Rongqian Will Chen

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Education

George Washington University (GW) — **Washington, D.C., US**
PhD in Electrical Engineering — *Sept. 2024 – Now*

University of Pennsylvania (UPenn) — **Philadelphia, US**
MSE in Electrical Engineering, GPA: 3.81/4.0 — *Sept. 2021 – May 2023*

Southwest Jiaotong University (SWJTU) — **Chengdu, China**
BEng in Automation, GPA: 3.45/4.0 — *Sept. 2017 – Jun. 2021*

Skills

Mathematical Tools	Mathematica, Matlab
Design and Simulation	SolidWorks, Ansys, Unity, PSIM
Hardware Development	Altium Designer, Keil, Proteus, CCStudio
Embedded Systems	Linux, Raspberry Pi, Arduino, STM32, FPGA, DSP
Programming Languages	Python, C, C++, C#, Verilog, HTML

Experience

Sung Robotics Lab at UPenn — **Philadelphia, US**
Leader, Master's Thesis: Pneumatic Legged Hopping Robot — *Sept. 2022 – July 2024*

- Modeled and fabricated tunable-stiffness pneumatic actuators with a 143% stiffness adjustment range.
- Designed a legged robot using Raspberry Pi and ESP32 for control and communication.
- Developed energy-saving strategies, achieving a 29.3% energy loss reduction.

Intelligent System Lab at SWJTU — **Chengdu, China**
Leader, Master's Thesis: Pneumatic Legged Hopping Robot — *Sept. 2022 – July 2024*

- Modeled and fabricated tunable-stiffness pneumatic actuators with a 143% stiffness adjustment range.
- Designed a legged robot using Raspberry Pi and ESP32 for control and communication.
- Developed energy-saving strategies, achieving a 29.3% energy loss reduction.

Power Conversion and Control Lab at SWJTU — **Chengdu, China**
Leader, Master's Thesis: Pneumatic Legged Hopping Robot — *Sept. 2022 – July 2024*

- Modeled and fabricated tunable-stiffness pneumatic actuators with a 143% stiffness adjustment range.
- Designed a legged robot using Raspberry Pi and ESP32 for control and communication.
- Developed energy-saving strategies, achieving a 29.3% energy loss reduction.

Projects

Hospital / Health Science IRB — **Mar 2015 – Present**

- Served as non-scientific/unaffiliated patient-representative
- Reviewed patient consent forms for completeness, accuracy, and clarity
- Became familiar with industry standards and regulations (OHRP, HIPAA)

Debian Linux — **Jan 2001 – Present**

- Maintained packages in Debian repositories
- Reviewed and sponsored packages on behalf of prospective Developers
- Resolved bugs reported in bug tracking system

Publications

- **Rongqian Chen**, Jun Kwon, Wei-Hsi Chen, Cynthia Sung. Design and Characterization of a Pneumatic Tunable-Stiffness Bellows Actuator. *RoboSoft 2024*.
- Shivangi Misera, Mason Mitchell, **Rongqian Chen**, Cynthia Sung. Design and Control of a Tunable-Stiffness Coiled-Spring Actuator. *ICRA 2023*.
- **Rongqian Chen**, Yingquan Zou, Anyong Gao, Leshi Chen. A Cluster-Based Weighted Feature Similarity Moving Target Tracking Algorithm for Automotive FMCW Radar. *VTC 2022-Spring*.
- Ping Yang, Xi Chen, **Rongqian Chen**, et al. Stability Improvement of Pulse Power Supply. *IEEE JETCAS, 2021*.