Curriculum Vitae

Mr. Farshid Sadeghian

EDUCATION

2019-Current	Ph.D., Biomedical Physiology and Kinesiology, SFU, BC, Canada (3.5 CGPA)
2015-2017	M.Sc., College of Engineering, University of Tehran, Tehran, Iran. (3.88 CGPA)
2010-2014	B.Sc., school of Mechanical Engineering, Shahid Rajaee University, Tehran, Iran. (3.25 CGPA)
2006-2010	Diploma in Mathematics and Physics, Roozbeh High School, Educational Complex, Tehran, Iran. (3.91 CGPA)

EMPLOYMENT

2019-Current — ***Research Assistant*, Biomedical Physiology and Kinesiology, SFU, Canada**
I was responsible for data analysis for a research project studying the effectiveness of high intensity interval training on muscle-pump baroreflex function after 14 days of bedrest.

2021 — ***Research Assistant*, McGill University Health Center, McGill University, Canada**
I was in responsibility of data collecting for a research project that looked at the effects of fourteen days of bedrest on the musculoskeletal system using six different tests on 21 older persons.

2015-2017 — ***Research Assistant*, R&D section of Noor institute, Iran.**
I was responsible for data collection and data analysis for a research project studying the effect of High Tibial Osteotomy (HTO) on the medial condyle for Varus patients.

2015-2017 — ***Research Assistant*,** College of Engineering, **University of Tehran, Iran.**
I was responsible for data collection and data analysis for a research project designing, developing, and testing a knee-ankle-foot-orthoses for patients suffering from neuromuscular diseases

2015-2017 — ***Research Manager*,** Center of Rehabilitation & Sports Medicine Equipment (CRSME) lab**,** College of Engineering**, University of Tehran**, **Iran.**
holding workshops and participating in scientific conferences as an executive member

2016 — ***Research Assistant*,** College of Engineering, **University of Tehran**, **Iran.**
providing PYTHON, MATLAB, and ABAQUS tutoring

TEACHING

Fall 2022 — **Teacher assistant, BPK 201 - Biomechanics, Biomedical Physiology and Kinesiology, SFU, Canada**
I am responsible for having six tutorial sessions per week, as well as answering student questions, grading their assignments, midterm and final exams.

Spring 2022 — **Teacher assistant, BPK 105C - Fundamentals of Human Structure and Function, Biomedical Physiology and Kinesiology, SFU, Canada**
I am responsible for answering student questions, grading their assignments, midterm and final exams.

Fall 2020 — **Teacher assistant, BPK 105C - Fundamentals of Human Structure and Function, Biomedical Physiology and Kinesiology, SFU, Canada**

I am responsible for answering student questions, grading their assignments, midterm and final exams.

2017-2018 **Lecturer of Industrial Drawing I, Shahid Rajaee University, Iran.**
I am responsible for solving problems in a separate class for students, taking quizzes, designing and grading the project during the semester, and proposing sample questions for final-term exam and grading them during two successive semesters.

2017-2018 **Lecturer of Mechanics of Materials, Shahid Rajaee University, Iran.**
I am responsible for teaching and progress of students, solving problems, designing and grading the project during the semester, and grading them during two successive semesters.

Spring 2017 ***Teaching Assistant,* Orthopedic biomechanics. College of Engineering, University of Tehran, Iran.**
I was responsible for setting up and running the rehabilitation lab where I gave demonstrations, helped students with dissections and answered questions. I also held weekly office hours and was responsible for grading assignments and exams.

Fall 2016 ***Teaching Assistant,* Introduction to continuum mechanics. College of Engineering, University of Tehran, Iran.** I am responsible for teaching and progress of students, solving problems, designing and grading the project during the semester.

Spring 2015 ***Teaching Assistant,* Mechanical engineering design I & II. School of Mechanical Engineering, Shahid Rajaee University, Iran.**
I am responsible for teaching and progress of students and solving problems.

Spring 2015 ***Teaching Assistant,* Heat transfer. School of Mechanical Engineering, Shahid Rajaee University, Iran.**
I was responsible for setting up and running weekly labs where I gave demonstrations, helped students with dissections and answered questions. Also, I am responsible for teaching and progress of students, solving problems, designing and grading the project during the semester.

