants should apply by sending a CV and a 500 word document summarizing their interest and demonstrating what their background and experience would bring to the project to margaret.omahony@tcd.ie

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