HANFENG ZHAI

Bachelor student at Shanghai University · *99 Shangda Rd., Shanghai, PRC*

`Hanfeng.Zhai@outlook.com` · +86 18021027596 · `HanfengZhai.net`

`GitHub` · `ResearchGate` · `LinkedIn` · `Twitter`

EDUCATION

- **B.S., Theoretical & Applied Mechanics**
  Shanghai University   2017 - 2021
  GPA: 3.44/4 · 86.65/100   Supervisor: Guohui Hu
  THESIS: *Physics-Informed Deep Learning on Multiscale Fluid Dynamics*

AWARDS & RECOGNITION

- Second Class Award   01/2021
  The 3rd Undergraduate Academic Forum, SHU

- Outstanding Student Nomination   12/2020
  School of Mechanics and Engineering Science, SHU

- Top Class Academic Scholarship   11/2020
  School of Mechanics and Engineering Science, SHU

- Arts and Sports Scholarship   11/2020
  School of Mechanics and Engineering Science, SHU

- Athletic Scholarship   11/2018
  Shanghai University Bombers American Football Team

- Outstanding Student Nomination   07/2018
  Residential College, SHU

SKILLS

- **Coding & Programming**
  Python, Matlab, C++, Mathematica, HTML, LaTeX, Bash, TensorFlow, PyTorch, DeepXDE

- **Simulation Softwares**
  Lammps, OpenFOAM, ANSYS workbench, Abaqus

- **Research & Thoeries**
  CFD, Fluid & Solid Mech., ML & DL, DPD, MD, etc.

PUBLICATIONS

- S. Liu, **H. Zhai**, Y. Xu, B. An*, D. Zhang*. (2021) "The Role of Rod Decussation on Crack Deflection in Enamel". Contributed to *Biomechanics and Modeling in Mechanobiology*. (Under Review)

PROJECTS

- **Mechanical Properties of Solid Biomaterials**
  1. Structural design of composite materials with superior mechanical behaviors: lesson from the microstructure of nacre and enamel. [PDF]
  CAD Application in Structural Mechanics, 2020
  2. Formulation and application of rate-independent stress update algorithm of hydrostatic pressure: elasto-plastic yielding in composite. [PDF]
  Plasticity Theory, 2020
  3. An investigation of the elastoplastic nature of ITD on the toughness of the dentin microstructure. [PDF]
  SHU Summer Research Program, 2020
  4. Thermal Estimation of Smartphone Chipset: Mechanical Distribution of Chipset in Multiphysics Field. [PDF]
  Elastic Mechanic, 2020

- **Machine Learning on Mechanics**
  1. Investigation of the mechanics of the airfoil: application of machine learning in the noise prediction of NACA 0012. [PDF]
  Fluid Physics on Flight, 2020
  2. An optimized algorithm for the prediction of the water emptying time on BPNN. [PDF]
  Online Research Program, 2020
  For more details, please visit `https://hanfengzhai.net/project`

PRESENTATIONS

- **Computation Methods for Applied Mechanics Problem.** *The 3rd Undergraduate Academic Forum*, Shanghai University. Dec. 30th, 2020

OTHER ACTIVITIES

- Won 1st Place (2018) and 3rd place (2019) in *Shanghai University Bodybuilding Contest*.

- Played Defensive End & Linebacker at Shanghai University Bombers football team; joined *Russell Wilson football training camp* (2018).