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h-index (Scopus):

10

Citations (Scopus):

306

Supervised MSc Theses

#	Thesis title	By	Date
1	Design, production, and evaluation of a high-speed tensile test instrument for measuring mechanical properties of soft tissues	Haniyeh Altafi & Seyyed Ataollah Hashemi	September 2021
2	load adaptive remodelling induced by orthodontic forces	Ghazal Sadat Mousavi Baghi & Seyyed Ataollah Hashemi	September 2021
3	biomechanical analysis of the effect of impact on the human mandible equipped with pad	Hosna Olfati & Seyyed Ataollah Hashemi	June 2021
4	Biomechanical analysis of impact to the human mandible using the finite element method	Yasaman Sedghi & Seyyed Ataollah Hashemi	June 2021
5	Modeling fixation of proximal humerus fracture by screw and plate in ORIF surgery	Sayyed Mohammadreza Abbasi Komleh & Seyyed Ataollah Hashemi	February 2020
6	Voxel based Finite Element Analysis of Metacarpophalangeal Joint Pyrocarbon Implants	Fatemeh Khorami & Seyyed Ataollah Hashemi	June 2019
7	Fracture toughness evaluation of sheep intervertebral disc and analysis of crack length and location	Pouya Sabouri & Seyyed Ataollah Hashemi	February 2019
8	The Application of Modal Analysis Method To Determine Dental Implant Fixation	Nima Alimoradi & Seyyed Ataollah Hashemi	February 2019
9	fracture toughness evaluation of meniscus	Ahmad Babazadeh & Seyyed Ataollah Hashemi	February 2019

10	Development Of A Gravid Uterus Model For The Study At High Speed Impacts	Anis Rasekh & Seyyed Ataollah Hashemi	February 2019
11	Determination of the Mechanical Properties of Bovine Periodontal Ligament	Mohammad Najafi Doust & Seyyed Ataollah Hashemi	October 2018
12	Thermal,mechanical,and FIXation stability analysis of cemented dental implants using FEA	Fatima Wayzani & Seyyed Ataollah Hashemi	October 2018
13	Biomechanical Analysis of impact to the lumbar motion segment	Saeid Kamal & Seyyed Ataollah Hashemi	February 2018
14	Biomechanical analysis of human impact to the mandible using the finite element method	Sajjad Rigi Ladez & Seyyed Ataollah Hashemi	February 2018
15	Pull out Strength of Dental Implant	Aysan Jamshidian & Seyyed Ataollah Hashemi	February 2018
16	Design & Manufacturing of a Knee Simulator to Perform Wear Test	Behzad Eydiyoon & Seyyed Ataollah Hashemi	February 2018
17	finite element analysis of the role of periodontal ligament on tooth movement	Parinaz Shokrani & Seyyed Ataollah Hashemi	October 2017
18	measuring tensile properties of soft biological tissues at high strain rate	Marjan Asghari & Seyyed Ataollah Hashemi	February 2017
19	Nonlinear vibrations of biomembrane	Leila Noori Tajraghi & Seyyed Ataollah Hashemi	January 2017
20	Synthesis, Mechanical and Biological Study of Bioactive Glass (45S5 and 58S)/Polycaprolactone Scaffolds for Bon Applications	Alireza Shahin Shamsabadi & Seyyed Ataollah Hashemi	October 2016
21	Designing a Multipurpose Bodybuilding Set for Home Application	Amir Vardy & Seyyed Ataollah Hashemi	July 2016
22	Thermal stress analysis of restored teeth by post-core method using finite element numerical method	Mina Karimi & Seyyed Ataollah Hashemi	February 2016
23	Thermal stress analysis of dental implants by using finite element modelling	Somayye Rabbani Arshad & Seyyed Ataollah Hashemi	October 2015
24	design and numerical modeling a disposable rotary handpiece for using in dentistry	Tohid Malekian Mallaghasem & Seyyed Ataollah Hashemi	February 2015
25	Design and Numerical Analysis and of a Microdrop generation system for bio printing of skin cells application	Hassan Abedini & Seyyed Ataollah Hashemi	February 2015
26	Analysis and design of sternal fixation system	Reza Yousofi & Seyyed Ataollah Hashemi	February 2015
27	Design and fabrication of cell adhesion measuring device	Saeed Salehipour & Seyyed Ataollah Hashemi	February 2015
28	an experimental study to measure the effect of thermal cycle on mechanical properties of tooth	Omid Sadeghiazari & Seyyed Ataollah Hashemi	December 2014
29	Extracting a non-linear model to describe the mechanical properties of soft tissue using experimental data	Seyed Behrooz Meshkat & Seyyed Ataollah Hashemi	September 2014
30	An experimental study to measure mechanical properties of chorioamniotic membrane"	Arash Dadkhah & Seyyed Ataollah Hashemi	September 2014
31	Design and Fabrication of Solid Coated Microneedles for Transdermal Drug Delivery	Payam Panahi & Seyyed Ataollah Hashemi	September 2014

