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**EDUCATION****École Polytechnique Fédérale de Lausanne**

Lausanne, Switzerland

Doctoral Student in Solid Mechanics

Present

**Beihang University**

Beijing, China

B.S. in Flying Vehicle Power Engineering. GPA: 3.7/4.0

Jun 2018

**Polytechnic University of Milan**

Milan, Italy

Undergraduate International Exchange Program

Sep 2017 – Feb 2018

**AWARDS AND HONORS**

- First-Class Academic Scholarship 2020
- Freshman Merit Scholarship 2019
- First-Class Academic Scholarship 2019
- First-Class Academic Scholarship 2018
- Full Scholarship for Undergraduate Exchange Program (China Scholarship Council) 2018
- Third Prize for the 26th “Feng Ru Cup” Competition 2016
- Student Research Training Grant (RMB3500) 2015-2016

**PUBLICATIONS**

- K Zhu\*, C Li\*, and B Pan (2022). “Rapid and repeatable fluorescent speckle pattern fabrication using a handheld inkjet printer.” *Exp Mech* 62:627-637
- X Zhang\*, C Li\*, L Yu, and B Pan (2021). “Heatwave distortion correction using an improved reference sample compensation method and multispectral digital image correlation.” *Appl Opt* 60(13):3716-3723
- B Dong, C Li, and B Pan (2021). “Fluorescent 2D digital image correlation with built-in coaxial illumination for deformation measurement in space-constrained scenarios.” *Exp Mech* 61:653-661
- B Fu\*, C Li\*, P Ou and B Dong (2020). “Enhanced digital gradient sensing using backlight digital speckle target.” *Sensors* 20(22):6557
- C Li, Haojian Luo and B Pan (2020). “High-throughput measurement of coefficient of thermal expansion using a high-resolution digital single-lens reflex camera and digital image correlation.” *Rev Sci Instrum* 91(10):105106
- B Dong\*, C Li\*, and B Pan (2020). “Fluorescent digital image correlation applied for macroscale deformation measurement.” *Appl Phys Lett* 117(4):044101
- B Dong\*, C Li\*, and B Pan (2019). “Ultrasensitive video extensometer using single-camera dual field-of-view telecentric imaging system.” *Opt Lett* 44(18):4499-4502
- C Li\*, B Dong\*, and B Pan (2019). “A flexible and easy-to-implement single-camera microscopic 3D digital image correlation technique.” *Meas Sci Technol* 30(8):085002

(\* donates equal contribution)

**PRESENTATIONS**

- “New exploration and application of fluorescent digital image correlation.” *International Digital Image Correlation Society Conference*, Virtual, Oct 2020

- “High-throughput CTE determination of bulk materials based on DSLR and DIC.” (in Chinese) *The 26<sup>th</sup> Annual Conference of Beijing Society of Theoretical and Applied Mechanics*, Beijing, Jan 2020

## RESEARCH EXPERIENCE

### **Institute of Solid Mechanics, Beihang University**

Beijing, China

*Research Assistant*

Oct 2018 – Jan 2021

- Discovered the advantages of fluorescent ink in macroscale digital image correlation and applied it to telecentric imaging with build-in coaxial illumination for deformation measurement in confined space
- Simplified the speckle target in the digital gradient sensing and improved the measurement accuracy
- Designed and executed high-throughput measurement of coefficients of thermal expansion of bulk materials using a digital single lens reflex and digital image correlation
- Developed an ultrasensitive video extensometer based on the idea of field-of-view separation and telecentric imaging
- Developed a single-camera three-dimensional microscopic digital image correlation technique
- Assessed the drift error and distortion between slices obtained by laser scanning confocal microscope (LSCM) using microscale digital image correlation
- Performed digital image correlation on scanning electron microscope images and analyzed the factors affecting the quality of the microscale speckle pattern

### **Center of Space Exploration (Chongqing University), Ministry of Education**

Beijing, China

*Experiment Assistant*

Jun – Sep 2018

- Assisted with the experiment preparation of the Chang'e-4 Lunar Biosphere Mini-Ecosystem
- Operated the equipment, collected experimental data and monitored the health of the mini-ecosystem
- Performed analysis on the acquired data, deduced the internal status of the mini-ecosystem and conducted troubleshooting when necessary

### **Institute of Solid Mechanics, Beihang University**

Beijing, China

*Undergraduate Researcher*

Sep 2017 – Jun 2018

- Generated finite element model of 3D closed-cell porous materials with spherical/polyhedral pores using AutoCAD, Rhinoceros and Hypermesh
- Performed finite element analysis using ABAQUS and investigated the effective bulk modulus of porous materials with porosity from 0 to 99%

### **Student Research Training Program, Beihang University**

Beijing, China

*Team Leader and APP developer*

May 2015 – Oct 2016

- Planned the project schedule and managed the research funding
- Developed a remote-control toy car based on Raspberry Pi and an IOS app, realizing motion control and real-time video streaming

## ADDITIONAL EXPERIENCE

### **Wroclaw University of Science and Technology**

Wrocław, Poland

*Summer School in MEMS and Microsystems*

Jul 2019

### **University of Cambridge**

Cambridge, UK

*Summer School in Nanotechnology and Quantum Technologies*

Jul 2017

### **Peter the Great St. Petersburg Polytechnic University**

St. Petersburg, Russia

*Summer School in Turbomachinery*

Aug 2016

**AIESEC International Inc.**

*International Volunteer in Women Empowerment*

Hyderabad, India

Jul – Aug 2015

### **SKILLS**

**Computer:** MATLAB, Python, 2D/3D Modelling, Finite Element Analysis

**Laboratory:** Scanning Electron Microscope, Raspberry Pi, Arduino

**Languages:** Chinese(native), English(proficient)