

POST-DOC RESEARCH ENGINEER

Laboratory:

LAMIH UMR CNRS 8201

Université de Valenciennes et du Hainaut-Cambrésis, France

Department:

Automation control & Human-Machine Interaction

Responsible:

Prof. Philippe Pudlo

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Position duration/starting date:

16 months/January 2017

Funding:

Direction Générale de l'Aviation Civile (French civilian aeronautic authorities)

Net salary in accordance with experience

Context

LAMIH, UMR CNRS 8201, offers a post-doc position, or a research engineer position, for highly motivated candidate, especially interested in industrial research concerning seat comfort of low mobility passenger in air transportation. The candidate will participate to an ongoing project started in 2015, with a strong partnership with Zodiac Seats France, and funded by French civilian aeronautic authorities (Direction Générale de l'Aviation Civile, or DGAC). The project aims to help Zodiac Seats France to design and build an airplane seat for long haul flight that increase comfort of low mobility passengers on two principal axis that are seat access and seat bearing. Two PhD students are currently already working on the project, and there is a need for an additional work force, especially to handle the validation and tests of several improvements previously proposed.

Missions

- assist the PhD students, mainly in experimentation design and handling, for biomechanical purpose, such as recruitment, lab sessions, and data analysis,
- get familiar with improvement concepts already proposed, design validation process, either with biomechanical experimentation or questionnaire, and handle collaboration with ESI Group for finite elements validation,
- contribute to concept proof design and building with the project partners,
- receive the concept proof for final validation,
- write project reports and scientific communications (in French),

Candidate should have skills amongst:

- PhD in biomechanics or ergonomic,
- skills in experimentation design on humans, based on movement analysis,
- skill in movement analysis, ideally in motion capture using optoelectronics system (such as VICON),
- some knowledge of instrumentation and metrology, notions of force/torque sensor use and specifications,
- skill in biomechanical model toolkit and analysis, either using simulation software (AnyBody), or mechanical model (Matlab),

- fluent in English and basic of French,
- previous experience in industrial research would be a plus,

Partners:

Main partners are:

- Zodiac Seats France
- IFSTTAR/LBMC
- ESI Group