

LONG ZHOU

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220B Talbot Laboratory, 104 South Wright Street, Urbana, IL 61801

PROFESSIONAL PROFILE

- Three years of experience designing, fabricating, and testing robot systems.
- Three years of rapid prototyping experience, including 3D printing, injection molding, and CNC machining.
- Ten years of programming experience, excellent debugging and profiling skills.
- Strong problem-solving skills, resilience to challenges, active thinker, team player.

SKILLS

Programming: C/C++, Python, MATLAB, Java, ActionScript, Bash, Assembly Language, VHDL.

CAD: SOLIDWORKS, Altium, EAGLE, OpenFOAM, MATLAB, Vivado Design Suite.

Prototyping: 3D Printing, CNC Milling, Reflow Soldering, Oscilloscope.

Other Proficiencies: Linux, Microsoft Office, Photoshop, Illustrator, etc.

EDUCATION

University of Illinois at Urbana-Champaign

Doctor of Philosophy in Nuclear, Plasma, and Radiological Engineering, expected 2021

Master of Science in Nuclear, Plasma, and Radiological Engineering, December 2018

GPA:3.87/4.0

Focus: Soft Robotics

University of Science and Technology of China

Bachelor of Engineering in Nuclear Engineering, June 2016

RESEARCH EXPERIENCES

Soft Robotics and Artificial Intelligence Lab, UIUC

08/2016-12/2018

Graduate Research Assistant

- Established a workflow for rapid robot prototyping, including 3D-printing, injection molding and milling.
- Designed a modular soft robot made of identical plug-and-play modules, allowing the soft robot to be scalable and reconfigurable. Fabricated functional prototypes to demonstrate and verify the design.
- Designed embedded MCU circuits to control the modules locally.
- Developed a communication protocol to reduce the relaying latency of commands from one module to another.

Computational Plasma Physics Lab, USTC

01/2016-06/2016

Graduation Project

Outstanding Graduation Project Award

- Developed a simulation library for plasma
- Implemented hybrid OpenMP and MPI parallel computing to accelerate the simulation.
- Verified the consistency of simulation result and real systems. Designed a visualized interface using OpenGL.

Particle Detection and Electronics Laboratory, USTC

04/2015-02/2016

- Improved the design of scintillator detectors to achieve better SNR for low energy beta ray.
- Conducted Monte Carlo simulations using Geant4 to analyze the efficiencies of different detector geometries.

Laboratory of Nuclear Materials and Nuclear Fuel Circulation, USTC

12/2014-10/2015

Undergraduate Research Project

Outstanding Undergraduate Research Award

- Analyzed the stability and the behavior of charged droplets in microfluid systems to guarantee the controllability.
- Designed an electric-microfluidic coupled system to generate and manipulate charged droplets.

COMPETITIONS

International Genetically Engineered Machine Competition 2014

Gold Medal

Member of USTC-Software Team (Software: *BioPano*).

- Developed the front-end application, created an elegant GUI and a cloud-based cooperating environment for users.
- Constructed a high-performance framework for interactively visualizing and managing large numbers of biological components and their relations.

“BioPano produced an incredible project that left all judges wowed in most cases (aspects 1- 6). It was complete, polished, well-thought out, documented, reusable, and professional.” – iGEM JUDGING HANDBOOK 2018, p. 102.

RoboGame 2013, USTC

Best of Tech Award

- Designed and built a quadruped robot, wrote the program for locomotion and automation.
- Developed an Android app for remote controlling.

HONORS & AWARDS

Baosteel Scholarship – Awarded ¥10,000 stipend for academic merit and overall performance, 2015

First Place Award, Undergraduate Thesis Competition, USTC, 2014