

Researcher profile

Location : Hôpital du Vinatier, 95 Bd Pinel Bâtiment 417 (2ème étage), 69500 Bron

Team: Centre ressource réhabilitation – (UMR5229, CNRS & University Lyon 1).

Function:

A postdoctoral fellowship in psychosocial rehabilitation is available in the research group of Pr. Nicolas Franck starting in March 2024 (earlier or later start possible). The position is for one year, with a possible extension of one year.

Mission:

The project will continue the labs' recent works using modern statistical methods to better understand factors associated with rehabilitation outcomes in patients with mental disorders.

Activities:

The objective of the project is to use predictive modelling techniques as well as causal inference methods to (1) investigate how socio-demographic, clinical and psychological factors may predict: (1-a) referrals to psychosocial rehabilitation programs, and (1-b) rehabilitation outcomes; (2) test the effect of specific interventions in improving rehabilitation outcomes.

Predictive modelling studies will use machine learning algorithms and ensemble methods, as well as explainable artificial intelligence. Causal analysis will be driven by direct acyclic graphs to identify the role of the main factors involved in the relationship between the tested interventions and the rehabilitation outcomes. Causal estimates will be calculated with modern methods for causal inference such as doubly-robust estimators.

Depending on the applicant's interests, there is plenty of opportunity to add elements to the project, including a larger public health component (e.g. cost-effectiveness analyses), a modelling dimension (e.g. modelling missing data in EHR databases), psychological network analyses and spatio-temporal analyses.

Expected profile:

We are seeking highly motivated applicants with a PhD in psychology (cognitive psychology or clinical psychology), health economics and outcomes research, public health, or epidemiology. Applicants should have expertise in handling EHR databases, and have strong statistical and programming skills. Knowledge of the R programming language is a plus but not mandatory. An interest in machine learning and causal inference is recommended.

The position requires excellent written and oral communication skills and a willingness to work as part of a collaborative team. The incumbent will be responsible for moving forward several projects within the lab, and maintaining active collaborations with other labs and universities.

Context:

The *Centre ressource réhabilitation et remédiation cognitive* is a multidisciplinary team involved in the promotion of psychosocial rehabilitation in individuals with mental illnesses. The missions of the CRR are: (1) to lead research projects on psychosocial rehabilitation, using an EHR database (REHABase) of 30+ centers in France; (2) to coordinate and develop other rehabilitation centers in France; (3) to organise trainings in psychosocial rehabilitation (workshops, certificates ...) at the national level; (4) to spread information on psychosocial rehabilitation and mental disorders to the general public in order to decrease stigmatisation and self-stigmatisation.

The postdoctoral fellowship is funded by the Erie Foundation (<https://fondation-erie.org/en>) and is part of a wider project aiming to promote psychosocial rehabilitation in individuals with mental illnesses in France. The aim of the funded position is to help develop the research branch of the CRR. Examples of the team's previous work can be found [here](#) and [here](#).

The Postdoctoral Scientist will work closely with Dr. Barbalat (MD/PhD) and Pr. Franck (MD/PhD) who are the research leaders of the team. The Postdoctoral Scientist will be part of a team of a biostatistician/data manager (MSc), two research assistants (PhD), and a neuropsychologist (PhD). The team members are supportive and high-energy. The Postdoctoral Scientist will have access to the resources and infrastructure available at the hospital.

The hosting research group is located in a teaching hospital in the city of Lyon, France, close to plenty of cultural activities.

Contract duration: 1 year, with possible extension of 1 year.

Quotity: 100%

Starting date: March 2024 – an earlier or later start is possible.

Selection process: Candidates will be selected based on a 2 stage-process: (1) a technical exercise including data analysis tasks; (2) an interview with a jury of 3-5 persons.

Grade: PhD thesis

Salary: Minimum 2180 euros/month (take-home). Includes health insurance.

For all enquiries, please email Dr Guillaume Barbalat Guillaume.Barbalat@ch-le-vinatier.fr or guillaumebarbalat@gmail.com