

Tian Yu

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Research Experience

Virginia Tech

Blacksburg, VA

Research Assistant

Jan 2017 – present

- Conducted numerical simulations to identify pleatability surfaces of mechanical rotary pleating process.
- Developed a theoretical model that was able to study mechanical pleating processes.
- Designed an exact linkage mechanism that was able to conduct pure bending test of thin sheets.
- Built a prototype of the pure bending tester that was able to measure the moment-curvature relationship of soft sheets.

Virginia Tech

Blacksburg, VA

Research Assistant

Jul 2015 – Jan 2017

- Studied bistability of creased thin sheets under removal of elastic singularities through a combination of experiments and numerical simulations.
- Studied bifurcations and large deformations of thin rods and strips through a combination of experiments and numerical simulations.

Zhejiang University

Hangzhou, China

Research Assistant

Sep 2011 – Jun 2014

- Designed and built a deployable structure that provided a parabolic surface for space antenna.

Education

Ph.D., Engineering Mechanics | Virginia Tech

expected Dec 2019

M.S., Structural Engineering | Zhejiang University

Jun 2014

B.S., Civil Engineering | Beihang University

Jun 2011

Skills and Interests

Computer: AUTO 07P, COCO, ABAQUS, ANSYS.

Languages: English (proficient), Mandarin (native).

Interests and Affiliations: Weightlifting; APS student membership, 2016 – 2019.

Conference Presentations, Trainings, and Additional Experiences

- Society of Engineering Science Annual Technical Meeting, 2016 and 2019.
- APS March Meeting, 2016, 2017 and 2019.
- Advanced Summer School on Continuation Methods for Nonlinear Problems, UIUC, Urbana, IL, Aug 2018.
- Geometry and topology in contemporary material science, PhD school, Niels Bohr Institute, Denmark, Sep 2017.
- Soft solids and complex fluids summer school, May 2016.

Mentoring, Teaching and Outreach

- Mentored four Virginia Tech undergraduates on their experimental works, Virginia Tech, 2017 – 2019.
- Delivered a lecture titled “Getting practice with continuation software AUTO 07P,” GEMS (Graduate Engineering Mechanics Society) workshop, Virginia Tech, Dec 2017.
- Demonstrated multi-stable toys to kids, Kid’s Tech University, Virginia Tech, Mar 2017.
- Teaching Assistant, Intermediate Dynamics, Virginia Tech, Fall 2016.
- Teaching Assistant, Mechanical Behavior of Materials, Virginia Tech, Spring 2015.