

# Andrei-Eduard Cursaru

+40754 870 443 | andrei.cursaru29@gamil.com | andrei-eduard-cursaru | București

## WORK EXPERIENCE

### Technische Universität Darmstadt – Student Research Assistant

Jun 2025 - Sep 2025

- Erasmus+ traineeship focused on developing and validating multiphase flow simulations using OpenFOAM (phase-field methods)
- Strong skills in computational fluid dynamics (CFD), numerical modeling, and scientific analysis
- Experience with programming, debugging, and optimizing simulation environments. Independent problem-solving and ability to manage complex technical tasks
- Effective teamwork through weekly research meetings and continuous collaboration with supervisors and colleagues
- Skills applicable to biomedical engineering, including modeling biological fluid behavior and supporting medical device development

## EDUCATION

### 2022 - present Bachelors's in Biomedical Engineering at Politehnica University of Bucharest

Expanded knowledge in STEM fields, with a focus on applying natural sciences such as biology and chemistry. Gained experience working with biological samples, cell cultures, and developing biocompatible materials, as well as testing their properties. Strengthened computer science skills through hands-on projects, including database creation and management using SQL and Python. Further applied physics principles in handling and testing small electrical circuits

## PROJECTS

Numerical simulations of multi-phase capillary flows	<b>openFOAM</b>
Fine-tuned image processing of kidney stones	<b>Python, ImageJ</b>
Prototype for an automated database	<b>Python, SQL</b>
Research blog website	<b>HTML, CSS</b>

## EXTRA CURRICULAR ACTIVITIES

### Student Scientific Communication Session, 1st Prize

2025

Co-authored the paper "Mișcări atipice ale cavităților Taylor" in collaboration with Andra-Eleonora Rădan. Project supervised and coordinated by Ș.l. dr. ing. Claudiu Pătrașcu

### Volunteerd at LSAC Students' Association

2022 - 2024

Part of the Fundraising Team for MOFT II. Responsible for setting goals, organizing charitable events, and engaging consistently with sponsors, stakeholders, and team members to negotiate and maintain partnerships.

## SKILLS

<b>General</b>	Computational Fluid Dynamics (openFOAM); AutoCAD; Rheological Tests; Biomaterials Study, Cell Culture Handling; Communication and Teamwork
<b>Programming</b>	Python, Linux ( <b>Intermediate</b> ); C/C++ ( <b>Basic</b> ); HTML+CSS
<b>Digital Competence</b>	Microsoft Office , Database Management (SQL), MATLAB
<b>Languages</b>	<b>Romanian</b> (Native) ; <b>English</b> (Proficient) ; <b>German</b> (Elementary)
<b>Other</b>	Driving licence ( <b>AM,B</b> )