Fall 2014 ***Teaching Assistant,* Introduction to fluid mechanics. School of Mechanical Engineering, Shahid Rajaee University, Iran.**
I was responsible for setting up and running weekly labs where I gave demonstrations, helped students with dissections and answered questions. Also, I am responsible for teaching and progress of students, solving problems, designing and grading the project during the semester.

Fall 2014 ***Teaching Assistant,* Dynamics of machine. School of Mechanical Engineering, Shahid Rajaee University, Iran.**
I am responsible for teaching and progress of students, solving problems, designing and grading the project during the semester.

SERVICE

2021 ***Head of SFU research team*. McGill University Health Center (MUHC), McGill University, Canada.**There was eight different research team from across Canada involved in this huge study founded by Canadian space agency, and my responsibility was to lead, manage, and organize all tasks related to SFU APL team included data collection, patients' communications, MUHC staff communications.

2015-2019 ***Member,* School of Mechanical Engineering Alumni Association. College of Engineering, University of Tehran, Iran.**
In addition to participating in monthly meetings, I assist in holding meetings for alumni to improve their services as an executive member.

2015-2019 ***Member*, Scientific Association of Mechatronics (S.A.M.). College of Engineering, University of Tehran, Iran.**

2015-2019 ***Member*, Scientific Association of Mechanical Engineering (S.A.M.E). College of Engineering, University of Tehran, Iran.**
SAME is the Best Scientific Association of Iran in Educational Activities in competition with 700 other student scientific associations in the 8th National Harekat Festival, and I assist in holding meetings and led the design, implementation of a student satisfaction survey.

PROFESSIONAL DEVELOPMENT AND CERTIFICATION

2016 *python Software*, Academic Center for Education of Sharif Industrial Jihad Organization.
2015 *Matlab Software*, Academic Center for Education of Sharif Industrial Jihad Organization.

FUNDING SUMMARY

2019-2023 $21,000 annually by the Department of Biomedical Physiology and Kinesiology (RA(CIHR&CSA): $7,000; TA: $7,000; SFU GF: $7,000
2019-2020 Entrance scholarship from SFU of $23,000

AWARDS AND HONOURS

2022 $7,000 graduate fellowship by department of Biomedical Physiology and Kinesiology
2021 Research Grant Stipend (450$)
2018 *Ranked 1st among 894 participants*, in the nationwide university entrance exam in the field of Mechanical Engineering for PhD degree. ($0)
2014 *Ranked 104th among approximately 8000 participants*, in the nationwide university entrance exam in the field of Mechanical Engineering for master's degree ($0)
2010 *Top 0.08% of the nationwide university entrance exam* ranked 823rd among nearly 550,000 participants in the nationwide university entrance exam. ($0)

FELLOWSHIPS AND SCHOLARSHIPS

2018 *Elite students in nationwide university entrance*, Farzanegan 6, Iran. ($10,000)

PEER-REVIEWED PUBLICATIONS » ACCEPTED OR PUBLISHED

1. Fadil, Rabie, Ajay K. Verma, Farshid Sadeghian, Andrew P. Blaber, and Kouhyar Tavakolian. "Cardio-respiratory interactions in response to lower-body negative pressure." Physiological Measurement 44, no. 2 (2023): 025005.
2. Farshid Sadeghian, Donya Naz Divsalar, Rabie Fadil, Kouhyar Tavakolian, and Andrew P. Blaber. "Canadian aging and inactivity study: Spaceflight-inspired exercises during head-down tilt bedrest blunted reductions in muscle-pump but not cardiac baroreflex in older persons." Frontiers in physiology (2022): 1887.
3. Divsalar, Donya Naz, Farshid Sadeghian, Kevin Burville, Malcom F. Tremblay, John Thomas, Steven Richter, and Andrew P. Blaber. "A spacecraft-compatible combined artificial gravity and exercise (CAGE) system to sustain astronaut health in the next generation of long-term spaceflight." Journal of Space Safety Engineering (2022).

