

Yuan Ji

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Education

Texas A&M University, College Station, TX Direct Ph.D. in Mechanical Engineering	GPA: 3.92	Aug. 2018 – Present
The Hong Kong Polytechnic University, Kowloon, HK BEng in Mechanical Engineering	GPA: 3.93	Aug. 2014 – May 2018

Skills

Experimental Research	Software: Abaqus, Mathematica, SolidWorks, AutoCAD
Programming: Python, MATLAB, LaTeX	Language: English, Mandarin

Work Experience

Graduate Teaching Assistant | Texas A&M University

MEEN 315 (Principles of Thermodynamics)	Aug. 2020 – Dec. 2020
<ul style="list-style-type: none">Held office hours with students to answer general questionsProctored exams, graded assignments and quizzes	
MEEN 260 (Mechanical Measurements)	Jan. 2019 – May 2019
<ul style="list-style-type: none">Instructed students to design analog and digital filtersInstructed students to use LabVIEW to take measurements from a mechanical structural systemInstructed students on LVDT, piezo-electric accelerometers and thermocouples	
MEEN 361 (Materials and Manufacturing in Design Laboratory)	Aug. 2018 – Dec. 2018
<ul style="list-style-type: none">Instructed students to perform hardness, tensile, heat treatment, cold working and bending experimentsProvided students with guidance in designing scissor jacks	

Research Experience

Graduate Research Assistant | PI: Dr. Justin Wilkerson | NEP Lab | Texas A&M University

Studying the Traumatic Brain Injury by Soft Gel Fractures	Aug. 2020 – Present
<ul style="list-style-type: none">Currently working on developing an experimental technique to characterize soft materialsInvestigating the response of soft materials under dynamic impact and perforation	
Constant-loading Creep Experiment on Soft Gels	Aug. 2019 – May 2020
<ul style="list-style-type: none">Designed the experimental apparatusAnalyzed the <i>Indentation vs. Time</i> data using both Prony series and power-law kernelInvestigated the deformation and recovery of gels with three different concentrations	
Three Different Experimental Methods to Determine the Soft Gel Stiffness	Jan. 2019 – Aug. 2019
<ul style="list-style-type: none">Conducted the cavitation rheology, static indentation and dynamic low-velocity impact experiments on a triblock copolymerModified the cavitation rheology method of determining Young's modulus and surface tension	

Publication

Y. Ji, A. M. Dagro, G. Dorgant, D. Starr, and J. W. Wilkerson, "A Comparison of Conventional Gel Stiffness Characterization Techniques with Cavitation Rheology," *Experimental Mechanics*. (Under review)

Honors

The Outstanding Student Award in Department of Mechanical Engineering, PolyU	2017
Mitsubishi Electric Cup Second Prize & CC-Link Special Award	2017
Lam Sze Ming Scholarship	2017
Dean's Honors List	2015-2017