

## **PhD position in Statistics with a focus on probabilistic graphical models and causal inference**

A PhD position is available under the supervision of Prof. Dr. Giusi Moffa at the Department of Mathematics and Computer Science, University of Basel.

### **Research topic**

The focus of the group will be on probabilistic graphical models and causal inference. However, the thesis project may develop in different directions depending on the inclination of the candidate. One option is to focus on computational methods for structure learning of Directed Acyclic Graphs (DAGs), e.g. in the context of mixed data, or hybrid learning methods which consider different measures of independence for the constraint-based part of the algorithm, so as to handle non-linear relationships. Alternatively one may focus on inferential aspects and interpretation, and tackle the problem of Bayesian estimation of putative intervention effects. Applications may cover clinical research, epidemiology, cancer genomics and precision medicine. Please visit my research page for more information about the projects

<https://annlia.github.io/jacademia/jresearch/>

### **Candidate profile**

- MSc in Statistics or closely related field
- A solid knowledge of statistical theory and methods
- Good computational skills
- Experience with statistical softwares (ideally R)
- Fluent in English with good writing skills

### **Offer**

The position will be funded for 4 years.  
Starting date is as soon as possible upon agreement.

### **Application / Contact**

For further information please contact Prof. Dr. Giusi Moffa ([giusi.moffa@unibas.ch](mailto:giusi.moffa@unibas.ch)), and if you are interested, please send your CV, including academic records, together with a cover letter and the names and e-mail addresses of two referees.

Applications will be evaluated on a rolling basis starting from September 1st 2019.