**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). 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.

**The Evidence Synthesis Methods Research Group** focuses on methods for synthesizing evidence from studies about the efficacy and safety of healthcare interventions.

## We are looking for a highly motivated PhD student
# PhD student in Biostatistics and Epidemiology

**Period:** Fixed-term contract for 3 years, start between 9/2018 and 1/2019 (negotiable)

**Place:** University of Bern, Switzerland

**Apply no later than:** 15/7/2018

The [Evidence Synthesis Methods Research Group](#) is seeking a PhD student to work on the project ["What works best? Methods for ranking competing treatments in network meta-analysis"](#) funded by the Swiss National Science Foundation. The project entails the development and appraisal of methods to synthesize evidence from clinical studies and rank medical treatments according to their efficacy, safety and acceptability.

The most critical question raised by patients and clinicians at the point of care is "what is the drug of choice for the given condition?". To answer such a question, researchers perform a comparative effectiveness review by collecting and appraising all studies that compare treatments for the same disease and synthesize their data using a statistical technique, network meta-analysis. While clinicians and guideline developers unanimously agree that a treatment hierarchy is essential for public health decisions, methodologists currently debate several issues underpinning the statistical methods to obtain a treatment ranking from in network meta-analysis. The project aims to a) extend the existing statistical methodology in a number of ways, e.g. by developing models that produce treatment hierarchies for multiple health outcomes b) provide methods that appraise the robustness of the treatment hierarchy in the presence of bias in the data. Within a multidisciplinary and highly motivated environment, the post holder will have the opportunity to gain vast experience of working on exciting theoretical and applied projects and collaborate with leading international researchers.

**During your PhD you will:**

- Perform *original statistical research:* development and comparison of methods to rank medical treatments
- Conduct *empirical research:* re-analysis of a collection of previously published network meta-analyses
- Participate in *international studies* aiming to rank treatments in mental health
- Collaborate with statisticians, epidemiologists and other PhD students
- Present your results in international scientific meetings and publish them in peer-reviewed journals.

**You have:**

- A university degree (MSc or equivalent) in statistics or another quantitative discipline such as applied mathematics, computational biology, mathematical physics or computer science
- Programming skills in a high-level language such as R or Python
- Fluency in English both written and oral
- Aptitude with writing and publishing manuscripts
- Previous experience with Bayesian methodology and meta-analysis is desirable.

**What we offer:**

- Working in a highly motivated and multidisciplinary research team
- Collaboration with leading European research groups
- Support for career development and training – a wide range of topics offered ([www.ssphplus-phd.ch](http://www.ssphplus-phd.ch) )
- Preparation for a research career in an academic setting (university) or a public health institution
- 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 (~48,540 CHF per annum plus social security contributions)

For further information on the position advertised, please contact Prof. Dr. Georgia Salanti (georgia.salanti@ispm.unibe.ch). Please send your application to 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 suitability and motivation.