



# L U I S M A T I A S

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20/06/1994



Category B



Slovakia

🇵🇹 Portuguese (Native)



English (C1)



lmatias.com



/luisdafmatias

from Portugal

**Skills/Tools** SolidWorks, Solid Edge, Teamcenter, 3D Printing, Excel, Ansys, Abaqus, Matlab, Python

**Interests** CAD, Mechanical Design, DFM, DFA, CNC Machines, 3D Printing, Automation, Programming, Product Development, Additive Manufacturing, Manufacturing Engineer

## WORK

**SKARTEK** ○ **Mechanical Design Engineer** Vlčkovce, Slovakia **Aug 2025 – Present**

- Designing conceptual mechanical solutions to secure customer buy-in and formalize service contracts.
- DFM & Process Optimization: Applying Design for Manufacturing principles across CNC machining, welding, laser cutting and 3D Printing to optimize part geometry and ensure structural durability.
- Collision Mitigation & System Adaptation: Re-engineering active machine assemblies to resolve mechanical interference and integrate customer-driven modifications, ensuring zero-collision performance and enhanced operational safety.
- PLM & CAD Integration: Utilizing Solid Edge for precision modeling and Teamcenter for robust version control, BOM management, and cross-departmental collaboration.

**Forvia** ○ **VIE Development Engineer/Manufacturing Engineer** Trnava, Slovakia **May 2023 – Dec 2024**

- Working in Instrument Panel programs: Citroën C3 and Opel Frontera.
- Define and articulate the Engineering Levels required for production, serving as a key liaison between R&D and the plant team to ensure seamless collaboration.
- Validate mockups for both interim and permanent solutions, ensuring functionality and compliance with design standards.
- Prepare production documents including Visual BOM and 3D models in PLM system.
- Assist manufacturing in defining the sequence of assembly operations during the initial stages of the conveyor production process, ensuring efficiency and accuracy.
- Independently develop 3D printing solutions for mockups, workstation and conveyor modifications, and production support tools, enhancing functionality and efficiency.
- Develop Excel VBA scripts to streamline stock tracking and ensure accurate inventory.

**Forvia** ○ **VIE Program Engineer** Gorzów Wielkopolski, Poland **Aug 2022 – May 2023**

- Working in Door Panel programs: Jeep Avenger, Fiat 600 and Alfa Romeo Junior.
- Support quality department in capabilities studies.
- Support suppliers in Gage R&R studies to ensure RPS system definition.
- Support in the Meisterbock build.

**INEGI** ○ **Research Fellow**

Porto, Portugal **Dec 2021 – July 2022**

Project: “Dealing with CT Cardiac Imaging Using Python: An Approach for Future Hemodynamic Simulations”

- Computer Vision - Using Python for 3D reconstruction of heart arteries. Region Growing method.
- User interface with PyQt.

Paper: “Dealing with CT Cardiac Imaging Using Python: An Approach for Future Hemodynamic Simulations”  
Conference Paper. M2D2022 - 9th International Conference on Mechanics and Materials in Design (pp. 1109-1114)

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## STUDIES

**University of Porto** ○ **M.Sc. Mechanical Engineer**

Porto, Portugal **July 2022**

Thesis: “Semi-Automatic Method of Stent Development in Coronary Arteries with Stenosis - Hemodynamic Simulations”

- Semi-automatic method to create arteries with stents using SolidWorks and Creo based on CT images.
- Hemodynamics simulations in ANSYS Fluent with stent applied in the arteries.

Paper: “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

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## MY PROJECTS

**CNC Milling Machine**

**On Going...**

- Under development in design phase.
- Designing in SolidWorks.

**CNC Diode Laser/Engraver**

**Jan 2025 – March 2025**

- Finished project and working machine.
- Designed in SolidWorks.
- Pinion and Belt driven system with NEMA 17 stepper motors. V-Slot profile frame.
- 3 Axis with semi-automatic focus.

More details [here](#)



## EXPERIENCES

**Elephant Nature Park** ○ **Volunteering | Elephant Caretaker**

Chiang Mai, Thailand **2017 (1 Week)**

- Taking care of abandoned and abused elephants and dogs.

**RMUTR** ○ **Internship | Professor Assistant**

Phutthamonthon, Thailand **2017 (3 Months)**

- Support students in their school projects.
  - Teach Mathematics and Solid Mechanics to the students.
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## CERTIFICATIONS



**SolidWorks CAD Design Professional [CSWP]**

**May 2025**



**Solid Edge Professional Level**

**April 2026**