

UNIVERSITY OF ANGERS

Inserm U1085 Irset Equipe ESTER
LAREMA UMR CNRS 6093

Catégorie: Post-Doctorat

REFERENS

*Branche d'Activité Professionnelle : A
N° emploi type : A1A41
Titre emploi type : Post-Doctorant.e en
analyse de données*

Presentation of the University of Angers

In the heart of a region known for its quality of life, the University of Angers -UA, the 3rd largest employer in the area, offers an environment conducive to the development of its staff and students. The UA is a multidisciplinary university with a strong health sciences component, with more than 23,000 students spread over 3 campuses in Angers (Belle-Beille, Saint-Serge and Santé) and 2 regional campuses (in Cholet and Saumur). It comprises 7 components including an in-house engineering school, with 30 research units and federative structures of research.

Thanks to the many innovative projects, it carries out and its openness to the world, the UA enables everyone to evolve in a stimulating environment. Its annual budget is €140 million (including €115 million in payroll).

The UA has more than 1000 faculty and 2700 staff, and is looking for engaged and innovative post-doctoral researchers. Do you identify with the values of innovation, global citizenship, collegiality, and impactful research? Join us

Job offer characteristic

Date of potential assignment: September 2020

Duration of contract: 1 year, renewable 1 to 2 years.

Work quota: 100%

Gross monthly salary: approximately 2 650 € gross per month

Site: Inserm U1085 Irset Equipe Ester and/or LAREMA UMR CNRS 6093 - University of Angers

Supervision: A d'Escatha (Principal) - Y Roquelaure (Auxiliaire) - P Graczyk (Principal) - M Escobar-Bach (Auxiliaire)

Description of unit and place of the agent in the unit(s) organization

Occupational health issues are of growing importance due to intensified working conditions, increasing multiple exposures, and the ageing of the working population. IRSET has strengthened its occupational health research potential with the creation in 2017 of Team 10, called "Epidemiology in Occupational Health and ERgonomy" (ESTER) at the University of Angers. The team studies a broad range of occupational health questions from etiology to prevention and is structured around four research themes: musculoskeletal disorders, psychosocial factors at work, cancer, and respiratory diseases. There are strong overlaps and interactions between these themes, including: (1) etiological research on occupational determinants of health, (2) evaluation of occupational exposures ("ergo-exposology"), (3) evaluation of contributions to social inequalities in health, and (4) integrated prevention interventions.

In one project (TEC-TOP), the person recruited as a post-doctoral fellow will carry out work on optimizing predictive models of musculoskeletal disorders using job-exposure matrices. The direct supervisor is Pr d'Escatha, in collaboration with Ester's statistical team. Mathematical aspects of research will occur in close collaboration with the laboratory of applied mathematics at the University of Angers LAREMA, UMR CNRS 6093 and the unit of Analysis, Probability, and Statistics (Fabien PANLOUP and Piotr GRACZYK).

This work will also associate the CNAM with its MeSUR team (Kevin Jean), specialized in modeling and statistics, and with the Healthy Work Center at Washington University in St Louis, USA with an occupational health team with expertise in musculoskeletal disorders and job-exposure matrices (Bradley Evanoff, Ann Marie Dale, and Ryan Colvin).

Missions and activities

As previously mentioned, within the framework of a project (TEC-TOP), a post-doc will have the task of optimizing predictive models of a common health condition, musculoskeletal disorders, using job-exposure matrices. The two main missions will be the development of predictive models based on simulations and real data in order to test hypotheses, and to synthesize new observations and hypotheses.

Mission 1: Establishment of simulated models based on simulated data to clarify exposure-disease relationships, including:

- Activity 1: Short versus long latency of exposure
- Activity 2: Long versus short duration of exposure
- Activity 3: Comparing intensity versus duration at equivalent cumulative dose
- Activity 4: Interaction with age, BMI, other co-morbidities

Mission 2: Establishment of similar models based on actual data (and syntheses) using large population datasets

- Activity 1: Short versus long latency of exposure
- Activity 2: Long versus short duration of exposure
- Activity 3: Comparing intensity versus duration at equivalent cumulative dose
- Activity 4: Interaction with age, BMI, other co-morbidities

Skills

Knowledge:

- Analysis, probabilities et statistics
- English language proficiency

Practice :

- Statistical modeling
- Data Simulation

Being :

- Collaboration and communication with other professionals
- Ability to work independently

Training

PhD (Doctorate in science or similar)

Speciality : Applied mathematics, staticstical modeling

Previous Experience

None (young PhD but knowing to work independently are welcome)

Recrutement modality and econtact

Administrative contact : Valérie Fierens au **02 41 73 59 12**

Send your application (cover letter and CV)
at ester@contact.univ-angers.fr
copy to alexis.descatha@univ-angers.fr