

Virtual Acoustics for Comfort Studies

Record number : OPR-77

Overview

RESEARCH DIRECTION

Philippe-Aubert Gauthier, Professeur associé - Department of Mechanical Engineering

INFORMATION

philippe-aubert.gauthier@usherbrooke.ca

RESEARCH CO-DIRECTION

Alain Berry, Professeur - Department of Mechanical Engineering

INFORMATION

alain.berry@usherbrooke.ca

ADMINISTRATIVE UNIT(S)

Faculté de génie
Département de génie mécanique

LEVEL(S)

Stage postdoctoral

LOCATION(S)

Campus principal

Project Description

Objective of the postdoctoral fellowship

Preparation, realization and valorization of tests with human subjects for the evaluation earplugs comfort. The tests are based on the virtual reproduction of sound environments thanks to a system of 96 loudspeakers. Contribute to the creation of a series of earplugs comfort indices by campaigns of subjective tests with a variety of commercial earplugs using virtual acoustic technologies. Possible extension of virtual acoustics to virtual mock-up for sound quality. Collaboration with ETS and IRSST.

Context:

This fellowship is part of a large-scale research project entitled "Development of a series of comfort indices for earplugs to improve the hearing protection of workers," carried out by a multidisciplinary team.

Issue:

In Québec, hearing loss is by far the most registered occupational disease and the number of workers affected by it is increasing. The effectiveness of hearing protectors is often lower than expected because protectors are badly worn and/or insufficiently long. The cause is yet well known: the hearing protectors are uncomfortable.

Discipline(s) by sector

Sciences naturelles et génie

Génie mécanique

Funding offered

Yes

Partner(s)

IRSST - Institut de recherche Robert-Sauvé en santé et sécurité du travail

The last update was on 12 March 2024. The University reserves the right to modify its projects without notice.