GAURAV BOKIL

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OBJECTIVE

I'm passionate about pushing the limits of computational modelling and simulation through numerical methods, optimization, deep learning and extensive research.

EXPERIENCE

Research assistant – IKTD Universität Stuttgart (IKTD)

Oct 2021 – Present (1 month)

- *Institut für Konstruktionstechnik und Technisches Design*
- Using deep learning methods to find the optimal surface contour for a shaft in a shaft-hub friction coupling.

Intern – (bcam) Basque Centre for Applied Mathematics

Jan 2021 – Sept 2021 (8 months)

- *Research line*: Analysis of PDEs.
- Approximating the solution to Navier-Stokes' equations by fabricating Physics Informed Neural Networks (PINNs) in Python and TensorFlow.

Advanced Trainee – Altair Engineering

Feb 2019 – Aug 2020 (1 year 7 months)

- Tested multibody dynamics simulations in MotionView.
- Added new functionalities to the *Python API.*
- Demonstrated multidomain capabilities in demo models.

RECENT PROJECTS

Transient 2D cell migration model using MATLAB

Feb 2021 – Aug 2020 (8 months)

- Simulated the mechanics of Actin and Myosin in the 2D cell domain which play a major role in eukaryotic cell migration.
- Solved the density based coupled transport problems using FEM and Crank-Nicolson method for time discretization.
- Working on a research paper about modelling and simulating 1D cell migration with "electrotaxis".

EDUCATION

M.Sc. in COMMAS

- *University of Stuttgart, Germany*
- *Sept 2021 to Sept 2022*

M.Sc. in Numerical methods in Engg.

- *BarcelonaTech (UPC), Spain*
- *Sept 2020 to Sept 2021*
- ***GPA - 8.58 / 10***

- Continuum mechanics
- Numerical methods for PDEs
- Advanced fluid mechanics
- Solid and Structural mechanics

Bachelor of Engineering (Mechanical)

- *University of Pune, India*
- *Aug 2014 to July 2018*
- ***GPA - 8.03 / 10***

KEY SKILLS

- Altair HyperWorks Suite
- ANSYS Workbench & Fluent
- Python
- MATLAB
- CAD modelling

LANGUAGES

- Deutsch (B1)
- English (IELTS – C1)

AWARDS

- National winning team of SAE INDIA E-BAJA 2016 competition