Three PhD positions in Biostatistics

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

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.

What 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).
- Enrolment in the graduate school of the University of Bern (www.gcb.unibe.ch or 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).
For further information on the advertised positions, please contact Prof. Georgia Salanti (georgia.salanti@ispm.unibe.ch) regarding HTx, and Dr. Orestis Efthimiou (orestis.efthimiou@ispm.unibe.ch) regarding REFINE.

Please send your application to Natalie Studer, 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.