Postdoctoral fellowship in spatio-temporal statistics

About the position

We have a vacancy for a two-year post-doctoral position supervised by Professor Andrea Riebler at the Department of Mathematical Sciences. The project concerns the development of new statistical methods for jointly modelling diverse sources of spatio-temporal data. A central application will be to obtain estimates and associated uncertainty measures for global health outcomes in low- and medium income countries, where high quality vital registration systems commonly do not exist. Methods will be developed to integrate data that have been observed at points, and data arising from aggregation over areas. The former is common from complex household surveys while the latter is a common feature of census data.

A central focus will be understanding and addressing the different sources of bias. In collaboration with the project "Statistical Methods for Geomasked Spatio-Temporal Data" led by Associate Professor Geir-Arne Fuglstad, we will address scenarios where there is missing information on where the points in space actually lie, or where the points have been systematically misplaced due to confidentiality concerns. Furthermore, we aim to account for misreporting. This is common to complex survey studies and have proved to be an issue in the modelling of under-5 mortality, where, for example, women may misreport birth or death dates or even omit entire births. We aim for providing computationally efficient and user-friendly software that ensures reproducibility and allows the new methods to be used by other scientists.

The successful candidate will report to Riebler in daily work, and to the Head of the Department of Mathematical Sciences in employee matters. The workplace will be Trondheim.

Duties of the position

- Research work, in collaboration with other members linked to the project and the two mentors.
- Teaching (the position may possibly be extended to a third year).
- Dissemination of results.

Required selection criteria

A postdoctoral research fellowship is a qualification position in which the main objective is qualification for work in academic positions. You must have completed a Norwegian doctoral degree in Statistics, or a corresponding foreign doctoral degree recognized as equivalent to a Norwegian doctoral degree is required. Some background in spatial statistics as well as familiarity with programming is required.

PhD students who expect to complete their PhD studies by the end of 2020 are also encouraged to apply. Employment will then be postponed until the PhD degree is finished.

If, for any reason, you have taken a career break or have had an atypical career and wish to disclose this in your application, the selection committee will take this into account, recognizing that the quantity of your research may be reduced as a result.

The appointment is to be made in accordance with the regulations in force concerning State Employees and Civil Servants and national guidelines for appointment as PhD, post doctor and research assistant.

Preferred selection criteria

- Experience with model-based spatial or spatio-temporal statistics.
- Experience with measurement error modelling.
- Background or experience with computational statistics.
- Experience with computationally efficient methods for analysing spatio-temporal data.
- Experience with the programming language R.
- High-level written and oral English language skills

Personal characteristics

We are looking for someone who

- is highly motivated for the position;
- has a strong interest in methodological work;
- has a desire to contribute to solving real-world challenges.
- has good communication and collaboration skills
- works self-driven and independently.

In the evaluation of which candidate is best qualified, emphasis will be placed on education, experience and personal suitability, in terms of the qualification requirements specified in the advertisement.
We offer

- exciting and stimulating tasks in a strong international academic environment
- an open and inclusive work environment with dedicated colleagues
- favourable terms in the Norwegian Public Service Pension Fund
- employee benefits

Salary and conditions

The employment period is 2 years without teaching, or 3 years with teaching and other duties of approximately 33% of the total available time.

Postdoctoral candidates are placed in code 1352 and are normally remunerated at gross from NOK 542 400 per annum before tax, depending on qualifications and seniority. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.

The engagement is to be made in accordance with the regulations in force concerning State Employees and Civil Servants, and the acts relating to Control of the Export of Strategic Goods, Services and Technology. Candidates who by assessment of the application and attachment are seen to conflict with the criteria in the latter law will be prohibited from recruitment to NTNU. After the appointment you must assume that there may be changes in the area of work.

It is a prerequisite you can be present at and accessible to the institution on a daily basis.

About the application

The application and supporting documentation to be used as the basis for the assessment must be in English. Please submit your application electronically via jobbnorge.no.

The application must include:

- CV including Information about educational background and work experience.
- A short research statement explaining the experience and the interest of the candidate for the research topic and describing the relevance of the candidate’s background to the research project (maximum 1 page)
- A copy of the PhD thesis. For those who are near to completion of their PhD: An extended abstract combined with a statement of how and when the applicant plans to complete the thesis.
- Publications and other academic works (up to ten) that the applicant would like to be considered in the evaluation. Joint works will be considered only provided that the applicant includes a brief description of his or her contribution.
- Certified copies of relevant transcripts and diplomas.
- Contact information for at least two references.
- Documentation of fluency in the English language.
- Other documents, which the applicant may find relevant may also be included.

Please note that applications are only evaluated based on the information available on the application deadline. You should ensure that your application shows clearly how your skills and experience meet the criteria which are set out above. Applications submitted elsewhere will not be considered. Diploma Supplement is required to attach for European Master Diplomas outside Norway. Chinese applicants are required to provide confirmation of Master Diploma from China Credentials Verification (CHSI): http://www.chsi.com.cn/en/.

Applicants invited for interview must include certified copies of transcripts and reference letters. Please refer to the application number 2020/14651 when applying.

General information

Working at NTNU

A good work environment is characterized by diversity. We encourage qualified candidates to apply, regardless of their gender, functional capacity or cultural background.

The city of Trondheim is a modern European city with a rich cultural scene. Trondheim is the innovation capital of Norway with a population of 200,000. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world. Professional subsidized day-care for children is easily available. Furthermore, Trondheim offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life and has low crime rates and clean air quality.

NTNU is committed to following evaluation criteria for research quality according to The San Francisco Declaration on Research Assessment - DORA.

As an employee at NTNU, you must at all times adhere to the changes that the development in the subject entails and the organizational changes that are adopted.

Under the freedom of Information Act (Offentleglova), your name, age, position and municipality may be made public even if you have requested not to have your name entered on the list of applicants.

Questions about the position can be directed to Professor Andrea Riebler, e-mail: andrea.riebler@ntnu.no.

Application deadline: 01.07.2020.

NTNU - knowledge for a better world
The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

Department of Mathematical Sciences

We are Norway’s largest university environment in mathematical sciences. The Department has a particular responsibility for all basis education in mathematical sciences for engineering and natural science students at NTNU. We focus on long-term basic research and applied research at a high international level.

Our aim is to meet the society’s needs for mathematical and statistical expertise in business and public administration as well as in the research and education sector. The Department of Mathematical Sciences is one of seven departments in the Faculty of Information Technology and Electrical Engineering.

Jobbnorge-ID: 188325, Søknadsfrist: 1. juli 2020