

## **PhD position “Air pollution and health in Europe” (1.0 fte, 4 years)**

### **Organisation**

At the moment, the Demography Department of the Faculty of Spatial Sciences at the University of Groningen and the Institute of Sociology and Demography of the Faculty of Economics and Social Sciences at the University of Rostock have a PhD position available on the topic “Air pollution and health in Europe”, for four years.

Since its foundation in 1614, the University of Groningen has enjoyed an international reputation as a dynamic and innovative centre of higher education offering high-quality education and research. Healthy Ageing is one of the strategic focus areas of the University of Groningen. At the Faculty of Spatial Sciences - consisting of approximately 100 members of staff and 100 PhD students in the fields of social and economic geography, demography and spatial planning - the Healthy Ageing topic is well covered within the collective research theme tWIST - towards Wellbeing, Innovation and Spatial Transformation, and within the research programme ‘Population and Well-Being in Context’ of the Demography Department.

The University of Rostock, founded in 1419, is the only university in Germany where Demography is offered as a study subject from a MA to PhD level. The main emphasis is on empirical data analysis using advanced statistical methods and formal demography. At the Faculty of Economic and Social Sciences, the Demography Program is working in close collaboration with the Department “Ageing of Individuals and Society” with a research agenda at the intersection of social science, demography, and population based/clinical epidemiology.

The available PhD position is linked to the overall research topic “The living environment and health”. This overall topic links the joint research interests between prof. dr. Fanny Janssen (chair in “Mortality and Ageing”, Demography Department, Faculty of Spatial Sciences, University of Groningen) and prof. dr. Gabriele Doblhammer (chair in “Empirical Methods in Social Science and Demography”, Institute of Sociology and Demography, University of Rostock) and their research experience. In addition, the topic links to one of the strategic focus areas of the University of Groningen and the Faculty of Spatial Sciences: “Healthy Ageing”, and to one of the four profile lines of the University of Rostock: “Aging Science and Humanities”.

Of the 4 years available for the position, two years should be spent at the Faculty of Spatial Sciences, University of Groningen and two years at the Institute of Sociology and Demography of the University of Rostock. You will be supervised by Dr. Tobias Vogt (co-promotor), Prof. dr. Fanny Janssen (promotor) and Prof. dr. Gabriele Doblhammer (promotor). Upon successful completion, the PhD candidate will be awarded a double PhD degree. The first PhD degree is awarded in Groningen.

### **The PhD project**

High concentrations of different air pollutants present a major health risk in developed and developing countries. There is mounting evidence that human health is negatively affected by

increasing concentrations of air pollutants stemming from different combustion sources ranging from car traffic over industrial production to private households. Large cross country observational studies and meta reviews have linked the long term exposure to particulate matter, nitrogen dioxide or sulphur dioxide to an increased risk of suffering from various heart and respiratory diseases. Living in an environment with severe air pollution is not only detrimental to physical health outcomes but also to cognitive development over the life course. Long term exposure to high concentrations of air pollution harms the cognitive performance of individuals and increases their risk of developing dementia.

Objective of the current multidisciplinary PhD research project is to study the contribution of air pollution to regional and international health differences in Europe, and trends therein over time.

As a central part of the dissertation project, the PhD student will adopt demographic techniques to estimate air pollution attributable mortality. This estimation method will allow to quantify to which extent air pollution concentration contributes to regional and cross border health differences and to changes in health outcomes over time. A particular focus will be on the effects of declining air pollution on changes in health over time. The deindustrialization in larger parts of Eastern Europe and especially in Eastern Germany during the 1990s will be highly relevant.

The PhD thesis will consist of a minimum of 4 first-authored articles in international scientific journals, an introduction and a discussion, and will be written in English. One of these articles should be sole-authored by the PhD student. Presentations at (inter)national conferences are part of the job as well. When at the University of Groningen (first two years), teaching will take up 15% of your time. When at the University of Rostock (last two years), teaching and research management will take up 50% of your time.

### **Qualifications**

We are looking for a candidate with:

- a (Research) Master's degree in a field of study relevant to the topic of "Living environment and health" (e.g. population studies, demography, geography, epidemiology, public health);
- excellent study results and CV;
- good writing skills and fluency in English; preferably experience in academic writing;
- previous experience or proven interest in the research field of health/mortality in the European context;
- preferably experience with geographical information systems;
- strong conceptual thinking with the desire and capacity to relate theoretical topics to practical challenges and solutions;
- strong motivation, good communicative skills, proactive and independent work.

We are looking for a candidate with the following competences:

- conceptual capacity & abstract reasoning;
- communicative skills (presenting);
- planning & organizing;
- drive & enthusiasm.

Students previously or currently enrolled in the European Doctoral School of Demography (EDSD) are especially encouraged to apply for the position.

### **Conditions of employment**

Of the 4 years available for the position, the first two years are spent at the Faculty of Spatial Sciences, University of Groningen and the second two years at the Institute of Sociology and Demography of the University of Rostock.

In the first two years, the appointment of the PhD researcher is with the Faculty of Spatial Sciences at the University of Groningen. As such the PhD researcher will be admitted to the Graduate School of the Faculty of Spatial Sciences, and a PhD training program is part of the agreement. In accordance with the Collective Labour Agreement for Dutch Universities, the University of Groningen offers a salary of € 2,325 gross per month in the first year, and a salary of € 2,709 gross per month in the second year, based on a full-time position (1.0 FTE). This is excluding a holiday allowance of 8% gross annual income and an 8.3% end-of-the-year allowance.

For the third and fourth year, the University of Rostock offers a two-year position according to EG 13 TV-L 50%. The main appointment of the PhD researcher is, then, at the Chair of Empirical Social Science and Demography at the University of Rostock. As such the PhD researcher may join the Graduate Academy of the University of Rostock.

The selected candidate will first be appointed for a period of 12 months. Prolongation of the contract is contingent on sufficient progress in the first year to indicate that a successful completion of the PhD thesis within the next three years is to be expected.

We expect the PhD researcher to start – the latest - September 1, 2019.

The PhD student is also expected to enroll for three years in the International Max Planck Research School for Population, Health and Data Science (IMPRS-PHDS) –established this year.

### **Procedure**

You may apply for this position up until **April 22, 2019** by means of the application form (click on "Apply" below on the advertisement on the University of Groningen website).

Please submit the following information:

- a motivation letter (no more than 1 page, in English)
- a curriculum vitae (including a list of publications if any)
- a copy of your Master diploma and transcripts
- the contact details of two referees whom we might contact for a recommendation

Interviews will take place May 20 and May 21, 2019.

### **Information**

A more detailed project description can be obtained from the secretaries of the Demography Department, [secr.demography@rug.nl](mailto:secr.demography@rug.nl). Further information about the project that cannot be derived from the project description can be obtained from dr. Tobias Vogt, [t.c.vogt@rug.nl](mailto:t.c.vogt@rug.nl).

Acquisition is not appreciated.