



Postdoctoral fellow within statistics and applied ecology

About the position

The Faculty of Environmental Sciences and Natural Resource Management (MINA) at the Norwegian University of Life Sciences (NMBU) has a vacant 2-year Post Doctoral-position related to the development of Bayesian models.

The postdoctoral researcher to be hired will work primarily on project WildMap, funded by the Research Council of Norway. Project WildMap aims to cause a paradigm shift in how we quantify, understand, and communicate information about the status and future of wildlife populations. To do so, we are developing spatial capture-recapture models that allow us to map abundance, vital rates, and space-use characteristics of wildlife population. We are collaborating closely with the Norwegian Environment Agency and the Swedish Environmental Protection Agency. During the project we use primarily genetic monitoring data on three large carnivores - wolverine, wolf, and brown bear - collected across Norway and Sweden over nearly 2 decades.

WildMap is an international collaboration of a team of researchers from Norway (Norwegian University of Life Sciences and Norwegian Institute for Nature Research), Sweden (Swedish University of Agricultural Sciences), France (Olivier Gimenez, University of Montpellier), and the USA (Perry De Valpine, University of California Berkeley and Andy Royle, USGS Patuxent Wildlife Research Center).

The project's main goals are to:

- Overcome the computational barriers to large-scale mapping of population dynamics.
- Identify general rules for efficient wildlife monitoring at the level of landscapes and populations.
- Quantify spatio-temporal patterns in population dynamics and their drivers at multiple scales.
- Generate spatially-explicit forecasts of wildlife population dynamics under alternative scenarios.

We are looking for an individual with extensive experience in Bayesian statistics. Familiarity with NIMBLE is not a requirement, but desirable. NIMBLE provides a new implementation of the BUGS model language coupled with the capability to add new functions, distributions, and MCMC samplers to improve computing performance.

One of the purposes of the post-doctoral position is to qualify for work in high-level scientific positions. During his/her work, the postdoctoral researcher will be gaining experience and developing capacity in statistical ecology and applied wildlife management. He/she will also learn how to build and use spatially-explicit capture-recapture models and develop custom functions/samplers for Bayesian analysis using NIMBLE. To ensure acquisition of these skills, the postdoctoral researcher will be working closely with ecologists and statisticians involved in the project. He/she will also participate in several stays abroad to learn from and collaborate with project partners. A progress plan detailing milestones for the postdoctoral period will be developed during the first four weeks after employment.

The preferred starting date for the positions will be October 1, 2019, but this is negotiable.

Academic Qualifications:

We are looking for a trained statistician, ideally with familiarity and interest in ecological applications. The successful applicant must hold a PhD degree within a relevant scientific area (statistics, mathematics, statistical ecology, biometry, or similar). The applicant must document expertise in the research subject.

Required academic qualifications:

- Solid statistical and mathematical foundation.
- Proven quantitative skills and extensive experience with both frequentist and Bayesian analysis.
- Proficiency using the statistical programming language R and various R packages.
- Programming experience (C++ or similar)

Desired academic qualifications:

- Preferred candidates will also have several of the following:
- Familiarity with hierarchical models, including spatial capture-recapture models and models that can integrate multiple sources of information.
- Familiarity with demographic/population dynamic analysis
- Familiarity with NIMBLE.
- Experience working with large data sets.
- Experience with GIS applications and spatial analysis
- Proven scientific writing skills (authored one or more peer-reviewed articles involving hierarchical analysis/modeling).

Applicants will be evaluated according to the aforementioned criteria, based on information provided in the online application form and up to 3 writing examples (published articles, and/or PhD thesis) submitted with the application.

Desired personal skills

- Interest and ability to communicate with non-statisticians.
- Motivation to work as part of a dynamic and diverse team.
- Interest in applying statistical concepts to answer ecological questions.
- Independent and self-motivated

Remuneration and information

The position is placed in government pay scale position code 1352 Postdoctoral Fellow, wage framework 24 (salary grade 57-77) (NOK 504.700-741.300), depending on qualifications. Seniority Promotion in position.

For further information, please contact Richard Bischof

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[Information to applicants](#)

Application

To apply online for this vacancy, please click on the 'Apply for this job' button above. This will route you to the University's Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

Application deadline: 30. September 2019.

Applicants invited for an interview will be asked to present verified copies of diplomas and certificates.

Up to 3 publications selected by the applicant as most relevant must be attached to the application. If it is difficult to identify the contribution of the applicant in multiple-author publications, a short explanation about the applicant's part of the work is suggested.

Printed material which cannot be sent electronically should be sent by surface mail to Norwegian University of Life Sciences, Faculty of Environmental Sciences and Natural Resource Management, P.O. Box 5003, NO-1432 Ås, within 30. September 2019. Please quote reference number 19/02622.

The Norwegian University of Life Sciences (NMBU)

NMBU has a special responsibility for research and education that ensures the basis of life for future generations.

Sustainability is rooted in everything we do and we provide knowledge for life.

NMBU has 1700 employees and 5200 students and is organized in seven faculties. NMBU has a campus in Ås and in Oslo. In the autumn of 2020 we are co-located on Ås. Further information on NMBU is available at www.nmbu.no

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