THOMAS DE SOUSA

**Graduate student interested in the field of biomechanics and Chronic Ankle Instability.
I want to pursue my research on Chronic Instability in P.h.D programs.
I develop skills in computer science and I'm interested in other fields such as machine learning, data science, sports biomechanics...**

CONTACT

tds.desouth@gmail.com

SKILLS

Programming

Python
Matlab
Latex

Softwares & Tools

Zebris
Qualisys
(Oxford Foot Model, Rizzoli Model)
IMU
GPS
(Maclloyd)
Myolux

Languages

French (native)
English B2

CERTIFICATES

Python

Applied Plotting, Charting Data Representation in Python
Python Data Structures
Introduction to Data Science in Python
Programming for Everybody

Matlab

Data Processing and Feature Engineering with MATLAB
Exploratory Data Analysis with MATLAB
Introduction to Programming with MATLAB

HOBBIES & STRENGTHS

Hobbies

Reading | Sport | Programming

Strenghts

Hard-worker | Organized | Team Work | Ambitious

EDUCATION

2019-2021
Rouen University
Master Degree's in Training and Optimization of Sports Performance

2018-2019
Rouen University
Bachelor Degree's in STAPS, Specialization Sport Training

RESEARCH STUDY

Influence of foot posture and interest of jerk to quantify Chronic Ankle Instability during gait

Second Year : The main objective of this study was to determine the value of studying jerk in a population with Chronic Ankle Instability. A second objective was to evaluate the influence of foot type (pes cavus, planus, rectus) on the risk of ankles sprain. Kinematics data (Qualysis) were collected to calculate jerk values of feet during walking. Pressure data (Zebris) was collected to identify foot type. Comparisons between groups were conducted using Statistical Parametric Mapping

Detection of chronic ankle instability: fulcrum insole inversion test

First Year : This study aim to investigate kinematics data of a simulated ankle sprain. The main metrics was: angular pic velocity, mean velocity, time to inversion.

PROFESSIONAL EXPERIENCE

2020-2021
(internship 8 months)
Orthodynamica, Rouen
Biomechanical Analyst
The purpose of this internship was to perform a biomechanical analysis in a podiatry center. These analyses were mainly conducted with a motion capture system (Qualisys) but other systems could be used (Zebris, Myolux). After each analysis, a report was presented and transmitted to patients. This work was done in collaboration with the clinical assessment of podiatrists.

2020-today
ALCL Handball Césaire, Rouen
Strength and Conditioning Coach, *National 2, Women's Handball*
In charge of strength and conditioning of the team during the pre-season, season, off-season

2019-2021
CMS Oissel, Oissel
Handball Coach
Junior School (2019-2020) and High School (2020-2021) coach.

RESEARCH ACHIEVEMENT

- Nominated for the poster award at the 46th Congress of the Society of Biomechanics
- Abstract publication in Computer Methods in Biomechanics and Biomedical Engine

PUBLICATIONS

Interest of jerk to quantifity Chronic Ankle Instability during gait

T. De Sousa, C. Menez, M. L'Hermette, E. Held and C.Pouliquen

2021 ABSTRACTS 46ème Congrès Société Biomécanique, Computer Methods in Biomechanics and Biomedical Engineering, 24:sup1, S1-S325, DOI: 10.1080/10255842.2021.1978758

COMMUNICATION

Colloque CETAPS Axe Prévention et Santé, Rouen, 30 Septembre 2021. *Movement smoothness and foot posture in people with Chronic Ankle Instability*

Colloque CETAPS Axe Prévention et Santé, Rouen, 15 avril 2021. *State of the art : Chronic Ankle Instability*

46ème Congrès de la Société de Biomécanique, *Interest of jerk to quantifiy Chronic Ankle Instability*, ***T. De Sousa***, *C. Menez, M. L'Hermette, E. Held and C. Pouliquen*