

The Institute of Social and Preventive Medicine (ISPM) at University of Bern performs research in a range of disciplines relevant to public health ([www.ispm.ch](http://www.ispm.ch)). Groups cut across divisions, facilitating an interdisciplinary approach to research in the fields of clinical epidemiology, social and behavioral health, biostatistics, and international and environmental health.

## Three PhD positions in Biostatistics

The Evidence Synthesis Methods Research Group is seeking three PhD students to work on the following projects:

- “Next Generation Health Technology Assessment (HTx)” (2 PhD positions funded by the European Union)
- “Predicting the real-world effectiveness and safety of medical interventions (REFiNE)” (1 PhD position funded by the Swiss National Science Foundation).
- The overarching aim of the projects is to support decision-making on medical treatment by developing new methods for tailoring the choice of treatment to the individual characteristics, needs, and preferences of patients found in everyday clinical practice.
- Both projects entail original research on statistical models for network meta-analysis, a technique that can be used to summarize evidence from multiple studies, regarding the efficacy and safety of all competing treatments for a specific disease.
- The position holders will have the opportunity to collaborate with the world's leading experts in evidence synthesis, biostatistics, and epidemiology, and will acquire expertise in a wide range of skills.

During your PhD you will:

- Extend existing statistical methods for network meta-analysis to facilitate the comparison of different treatment modalities including treatment combinations and treatment pathways.
- Perform original research on developing statistical methods for making patient-level predictions about the effects of medical interventions.
- Develop models for making real-world predictions of health outcomes at the population level.
- Develop methods for monitoring patient outcomes and adapting treatment decisions.
- Develop easy-to-use online tools that will implement the developed methods.
- Apply the developed methods to answer clinical questions about the optimal pharmacological management of patients with multiple sclerosis (HTx) and the treatment of depression (REFiNE).
- Collaborate with scientists in Bern and abroad.
- Present results in international conferences and publish them in peer-reviewed journals.

### Requirements

- You have a university degree (MSc or equivalent) in biostatistics, statistics, or another quantitative discipline such as applied mathematics, mathematical physics, or computer science.
- Programming skills in at least one computer programming language.
- Fluency in English both written and oral.
- Some experience with the following would be desirable: Bayesian statistical methodology, meta-analysis, machine learning.



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**We offer**

- Working in an international, multidisciplinary, and highly stimulating environment.
- Collaboration with world-renowned experts in Switzerland, UK, Japan, and the Netherlands.
- Support for career development and training. A wide range of topics is offered ([www.ssphplus-phd.ch](http://www.ssphplus-phd.ch)).
- Enrolment in the graduate school of the University of Bern ([www.gcb.unibe.ch](http://www.gcb.unibe.ch) or [www.ghs.unibe.ch](http://www.ghs.unibe.ch)).
- Salary according to the pay scales of the Swiss National Science Foundation for PhD students (1st year 47,040 CHF/ 2nd year 48,540 CHF/ 3rd and 4th year 50,040 CHF, gross per annum).

**Application / contact**

Period: Fixed-term contracts for 4 years, start between 11/2018 and 2/2019 (negotiable)

Place: Bern, Switzerland

Department: Institute of Social and Preventive Medicine (ISPM), University of Bern

Apply no later than: 8/10/2018

For further information on the advertised positions, please contact Prof. Georgia Salanti ([georgia.salanti@ispm.unibe.ch](mailto:georgia.salanti@ispm.unibe.ch)) regarding HTx, and Dr. Orestis Efthimiou ([orestis.efthimiou@ispm.unibe.ch](mailto:orestis.efthimiou@ispm.unibe.ch)) regarding REFINE.

Please send your application to Natalie Studer, [hr@ispm.unibe.ch](mailto:hr@ispm.unibe.ch). Applications must be written in English and include the following PDF documents: curriculum vitae, contact details of two academic or professional referees, and a cover letter with a personal statement (about half a page) describing your motivation.

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University of Bern, Institute of Social and Preventive Medicine, Mittelstrasse 43, 3012 Bern, [www.unibe.ch](http://www.unibe.ch)

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