

The team METHODS of the Centre de Recherche Epidémiologie et Statistiques/Université de Paris (CRESS-UMR1153) is looking for a post-doctoral fellow.

The project has for objectives to develop innovative approaches to identify individualized treatment strategies using both randomized trial and observational data. Different aspects of this question can be studied according to the candidate's expertise. Possible topics are:

1. When more than two treatment options exist;
2. When the treatment initiation is decided during follow-up (time-varying treatment);
3. Development of individualized treatment rules taking into account multidimensional aspects, such as individual benefits and risks;
4. Evaluation of the robustness of individualized treatment strategies.

The methods developed will be applied to real data, but the project also includes questions regarding the generation of high-quality synthetic clinical data.

We are looking for a highly motivated candidate with a doctoral degree in statistics/machine learning or mathematics, interested by applications in health sciences. The position is open and to be filled as soon as a suitable candidate will be identified.

Team:

The team METHODS of CRESS, located at Hôtel-Dieu hospital in the center of Paris, is affiliated to Université de Paris and Inserm. It offers a dynamic international research environment.

Activities:

- To develop mathematical or statistical methods
- To program these methods
- To evaluate their properties
- To compare with other state-of-the-art methods
- To apply these methods to real data

Skills:

- Advanced mathematics skills
- Proficiency in programming
- Experience in writing scientific articles
- Autonomy and ability to work in a multi-disciplinary environment

Desirables: Additionally a good knowledge of any of these fields would be highly appreciated

- Conformal prediction
- Reinforcement learning
- GAN
- Topological data analysis
- Optimization
- Data generation

Education level:

Doctoral degree in mathematics or (bio-)statistics or computer science.

Duration: 12 months (depending on the starting date)

Salary: 2 200 to 2 400 € Net /month depending on experience

Contact: raphael.porcher@aphp.fr

How to Apply: Your application should include a cover letter with a brief account of your research interests and motivation for applying for the position, a resume and a complete list of publications, the name, and email address of 2 references.

The deadline to apply is the 8th of October 2021.