

# BANGHUA ZHAO

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## SUMMARY

- Seeking for an internship in CAE or SE related area. Available from summer 2018. Willing to relocate.
  - 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
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## EDUCATION

<b>Purdue University</b> , West Lafayette, IN	01/17 – Expected 12/20
Ph.D. in Aeronautics and Astronautics Engineering, Structures & Materials	<b>GPA: 3.85/4.0</b>
<b>Purdue University</b> , West Lafayette, IN	01/15 – 12/16
M.S. in Aeronautics and Astronautics Engineering, Structures & Materials	<b>GPA: 4.0/4.0</b>
<b>Beihang University</b> , Beijing, China	09/10 – 06/14
B.E. in School of Astronautics, Spacecraft Design and Engineering	<b>GPA: 3.4/4.0</b>

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## 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
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## 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
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## SKILLS

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