Tiago **Campos**

From Porto, Portugal. Currently living in Berlin, Germany.

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Work Experience

Internship - Numerical simulation of falling liquid films over complex surfaces

Lyon, France

IFP Energies nouvelles — *Feb. 2024 - Jul. 2024*

- Executed validation and replication of CFD cases from literature relating to multiphase flows utilizing the volume-of-fluid method in OpenFOAM. Set up the cases by creating geometry and mesh, defining boundary and initial conditions, and selecting numerical schemes.
- Customized and adapted the OpenFOAM C++ codebase by modifying and extending its functionality related to the required physical models in terms of dynamic contact angle models and slip boundary conditions.
- Automated tasks to enhance efficiency and reliability of simulations. Developed multiple shell scripts to streamline post-processing of results and execution of simulation cases, both locally and on a computer cluster.

Monitor - Project FEUP

Porto, Portugal

Faculty of Engineering of the Univesity of Porto (FEUP) - Department of Chemical Engineering — *Sep. 2023 - Jan. 2024*

- Instructed and monitored a class of first-year bachelor students in the discussion of a project in the field of chemical engineering.
- Guided and mentored the students through the entire development of an engineering report, engaging presentation, and visually compelling poster. This encompassed aiding in the understanding the complexities of the industrial production of a specific compound, resulting in enhanced understanding and knowledge retention among the students.

Internship - Productivity analysis in the production of artificial leather

Porto, Portugal

Monteiro, Ribas - Revestimentos S.A. — *Sep. 2021 - Feb. 2022*

- Worked closely with the engineers in the production department and the operators in the factory floor throughout this part-time curricular internship.
- Analysed production and productivity data within the scope of process improvement. Monitored the production revealing and documenting opportunities for improvement.
- Proposed and implemented several measures for improvement based on the Lean Six Sigma methodology, Kaizen, and concepts of the Toyota Production System.

Education

Master in Chemical Engineering

Porto, Portugal

Faculty of Engineering of the University of Porto (FEUP) — *Sep. 2022 - Jul. 2024*

Bachelor of Chemical Engineering

Porto, Portugal

Faculty of Engineering of the University of Porto (FEUP) — *Sep. 2019 - Jul. 2022*

Skills

Programming	Python, Scilab/Matlab, Excel & VBA, C++, shell script, R & R commander, LaTeX.
Digital competencies	Ansys Fluent, OpenFOAM, Linux, Microsoft Office (Excel, Word, PowerPoint), Autodesk Fusion 360, Aspen Plus.
Languages	Native Portuguese, Proficient English

Extracurricular Activity and Projects

XXIII Chemical Engineering Conference

Porto, Portugal

President — *Jan. 2023 - Nov. 2023*

- Lead a team of 12 people divided in 4 departments in the organization of a full day event about Chemical Engineering, complete with several talks and a round table.
- Worked together with my colleagues to invite many lecturers (both national and international), acquire sponsorships from companies and organize the event.

Project in Chemical Engineering

Porto, Portugal

Member - Curricular Project — *Sep. 2023 - Jan. 2024*

- Developed a fully dimensioned project for an integrated green Ammonia-Urea production process/facility utilizing, among other tools, Aspen Plus for the simulation of processes and heat integration. Worked with a team of 8 colleagues with professor supervision.
- Presented an engineering report complete with the P&IDs of all processes, the technical specifications of all the included equipment, a safety and environmental concerns section, and an economic analysis of the project as a whole.