Hui Shi

EDUCATION

JOHNS HOPKINS UNIVERSITY, Baltimore, MD *Exp. Graduation: May 2019*
M.S. in Biomedical Engineering
Research Advisor (2017-present): Daniela Cihakova

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA *Graduation Date: Dec 2016*
B.S in Biomedical Engineering with Highest Distinction
Research Advisor (2013-2017): Prof. Richard Nichols

RESEARCH PROJECT

Neurophysiology Lab, Department of Applied Physiology, Georgia Tech
Research Assistant

(1). *The Use of Positive Force Feedback in Functional Electrical Stimulation* *Fall 2015-July 2017*
- Developed a functional electrical stimulation system concept to treat foot drop symptom
- Designed and performed experimental protocol for intramuscular stimulation
- Discussed the concept in SfN 2017 Annual Meeting (Abstract)

(2). *Neuromechanic* *Spring 2014-Fall 2015*
- Ran computer simulation to predict the mechanical response of the hindlimb
- Compared different muscle combination's neural feedbacks with the simulation

(3). *Behavioral Studies of Peripheral Nerve Injury* *Fall 2013-Spring 2014*
- Participated in the FHL muscle nerve reinnervation surgery
- Collected the data of cats running up and down a ramp or stair
- Analyzed the kinematic behavior of of the cat using various programs (LabVIEW, Vicon, Matlab)

Senior Design Capstone, Georgia Tech *Fall 2016*
Capstone Team Leader
- Developed a product that delivers a comfortable environment for surgeons in the operating room
- Designed and made a wearable and high fidelity prototype that cools down the user
- Maintained team communication between the client and instructors

Bionic Lab, Department of Electrical Engineering, Georgia Tech *Fall 2015*
Research Assistant
- Contributed to the development of a wearable necklace device to monitor the compliance of medical regimen
- Visualized the different signal outputs from the device and analyzed the algorithm of the various biological signals
- This work leads to the Mobile Atlanta Scholarships through Metro Atlanta Chamber.

PUBLICATION

[C1]. **Shi, H.,** Lyle, M., Turtill, C., Nichols, R., *Positive force feedback may ameliorate muscle weakness*, SfN's 47th annual meeting, Neuroscience 2017 (Accepted)
[C2]. Lyle, M., **Shi, H.,** Anderson, H., Rapsas, B., *Behavioral adaptations during downslope walking after cross-reinnervation of medial gastrocnemius and the pretibial flexors,* SfN's 47th annual meeting, Neuroscience 2017 (Accepted)

WORK EXPERIENCE

Georgia Institute of Technology, Atlanta, GA *Fall 2014 – Fall 2016*
Teaching/Lecture Assistant, *School of Mathematics*
- Taught two 50-minute recitation sessions each week
- Graded papers and held office hours
- Communicated with students and course instructor to improve learning

BGI, Shenzhen, China *Summer 2014*
Intern, BGI
- Participated in genomics sequencing and genetic research
- Attended seminars about genetic research, big data research and bio-ethical issues
- Visited the agricultural genomic projects and learned about the new products

Updated Feb, 2018

China Telecom, Shenzhen, China *Summer 2014*
Intern, China Telecom Training Program
• Assisted in training of future employees
• Wrote reports for classes and evaluated students based on their participation
• Made reservations for students and instructors
• Applied for scientific/educational funds for the company

SKILLS

Leadership: Public Speaking (Speech, Presentation), Team Dynamics, Team building
Communication: Visual Design **(**Poster, Website); Technical Document Writing (Project Proposal, Technical Report), Native speaker of Chinese (Mandarin)
Instrumentation: Oscilloscope, Function Generator, Digital Multimeter, NI myDAQ,
Software: Solidworks, LabVIEW, MATLAB, Microsoft Illustrator, EndNote, LaTeX, ChemBioDraw, Python
Biology: System Physiology, Cell Biology, Bio-system Modelling, Neuroscience, CCK Cell Counting, Flow Cytometry, Western Blotting, Clonogenic Assay
Chemistry: Biochemistry, Material Science, NMR Spectroscopy, IR Spectroscopy, Mass Spectroscopy, Retro-synthesis
Mathematics: Statistical Testing, Differential Equation, Laplace Transforms, Integrals, Derivatives, Matrix Algebra, Systems of Linear Equations, Fourier Series, Maxima and Minima, Eigenvectors, Eigenvalues
Engineering: Signal and System, Circuit Analysis, Biomechanics, Bio-solid Mechanics

LEADERSHIP

AEMB National Biomedical Honor Society GT Chapter, Member *Spring 2015-Present*
• National biomedical engineering honor society awarded to undergrads with the top academic achievements

Biomedical Engineering Student Learning Ambassador *Spring 2015-Summer 2016*
• Made instructional videos for the course Conservation Principles in Biomedical Engineering

Georgia Tech Women's Chorus, Vice President *Fall 2012 – Fall 2015*
• Attended weekly rehearsals and took notes at officer meetings

Leading Edge Leadership Program, Mentee *Fall 2014 – Fall 2015*
• One-on-one workshop with a mentor on developing leadership skills

BME Mentorship Program, Mentor *Fall 2014 –Fall 2015*
• Served as mentor for the first year BME students and gave guidance for how to succeed in Tech

Biomedical Research Opportunities Society, Secretary *Fall 2012 – Fall 2014*
• Arranged semester's activities for information about biomedical research, invited professors to hold seminars, and took attendance and evaluated the members' performance in the organization

Pioneer BME Publication, Staff Writer *Spring 2013 – Spring 2014*
• Interviewed with professors, professionals and editors of biotechnology journals and wrote monthly articles

Tech Trek Alaska, Team Member *July 2012*
• 11 days' freshman leadership orientation trip in Alaska with 9 other Tech freshmen