

# LUIS MATIAS

## MECHANICAL ENGINEER


CURRICULUM VITAE



### CONTACTS

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### INTERESTS

Product Development    3D Printing

Mechanical Design    Web Development

CAE    Travelling


CAD/CAM    Photography

### LANGUAGES

Portuguese (Native)

English

 20/06/1994 (27)


 Covilhã, Portugal

## WORK.

### RESEARCH FELLOW

2021 (December) - Current

[INEGI] Institute of Science and Innovation in Mechanical and Industrial Engineering

 Porto, Portugal

Financed Project: "Coronary Artery Disease Numerical Simulation and Functional Assessment by Advanced Computed Tomography"

Python - Medical Images - Image Segmentation - 3D Reconstruction


## EDUCATION.

### MASTER DEGREE

### MECHANICAL ENGINEERING

2022

[FEUP] Faculty of Engineering of Porto University

 Porto, Portugal

Dissertation (Classification - 18): "Semi-Automatic Method of Stent Development in Coronary Arteries with Stenosis - Hemodynamic Simulations"

SolidWorks - Ansys Fluent - Medical Images - 3D Reconstruction - Fluids Dynamics

Curricular Project: Industrial Pavilion Dimensioning

Multiframe - Solids Mechanics - Eurocode 3 - Metallic Structures

Curricular Project: Composite Specimens - Fabrication, Mechanical Tests and Simulation


SolidWorks - Abaqus - Glass Fiber - Kevlar - Aluminum - Numerical Modelling - Tension Tests - Fabrication

### BASCHELOR DEGREE

### MECHANICAL ENGINEERING

2015

[FCT-UNL] NOVA School of Science and Engineering

 Almada, Portugal

## SOFTWARE/SKILLS.



## EXPERIENCES.

### INTERNSHIP

#### PROFESSOR ASSISTANT

2017

[RMUTR] Rajamangala University of Technology Rattanakosin

Phutthamonthon, Thailand

Teaching solids mechanics and helping students in their projects.

Introducing composite materials to students.

### VOLUNTEERING

#### ELEPHANTS CARETAKER

2017

Elephant Nature Park

Chiang Mai, Thailand

One week taking care of abused elephants and abandoned dogs.

## PUBLICATIONS.

2022 "Dealing with CT Cardiac Imaging Using Python: An Approach for Future Hemodynamic Simulations"

In Proceedings of the 9th International Conference Mechanics and Materials Design, M2D2021, 26-30th June 2022, Funchal, Portugal.

ISBN and DOI are still undefined. In Press. Paper to be presented orally.

Python 3 - Medical Images - Image Segmentation - 3D Reconstruction

2022 "Semi-Automatic Method of Stent Development for Hemodynamic Simulations in Patient Coronary Arteries with Disease"

Theoretical Analyses, Computations and Experiments of Multiscale Materials - Advanced Structured Materials, Springer

DOI: 10.1007/978-3-031-04548-6\_16

SolidWorks - Ansys Fluent - Medical Images - 3D Reconstruction - Fluids Dynamics

## ONLINE COURSES.

### CAD/CAM FOR MANUFACTURING

Currently Enrolled

Autodesk CAD/CAM for Manufacturing Specialization

Coursera - Autodesk

Fusion 360 - CAD/CAM - CNC - Machining