Mohammad Amin Zakershobeiri

MASc in Mechanical Engineering

CAD & CAE (Design and Drafting: SolidWorks, AutoCAD, ANSYS, Abaqus, etc.), *FEM / FEA (Finite Element Analysis), CFD (Computational Fluid Dynamics), US Patent, Programming, Simulations & Modeling, Optimization. Eligible for EIT registration + 2 Internship experiences in Mechanical Engineering.*

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QUALIFICATIONS

- Master's in Mechanical Engineering, eligible for EIT registration, with 2 engineering internship experiences (**CAD/CAE**) and a **US patent**, with a solid grasp of theoretical and computational *Solid* & *Fluid Mechanics,* and *Heat Transfer.*
- Experienced in CAD & **3D Modeling**, preparing manufacturing drawings (**GD&T**†), **BOM** and **3D-print**ed parts, with a strong spatial visualization ability, well suited to 3D design.
- Experienced in **FEM/FEA** (*stress analysis, elasticity, large deformations, plasticity, vibration, modal,* and *thermal analysis*).
- Experienced in **CFD** (*Fluid-Structure Interactions, Two-Phase Flow,* and *Turbulence*).
- Deadline-driven / Independent & critical thinking / strong verbal & written language skills / Fluent in English, intermediate German fluency (B1), native Persian / Microsoft Office (Word, Excel, PowerPoint)/ professional presentation, communication, & collaboration /dedicated to promoting workplace diversity and integrity.

WORK EXPERIENCE

See other Projects on my LinkedIn

- **Graduate Research Assistant** at ***The University of British Columbia*** **(UBC)** [2019–2021]
  in Dr. Mauricio Ponga's *Modeling and Simulation Research Group*, focused on: enhancement and optimization of *Coanda-Effect Screens* (resulting in a *patent*), and the absorption mechanism and capillarity in paper towels (resulting in *publications*). Also worked on particle methods and molecular dynamics and *Fluid-Structure Interactions* (FSI). Designing a Lab-in-a-Box for undergraduate students to test plate buckling at home, due to school closures in the wake of COVID-19 pandemic, using **SolidWorks** & **3D-printing**.
- **Senior CAD/CAE Intern** at ***Farineh Machine***, [Summer 2017]
  material handling & sulfur granulation & material processing industry, focused on: designing a Diverter Gate and a Conveyor Belt fastener and providing CAD and manufacturing drawings using **SolidWorks** & **AutoCAD.** See more on *LinkedIn*.
- **Junior CAD/CAE Intern** at ***Iran Khodro***, [Summer 2016]
  supplier of automotive parts & engineering services, focused on: Clamp, Gripper, Stand and Fixture selection based on *Saab Group*'s standards and providing 3D models using **CATIA**. See more on *LinkedIn*.

COMPUTER SKILLS

- **Mechanical Engineering & Simulation:**
  SolidWorks: *3D & Drawing, Assembly, Sheet Metal, FEM/FEA* / AutoCAD†: *Drawings (+ certificate)* / ANSYS: *Solids (Mechanical: FEA/FEM, Large Deformations, Elastoplasticity), Heat Transfer (Thermal), Fluids (Fluent: CFD, Turbulence, Two-Phase Flows)* / Abaqus: *Solids (FEA/FEM) & Heat Transfer (Conduction)* / CATIA: *CAD, 3D Modeling.*
- **Programming:**
  MATLAB / C / Python / Microsoft Excel / Wolfram Mathematica / Linux.

PATENT

- **Inventor:** High-Performance Water Intake Structure *(US, Canada, EU)* [Summer 2020]
  Proposed a novel optimal design through extensive *Two-Phase Flow CFD* simulations for a *Coanda-Effect Screen,* boosting the efficiency up to **70%**, using genetic algorithm methods via **ANSYS Fluent**. In colaboration with *Sea-to-Sky Energy Solutions*, a clean energy hydroelectric facility owner in British Columbia.

EDUCATION

- **Master of Applied Science (MASc)** in **Mechanical Engineering**, **The University of British Columbia (UBC)**, Vancouver, BC, Canada. [2019–2021]
  Cumulative **GPA: 89.2%** (4/4)
  MASc Thesis: *Capillarity in Complicated Geometries,* **Supervisor:** *Dr. Mauricio Ponga*
- **Bachelor of Science (BSc)** in **Mechanical Engineering**, **Amirkabir University of Technology (Tehran Polytechnic)**, Tehran, Iran. [2014 – 2018]
  Cumulative **GPA**: **94%** (3.96/4)
  BSc Thesis: *Heat Transfer in Checkerboard Media,* **Thesis Advisor:** *Dr. Taha Goudarzi*