4. Farshid Sadeghian, Mohammadreza Zakerzadeh, Morad Karimpour and Mostafa Baghani. Compliant orthoses for repositioning of knee joint based on super-elasticity of shape memory alloys. *Journal of Intelligent Material Systems and Structures*, p.1045389X18783085. (2018). Published Original research article.
5. Farshid Sadeghian, Mohammadreza Zakerzadeh, Morad Karimpour and Mostafa Baghani. Numerical study of patient-specific ankle-foot orthosisfor drop foot patients using shape memory alloy. *Journal of Medical engineering and physics*, 69, pp.123-133. Published Original research article.
6. Farshid Sadeghian, Mehrdad Davoodi, Mohamad Parnianpour, Morad Karimpour. Analysis and Simulation of the Effect of Knee Structure on the Condylar Forces. *Journal of Clinical Physiotherapy Research*, 4(3), pp. e20-e20. Published Original research article.
7. Farshid Sadeghian, Morad Karimpour, Mohammadreza Zakerzadeh and Mostafa Baghani. Design and Analysis of a knee-ankle-foot orthosis using torsional spring. *Journal of Modares Mechanical Engineering*, 17(10), pp.185-193. 20017. Published Original research article. (In Persian)
8. Farshid Sadeghian, Mohammadreza Zakerzadeh, Morad Karimpour and Mostafa Baghani. Design and Simulation of an ankle foot orthosis using torsional spring. *Journal of Mechanical engineering transaction of the ISME*. (In Persian)

PEER-REVIEWED PUBLICATIONS » SUBMITTED

1. The effect of skeletal muscle-pump on blood pressure and postural control in Parkinson's disease. R Fadil, A Huether, F Sadeghian … - Cardiovascular Engineering and Technology, 2022
2. Understanding the health impact of inactivity for the benefit of older adults and astronauts' initiative. G Hajj, V Sonjak, A Faust, E Hedge, C Mastrandrea, S Balram, J Lagacé, P Martin, DN Divsalar, F Sadeghian … - Trials, 2023.
3. Impact of 14 days of bed rest in older adults and an exercise countermeasure on body composition, muscle strength and cardiovascular function: Canadian Space Agency standard measures. G Hajj, V Sonjak, A Faust, E Hedge, C Mastrandrea, S Balram, J Lagacé, P Martin, DN Divsalar, F Sadeghian … - NPJ microgravity, 2023
4. Elevated biomarkers of neural injury in older participants following head-down bed rest: links to physiological deconditioning in spaceflight and aging. A Blaber, F Sadeghian, DN Divsalar, … - Frontiers in Human Neuroscience, 2023.

RESEARCH ABSTRACTS

1. Andrew Blaber, Farshid Sadeghian, Donya Divsalar, Rabie Fadil, Kohyar Tavakolnia. HIIT exercise reduces muscle-pump baroreflex impairment following fourteen days of head-down tilt bed rest in older adults. 2022 NASA Human Research Program Investigators' Workshop. [Poster presentation]
2. Farshid Sadeghian, Amirhossien Borjali, Mohmoud Chizari. Designing a strengthening mechanism for Hamstring and Culf muscles of people suffering from weakness in their knee and ankle joints. *8th world congress of Biomechanics*, Dublin, Ireland, 2018, 8-12 July. [Poster presentation]

PRESENTATIONS

1. The effect of HTO on knee condyles for Varus and Valgus patients, *Iran University of Medical Science:* 4th seminar on orthopedics surgery. Invited talk. Tehran, Iran (2017).
1. The effect of pregnancy on pelvic floor muscle. *Shahid Beheshti University of Medical Sciences: 5th seminar on electrotherapy updates.* Invited talk. Tehran, Iran (2018).

PATENTS

1. Farshid Sadeghian, Mohammadreza Zakerzadeh, Morad Karimpour and Mostafa Baghani. *Knee orthosis using shape memory alloys*. Iran, Sep 7, 2017, A61F 5/01 (Non-provisional, issued).
2. Farshid Sadeghian. *Patient specific ankle-foot orthotic for drop foot patient*. Iran, Oct 28, 2017, (Non-provisional, issued).

NON PEER-REVIEWED PUBLICATIONS

Farshid Sadeghian and Arvin Ebrahimi. Job making after the increase of the currency, Fekrezemestoon's website, Internet Financial Counseling. Tehran, Iran (2018).

Discussing about the converts the threat of increasing exchange rates to opportunities using entrepreneurs.

COMPUTER SKILLS

Technical:	**Programing:**	**General:**
ABAQUS	MATLAB	Microsoft Office
Adams	C++	Photoshop
OpenSim	Python	AutoCAD
Solidwork	Java	

LANGUAGE SKILLS

1. English: Proficient, TOFEL Score: 98 (Reading: 27, Listening: 24, Speaking: 23, Writing: 24)
2. Persian: Native
3. Arabic: Familiar