BANGHUA ZHAO

2101 Cumberland Ave, Apt 1204, West Lafayette, IN, 47906 | (765)337-8424 | zhao563@purdue.edu

SUMMARY

- Excellent in engineering principles, strength of mechanics, solid mechanics and structural analysis
- Proficient in Finite Element Analysis and stress analysis, using ANSYS and Abaqus
- Skills in Programming (Python, Swift), experience with iOS app and ANSYS ACT development
- Self-motivated and good communication skills with ability to work in fast-paced environment

EDUCATION

Purdue University, West Lafayette, IN — 01/17 – Expected 12/20
Ph.D. in Aeronautics and Astronautics Engineering, Structures & Materials — **GPA: 3.85/4.0**

Purdue University, West Lafayette, IN — 01/15 – 12/16
M.S. in Aeronautics and Astronautics Engineering, Structures & Materials — **GPA: 4.0/4.0**

Beihang University, Beijing, China — 09/10 – 06/14
B.E. in School of Astronautics, Spacecraft Design and Engineering — **GPA: 3.4/4.0**

EXPERIENCE

Graduate Research Assistant, Purdue University, West Lafayette, IN — 09/16 – Present

- Developed an iOS app for SwiftComp™ by coding with **Swift** using **Xcode**. SwiftComp™ is a code developed by Prof. Yu's group at Purdue University for multiscale constitutive modeling for composites
- Developed an ANSYS Workbench platform-based GUI (Graphical User Interface) for SwiftComp™ by coding with **Python** and **XML** using ANSYS **ACT**
- Developed an ANSYS MAPDL platform-based GUI for SwiftComp™ by coding with **APDL** and **UIDL** and promoted the GUI by making YouTube video and LinkedIn article
- Conducted multiscale structural analysis for honeycomb sandwich structure using **ANSYS** and SwiftComp™

MAPDL Testing Engineer Intern, ANSYS Inc, Canonsburg, PA — 05/16 – 08/16

- Planned and designed different test models and scenarios for the new feature of ANSYS Mechanical APDL using engineering and mathematical knowledge and judgment
- Developed APDL test code and scripts for testing the new feature and submitted **50+** test cases into the test set for daily regression testing
- Worked closely with R&D teams by verifying newly developed features, identifying root cause of defects and communicating effectively within and across teams
- Learned knowledge about ANSYS ACT, Python, and XML by taking ANSYS training course
- Gained expertise in FEA, ANSYS Workbench, Nonlinear numerical simulation and meshing technology

PROJECT

The Third Flying into the Future-Space Exploration Innovation Contest in Asia — 06/12 – 08/12

- Invented a modular and rotational spacecraft: Rubik's Cube-type deep space exploration vehicle
- Developed the simulation video for the spacecraft by using **3ds Max** within three days
- Granted the only Heinlein Innovation Award (1 out of 20) and the Third Prize

SKILLS

- Programming: Python, Swift, MATLAB, Mathematica, APDL, HTML, CSS, JavaScript
- Professional: ANSYS, Abaqus, Xcode, 3ds Max, SwiftComp, BootStrap, Git
- Languages: Native speaker of Chinese, professional working proficiency in English