**PhD SCHOLARSHIP: Development of a mobile physical capacities self-assessment station and personalized monitoring: health benefits**

A fully funded 3-yr PhD scholarship is available at Jean Monnet University in Saint-Etienne (University of Lyon). The successful applicant will become part of a unique training and research environment, the ActiFS group within the multidisciplinary Inter-university Laboratory of Human Movement (LIBM). As a PhD student, you will be responsible for:

* Independently carrying out research and completing a PhD dissertation within three years;
* Developing mobile stations that will allow data collection on functional capacity (strength, coordination, force velocity profile, etc.) and analyzing those data;
* Developing personalized training recommendations and evaluating the results of the intervention
* Reporting the results in international peer-reviewed scientific journals and conferences.

Net remuneration is approximately 1420 € per month (healthcare included) from October 2019 to September 2022.

**LaboratoRIES**

* Inter-university Laboratory of Human Movement Biology, Jean Monnet University, Saint Etienne, France
* HESPER, Health Services and Performance Research, Jean Monnet University (Prof Franck Chauvin)
* Hubert Curien Laboratory, Jean Monnet University (Dr Mathias Géry)

**SUPERVISOR**

Jérémy ROSSI, LIBM, Saint-Etienne

jeremy.rossi@univ-st-etienne.fr

T: +33 477.42.18.92

**Co-SUPERVISOR**

Guillaume MILLET, LIBM, Saint-Etienne

guillaume.millet@univ-st-etienne.fr

T: +33 477.42.18.94

**PROJECT SUMMARY**

Regular physical activity has shown to reduce chronic fatigue, the risk of cardiovascular disease, diabetes and some cancers. Research has shown that information or education-based interventions have limited effect on behavior. Thus, it is necessary to develop an intervention that educates the population at-risk and provides personalized follow-up in order to achieve long-term health benefits.

This thesis will attempt to answer the following question: can personalized assessment and monitoring increase the level of physical activity in sedentary or physically inactive adults?

In order to address this question, this project has two main objectives:

The first aim will be for individuals to (i) become aware of the health effects of their physical inactivity / sedentary behaviors through self-assessment and (ii) benefit from personalized follow-up based on diagnosis and monitoring of their progress.

The second aim will be to evaluate the effects of a personalized follow-up on neuromuscular function, chronic fatigue, sleep and quality of life in comparison to general recommendations.

For this, it will be necessary to:

* Develop mobile stations to assess fitness level (strength, muscular endurance, cardiorespiratory endurance, anthropometry, coordination, etc.), motivation and barriers to physical activity.
* Develop an online platform for personalized monitoring based on the profiles determined by an algorithm that will use the results of the self-evaluation, the characteristics of the person, the analysis of the needs of the target population and the local context (occupation type, transport used, place of residence, etc.).
* Evaluate the effects of the intervention on adherence, health, fatigue, neuromuscular function and physical attributes (locomotion-autonomy) compared to a control group receiving general recommendations.

**Applicant profile**

The candidate should have a strong background in computer science, software programming, data mining and / or algorithm development. Applicants with a sports science/kinesiology Master's degree with advanced computer skills will be considered. The candidate should have an interest in physical activity and / or health. French is not mandatory, but the candidate must be motivated to learn French during her/his PhD and she/he must be able to communicate in English.

**Full applications must be sent in PDF format (merged into one PDF file) to Jérémy ROSSI via email (****jeremy.rossi@univ-st-etienne.fr****). Please also Cc Guillaume MILLET (****guillaume.millet@univ-st-etienne.fr****) into the email. Deadline for submission is April 29th, 2019. The application must include the application form (see below), a detailed CV, two academic reference letters and a cover letter. Interviews will be conducted by videoconference on May 13th.**

**APPLICATION**

**PhD SCHOLARSHIP**

**Year 2019**

**It is important not to exceed the number of pages allocated to each item.

Additional documents must be attached to the scanned file
(they are indicated in the remainder of the file).

This file must be sent by E-mail to the Thesis Supervisor with Cc to the Co-supervisor.**

**Last name, First name:**

**Citizenship:**

**E-mail:**

**Thesis title:** **Development of a mobile physical capacities self-assessment station and personalized monitoring: health benefits**

**Name of supervisor:** Jérémy ROSSI

**Thesis’ primary host laboratory:** Inter-university Laboratory of Human Movement Biology

**If international cotutelle, University and country:**

**Date of taking contact with supervisor:**

**Date of interview with supervisor:**

**CURRICULUM VITAE**

 *(2 sided pages maximum)*

**Contact information**

Last name:

First name:

Nationality:

Date and place of birth:

Age:

Mailing address:

Phone:

**BSc degree or equivalent**

Institution (University, School):

Country:

Year of graduation:

Mention / Specialty:

Rank / Class size:

**MSc degree 1st year**

Institution (University, School):

Country:

Master (mention, specialty):

Academic year:

Rank:

Corresponding to: 🞏 First 10% 🞏 10-20% 🞏 20-50% 🞏 > 50%

Size of class (number of students)

**Transcript must be attached**

**MSc degree 2nd year**

Institution (University, School):

Country:

Master (mention, specialty):

**1er semester:**

Academic year:

Rank:

Corresponding to: 🞏 First 10% 🞏 10-20% 🞏 20-50% 🞏 > 50%

Size of class (number of students):

**Transcript must be attached**

**2nd semester if known:**

Academic year:

Rank:

Position: (*check good indication*)

🞏 TB or < 10% 🞏 B or 10-20% 🞏 AB or 20-50% 🞏 > 50%

Size of promotion:

**Transcript must be attached**

**MSc work experience or equivalent**

Supervisor:

Laboratory:

University:

Country:

Dates (month / year) of experience:

Title:

Publications, participation in conferences:

**Indicate maximum 5 keywords that characterize your scientific skills**

***Attach two (2) academic reference letters with your application***