



Amirkabir University of Technology
(Tehran Polytechnic)



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h-index (Scopus):

9

Citations (Scopus):

225

Soroush Sadeghnejad

Assistant Professor

Department of Biomedical Engineering

Biomechanic



Educational Records

#	Degree/Major	University	City	Country	Graduation Date
1	B.Sc., Mechanical Engineering	Amirkabir University of Technology (Tehran Polytechnic)	Tehran	Iran	2009
2	M.Sc., Mechanical Engineering	Amirkabir University of Technology (Tehran Polytechnic)	Tehran	Iran	2011
3	PhD, Mechanical Engineering	Sharif University of Technology	Tehran	Iran	2017

Research Interests

#	Title	Start date
1	Intelligent control of systems	2017
2	Haptic, Tele-Operation and Virtual reality in medical systems	2017
3	Surgery robotics	2019
4	Rehabilitation	2020
5	Mechatronic system design	2006

Journal Papers

Other Records

- 1 1. Farshad Khadivar, Soroush Sadeghnejad, Hamed Moradi, Gholamreza Vossoughi, " Dynamic characterization and control of a parallel haptic interaction with an admittance type virtual environment", *Meccanica*, 2020 Vol. 55, Num. 159, Page pages435, 2020, January
- 2 Soroush Sadeghnejad, Yousef Taraz Jamshidi, Mojtaba Sadighi, " On the Low-Velocity Impact and Quasi-Static Indentation Studies of Nomex™ Honeycomb Composite Sandwich Panels", *AUT Journal of Mechanical Engineering*, 2019 Vol. 3, Num. 2, Page 243, 2019, October
- 3 Soroush Sadeghnejad, Nahid Elyasi, Farzam Farahmand, Gholamreza. Vossoughi and Seyed Mousa Sadr Hosseini, "Hyperelastic modeling of sino-nasal tissue for haptic neurosurgery simulation ", *Transactions on Mechanical Engineering (B), International Journal of Science and Technology (Scientica Iranica)*, 2020 Vol. 27, Num. 3, Page 1266, 2020, June
- 4 Soroush Sadeghnejad, Farshad Khadivar, Ehsan Abdollahi, Hamed Moradi, Farzam Farahmand, Mousa Hosseini, Gholamreza Vossoughi, "Development of a virtual based haptic system for endoscopic sinus surgery training: a validation study", *The International Journal of Medical Robotics and Computer Assisted Surgery*, 2019 Vol. 15, Num. 16, Page e2039, 2019, September
- 5 Soroush Sadeghnejad, Farzam Farahmand, Gholamreza Vossoughi, Hamed Moradi, S.Mousa Sadr Hosseini, "Phenomenological Tissue Fracture Modelling for Endoscopic Sinus and Skull Base Surgery Training System Based on Experimental Data", *Medical Engineering & Physics*, 2019 Vol. 68, Num. , Page 85, 2019, June
- 6 Soroush Sadeghnejad, Yousef Taraz Jamshidi, Reza Mirzaeifar, Mojtaba Sadighi, " Modeling, characterization and parametric identification of low velocity impact behavior of time-dependent hyper-viscoelastic sandwich panels", *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, 2017 Vol. 233, Num. 4, Page , 2017, April
- 7 Soroush Sadeghnejad, Mojtaba Sadighi, Abdolreza Ohadi, "Numerical and Experimental Investigations of Sandwich Plates with Viscoelastic Core under Low-Velocity Impact", *Iranian Journal of Polymer Science and Technology (JPST)*, 2016 Vol. 29, Num. 1, Page 55, 2016, May
- 8 Hamed Navabi, Soroush Sadeghnejad, Jacky Baltes, Sepehr Ramezani, "Position control of the Single Spherical Wheel Mobile Robot by Using the Fuzzy Sliding Mode Controller (FSMC)", *Advances in Fuzzy Systems*, 2016 Vol. 2017, Num. 1, Page 1, 2016,
- 9 Hamid Shahsavari, Soroush Sadeghnejad, Mojtaba Sadighi, "Parametric study of specific buckling load of cylindrical grid stiffened composite shells", *Advanced Science Letters*, 2012 Vol. 13, Num. 1, Page , 2012,

