

Convocatòria del Lloc/ Call for Position: DTIC-PLCT-2024-45

Research support position - Specialist support technician: Motion Capture Laboratory Technician in STRATO project

Fons de finançament/ Financing fund: Proyecto PRESP04422 - AEI-PID2021-126469OB-C21/AEI/10.13039/501100011033 - Noailly, Jérôme, "Estratificación avanzada de los pacientes con osteoartritis según el dolor, la biomecánica y la biología del cartílago", financiado por MICIU/AEI /10.13039/501100011033 y por FEDER, UE.

Descripció del projecte/ Project description:

STRATO aims to identify the interaction among the parameters describing Knee Osteoarthritic condition in order to achieve a better selection of patient-oriented therapies.

Classically, Osteoarthritis has been considered as a degenerative joint disease, that was inevitable in the elderly. However current knowledge doesn't describe the true complexity of the disease. For example, nowadays, we know that the relation between Biological and Mechanical factors might be mediated by Emotional conditions. Therefore, their role in the progression of the pathology should be studied.

Results from previous studies showed how emotional states are the leading unique factors shaping the final decision of Total Knee Replacement. Therefore, emotional/mindfulness training might lead the patients to a different state or trend in developing their pathology. Given that all mindfulness disciplines focus on breathing, particularly abdominal breathing, this variable will be studied to verify the efficacy of the Expert Patient program where trained patients will help other patients deal with their pathology.

Teaching how to relax and breathe is becoming the aim of many studies, and several oriental disciplines like Tai Chi, QiGong, and Yoga are increasingly used in clinical trials to teach subjects how to breathe and relax. However, the fact that a big portion of the population gives the impression of being unable to control their breathing introduces a big problem in the management of pain and its catastrophism affecting daily activities and in general, the wellbeing of the patients.

The Human Development Index lists the length of life as one of the three key dimensions of human development. However, a longer life is not an achievement if it is not healthy.

The candidate is requested to learn how to use optoelectronic technology and EMG sensors. He/she will engage volunteers and prepare them, positioning all the sensors and markers. He/she will then perform the acquisition and participate in the related analysis of data.

Previous experiences in motion capture laboratories are recommended but not mandatory.

Main research field: biomechanics of human movement.

Funció a desenvolupar/ Tasks to be performed:

The candidate will carry out activities linked to different WPs of the STRATO project. In brief, the activities include:

- Learn how to use optoelectronic technology and EMG sensors.
- Engage volunteers and prepare them, positioning all the sensors and markers.
- Perform the acquisition and participate in the related analysis of data.

The mentioned activities are linked to the following WPs of the project.

WP3: Design and implementation of a clinical assay based on the Expert Patient Program (EPP).

Task 3.4 Clinical visits, evaluating data, and analysis of the results.

WP5: Multilevel nonlinear analysis.

Task 5.3 Longitudinal dynamic analysis of the impact of EPP training over posture and breathing

La durada d'aquestes tasques s'estima en un període de 8-10 mesos./ The duration of these tasks is estimated over a period of 8-10 months.

Tipus de contractació/ Type of contract: Indefinida segons previst RD 32/2021 de 28 de desembre de 2021/ Indefinite according to RD 32/2021 of December 28, 2021

Requisits/ Requirements:

- Batxillerat-FP2/ High school-FP2.

La feina és a Barcelona./ The job is in Barcelona.

Críteris de selecció/ Selection criteria: La selecció dels candidats es farà mitjançant valoració del currículum i, si escau, amb la realització d'una prova i/o entrevista. La valoració serà la següent:/ The selection of the candidates will be made through evaluation of the curriculum and, where appropriate, with the carrying out a test and/or interview. Valuation will be as follows:

- Formació Acadèmica/ Academic Training (0-30 punts/points).
 - Studies in Information Technology (Bachelor or Master degree)
- Altra formació i experiència professional, adequació al perfil proposat/ Other recommended but not mandatory professional training and experience, adequacy to the proposed profile (0-40 punts/ points):
 - Previous experiences in motion capture laboratories
 - Experience working with expensive material
 - Experience working with volunteers/patients participants in clinical studies
 - Experience in data analysis
- Altres mèrits/ Other merits (0-30 punts/ points):
 - Oral and written communication skills in Spanish.
 - Fluent in spoken and written English.

La puntuació mínima per passar el procés de selecció és de 70 punts. La persona candidata que hagi obtingut la puntuació més alta en el procés de selecció serà l'adjudicatària del lloc



de treball./ The minimum score to pass the selection process is 70 points. The candidate with the highest score in the selection process will be offered the job.

Retribució prevista aproximada/ Planned remuneration approx: 22K-25K € brut per any/ gross per year

Grup i complement/ Group and complement: Grup 3 + Nivell u/ Group 3 + Level u

Dedicació i jornada/ Dedication and working hours: Temps parcial (30h/setmana)/ Part time (30h/week).

Comissió de Selecció/ Selection Committee: President: Jerome Noailly, Vocal 1: Simone Tassani, Vocal 2: Laura Tio (membre per delegació de la direcció de la UCA).

Data de publicació/ Date of publication: 02/08/2024.

Termini de presentació sol·licituds/ Deadline for submission of applications: 01/09/2024.

Com aplicar/ How to apply:

Les persones interessades han d'inscriure's al procés selectiu [aquí](#). Si tens algun problema per aplicar, si us plau envia un correu a recerca.enginyeria@upf.edu

Interested persons must register in the selective process [here](#). If you have any problems applying, please send an email to recerca.enginyeria@upf.edu

[Link to Euraxess](#)