

Zhang Zhanhao

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EDUCATION BACKGROUND

University: New York University

New York, USA

Major: Mechanical and Aerospace Engineering (GPA: 4.0/4.0)

09/2021-06/2023

Concentration: Fluids Specialty

Main Courses: Computational Fluid Mechanics and Heat Transfer, Compressible Flow, Linear Control Theory and Design I, Thermal Engineering Fundamentals, Applied Mathematics in Mechanical Engineering, Vibrations

University: Shandong University

Jinan, China

Major: Energy and Power Engineering (GPA: 4.06/5)

09/2017-06/2021

Concentration: Thermal Power Engineering & Automation

Main Courses: Advanced Mathematics, Fundamentals of Mechanism Design, Thermal Engineering, Fluid Mechanics, Mechanics of Materials, Theoretical Mechanics, Mechanical Drawing

PROFESSIONALEXPERIENCE

Course Design of Computational Fluid Mechanics and Heat Transfer

New York University

Project: The one-dimensional nozzle flow

03/2022

- Used MATLAB to construct one-dimensional pipeline flow field and get the numerical solution.
- The analytical solution was simulated and compared with the numerical solution.
- Simulated again with FORTRAN.

Project: The Prandtl-Meyer flow

05/2022

- Constructed a two-dimensional flow field with FORTRAN;
- Constructed a body fitted grid for the wedge-shaped boundary of the flow field;
- The numerical solution was obtained by McCormack method and then compared with the analytical solution.

Project: The incompressible flow around the cylinder

04/2022

- Simulated the two-dimensional flow field by FORTRAN;
- Used ParaView for post-processing to get visual data;
- Observed the vortex shedding behind the cylinder by changing the Reynolds number.

Undergraduate Graduation project

Shandong University

Topic: Numerical simulation of unsteady field characteristics of respiratory airflow in OSAS patients. 12/2020-04/2021

- Reconstructed the three-dimensional geometric model of upper airway based on clinical CBCT;
- Simulated the model in three states of steady, quasi steady and unsteady state through ANSYS;
- Established an in vitro respiration test bench to verify the simulation results.

Course Design of Fundamentals in Machine Designing

Shandong University

Participant

12/2019-01/2020

- Preliminarily set the type of speed reducer;
- Calculated the parameters of reducers' parts;
- Drew the designed drawings with hands and CAD;
- Composed the specification of this course design;
- Recorded the whole design process.

EXTRA CURRICULAR ACTIVITIES

Student Union, School of Energy and Power Engineering of Shandong University

Jinan, China

Vice-chairman& Organizer

10/2017-05/2020

- Responsible for daily work of two departments with 30+ members
- Efficiently coordinated with different sponsors for large-scale campus activities

OTHER SKILLS

- Software and computer language: FORTRAN, MATLAB, Tecplot, ParaView, Wolfram Mathematica, CAD, Ansys Fluent 15.0, Microsoft Office (Word, Excel, PowerPoint)
- Languages: Chinese (Native); English (Proficient)