Conference Papers

Portal Records

- 1 Youssef Taraz Jamshidi, Soroush Sadeghnejad, Mojtaba Sadighi, "Static and Dynamic Study of Sandwich Panels with Composite Skins and Nomex™ Honeycomb Core ", *The 22nd Annual International Conference on Mechanical Engineering-ISME2014*, April 2014
- 2 Soroush Sadeghnejad, Mojtaba Sadighi, "Theoretical and Experimental Static Behavior of Sandwich Structures with Viscoelastic Core ", *The Bi-Annual International Conference on Experimental Solid Mechanics and Dynamics (X-Mech-2014)*, February 2014




Awards & Honors









#	title	Date
1	Honored Entrance Student for Ph.D. of Mechanical Engineering department of Sharif University of Technology	
2	Honored Entrance Student for MSc of Mechanical Engineering department of Amirkabir University of Technology	
3	Ranked 1th among the B.Sc students of Mechanical Engineering department of Amirkabir University of Technology in my entrance year	
4	10% honored student of Department of Mechanical Engineering in Amirkabir University of Technology	
5	Honored Entrance Student for BSc of Mechanical Engineering department of Amirkabir University of Technology	

Executive Activities

#	Executive Activities Titles	Name of Organization / comment	Starting Date	Termination Date
1	Dean of Amirkabir Kish International Campus	Amirkabir University of Technology (Tehran Polytechnic)	2021	-
2	Head of Biomedical Engineering Innovation Center	Amirkabir University of Technology (Tehran Polytechnic)	2021	-
3	Amirkabir Student Scientific Association Office Manager	Amirkabir University of Technology (Tehran Polytechnic)	2017	-
4	Advisor of Robotic and Mechatronic Student Scientific Association :union:	Ministry of Science, Research and Technology	2016	
5	Head of Sport Robotics ans AI Association	Ministry of Science, Research and Technology	2015	

Taught Courses

#	Course title	Description	Headlines	Date
1	Rehabilitation Principles & Devices	In this course, we will attempt to provide the student with an overview of rehabilitation devices. Rehabilitation has been mostly based on physiology, pathology and analysis of sensory and motor dysfunctions. On the other hand, engineering has an imp		Spring 2022
2	Vibrations	Vibration is the part of the dynamics, which deals with the reciprocating motions of objects. Studying the behavior of objects and systems under vibration and controlling vibrations is one of the important goals of this science		Spring 2022
3	special Topics (Sense of Touch & Haptic Feedback in Medical Robotics)	This course will give students a broad overview of the topic of haptics applied to virtual reality, teleoperation, and physical human-robot interaction. Haptics is the study of touch: touch sensing, perception, cognition, and feedback. Study of the d		Fall 2021

4	Statics and Strength of Materials	Mechanics is the physical science which deals with the effects of forces on objects. This course teaches students how to apply the equilibrium of bodies under action of forces. Strength of materials, also called mechanics of materials, deals with the		Fall 2021
5	Rehabilitation Principles & Devices	In this course, we will attempt to provide the student with an overview of rehabilitation devices. Rehabilitation has been mostly based on physiology, pathology and analysis of sensory and motor dysfunctions. On the other hand, engineering has an imp		Fall 2021
6	Fundamentals of Mechanical Engineering Pre-Request (II)	Dynamics is a course in engineering mechanics which is concerned with the motion of bodies under the action of force. Vibration is a mechanical phenomenon whereby oscillations occur about an equilibrium point. A broad introduction to Newtonian dynami		Spring 2021
7	Fundament of Rehabilitation Inst.	In this course, we will attempt to provide the student with an overview of rehabilitation devices. Rehabilitation has been mostly based on physiology, pathology and analysis of sensory and motor dysfunctions. On the other hand, engineering has an imp		Spring 2021
8	Static & Strength of Mat.	Mechanics is the physical science which deals with the effects of forces on objects. This course teaches students how to apply the equilibrium of bodies under action of forces. Strength of materials, also called mechanics of materials, deals with the		Spring 2021
9	Dynamics	Dynamics is a course in engineering mechanics which is concerned with the motion of bodies under the action of forces. It will also help you interpret the movement of all moving objects we encounter in our daily lives. We will cover kinematics and ki		Spring 2021
10	Dynamics	Dynamics is a course in engineering mechanics which is concerned with the motion of bodies under the action of forces. It will also help you interpret the movement of all moving objects we encounter in our daily lives. We will cover kinematics and ki		Spring 2021
11	Special Topics (Robotic Surgery)	The course presents an overview of the field of medical and surgery robotics. For this purpose, a short review on the history of the field is presented and the development of different paradigms of the medical and surgery robotic is discussed. The		Spring 2021