32	Studying the effect of adding antibiotics on the mechanical properties of bone cement	Maryam Kalantari & Seyyed Ataollah Hashemi	September 2014
33	Modeling and Analysis of the Surface Roughness and Geometry on The Cell using FEM	Samaneh Ganjei & Seyyed Ataollah Hashemi	July 2014
34	an experimental study to measure measure mechanical properties of chorioamniotic sac	Ayda Memar & Seyyed Ataollah Hashemi	March 2014
35	Design & manufacture of measurement system of mechanical properties of nervous cell	Farzaneh Allahverdi & Seyyed Ataollah Hashemi	February 2014
36	Design of a Biological Chip for Diagnostic of Ion Blood Density for Precaution or Warning of Sports Injuries	Mahnaz Seddigh & Seyyed Ataollah Hashemi	January 2014
37	Developement of a FEM to predict cellular adhesion force	Negin Ebrahimi & Seyyed Ataollah Hashemi	January 2014
38	Finite Element Modeling of Needle Free Jet Injection	Nima Sarrafzadeh Ghadimi & Seyyed Ataollah Hashemi	January 2014
39	Design and Analysis of an Biosensor for Measuring the Blood Viscosity	Atefeh Hafezizadeh Manshadi & Seyyed Ataollah Hashemi	October 2013
40	Design and fabricate a centrifugal microfluidics system for seperation of blood components and evaluation of effective parameters in plasma purity	Arezou Hosseinzadeh Rostamroudi & Seyyed Ataollah Hashemi	October 2013
41	Design, analysis nad fabrication of a MEMS platform for the study of cell mechanics	Ali Mehdizadeh Rahimi & Seyyed Ataollah Hashemi	July 2012
42	A probe into the methods of testing multi-sports surfaces adopted by international standards and manufacturing design of some test equipment	Sayed Alireza Tabatabaie Panah & Seyyed Ataollah Hashemi	October 2011

Journal Papers

Portal Records

- 1 Mohammad Javad Ein-Afshar, Seyyed Ataollah Hashemi, "New biomechanical approach for evaluation of spinal pedicle screw fixation stability", JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING, June 2021 Vol. ?, Num. 0, Page 1-9, June 2021,
- 2 Mohammad Javad Ein-Afshar, Seyyed Ataollah Hashemi, Harry Van Lenthe, "Homogenized finite element models can accurately predict screw pull-out in continuum materials, but not in porous materials", COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, April 2021 Vol. 202, Num. 105966, Page 59-66, April 2021,
- 3 Saeid Kamal, Seyyed Ataollah Hashemi, "Design and Fabrication of a Drop Tower Testing Apparatus to Investigate the Impact Behavior of Spinal Motion Segments", Archives of Bone and Joint Surgery, November 2020 Vol. 8, Num. 6, Page 682-688, November 2020,
- 4 Pouya Sabouri, Seyyed Ataollah Hashemi, "Influence of crack length and anatomical location on the fracture toughness of annulus fibrosus", MEDICAL ENGINEERING & PHYSICS, November 2020 Vol. 88, Num. 1, Page 1-8, November 2020,
- 5 Somayye Rabbani Arshad, Seyyed Ataollah Hashemi, JIman Zoljanahi Osku, "DOES PEEK DENTAL IMPLANT HAVE THERMAL ADVANTAGE OVER ZIRCONIA OR TITANIUM IMPLANTS?", JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY, May 2020 Vol. 20, Num. 3, Page 1-10, May 2020,
- 6 Mohammad Najafi Doust, Seyyed Ataollah Hashemi, Iman Z. Oskui, "Dynamic Viscoelastic Behavior of Bovine Periodontal Ligament in Compression,", JOURNAL OF PERIODONTAL RESEARCH, April 2020 Vol. 0, Num. 0, Page 1-9, April 2020,

- 7 Parinaz Shokrani, Seyyed Ataollah Hashemi, Iman Z. Oskui, "Effect of geometric dimensions and material models of the periodontal ligament in orthodontic tooth movement", *ORTHODONTICS & CRANIOFACIAL RESEARCH*, April 2020 Vol. 0, Num. 0, Page 1-9, April 2020,
- 8 Anahita Ahmadi Soufivand, Nabilah Abolfathi, Seyyed Ataollah Hashemi, Sang Jin Lee, "Prediction of mechanical behavior of 3D bioprinted tissue-engineered scaffolds using finite element method (FEM) analysis", *Additive Manufacturing*, March 2020 Vol. 33, Num. 0, Page 1-9, March 2020,
- 9 Anahita Ahmadi Soufivand, Nabilah Abolfathi, Seyyed Ataollah Hashemi, Sang Jin Lee, "The effect of 3D printing on the morphological and mechanical properties of polycaprolactone filament and scaffold", *POLYMERS FOR ADVANCED TECHNOLOGIES*, December 2019 Vol. 31, Num. 5, Page 1038-1046, December 2019,
- 10 Rahim Faturechi, Seyyed Ataollah Hashemi, Nabilah Abolfathi, Atefeh Solouk Mofrad, "Mechanical guidelines on the properties of human healthy arteries in the design and fabrication of vascular grafts: experimental tests and quasi-linear viscoelastic model", *ACTA OF BIOENGINEERING AND BIOMECHANICS*, June 2019 Vol. 21, Num. 3, Page 13-21, June 2019,
- 11 Rahim Faturechi, Seyyed Ataollah Hashemi, Nabilah Abolfathi, Atefeh Solouk Mofrad, Alexander Seifalian, "Fabrications of small diameter compliance bypass conduit using electrospinning of clinical grade polyurethane", *VASCULAR*, May 2019 Vol. 0, Num. 0, Page 1-12, May 2019,
- 12 Alireza Shahin Shamsabadi, Seyyed Ataollah Hashemi, Mohammadreza Tahriri, Farshid Bastami, Majid Salehi, Fatemeh Mashhadi Abbas, "Mechanical, material, and biological study of a PCL/bioactive glass bone scaffold: Importance of viscoelasticity", *MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS*, April 2018 Vol. 90, Num. 1, Page 280-288, April 2018,
- 13 Iman Zoljanahi Oskui, Seyyed Ataollah Hashemi, Hamid Jafarzadeh, Akiko Kato, "Finite element investigation of human maxillary incisor under traumatic loading: static vs dynamic analysis", *COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE*, March 2018 Vol. 155, Num. 0, Page 121-125, March 2018,
- 14 Alireza Shahin Shamsabadi, Seyyed Ataollah Hashemi, Mohammadreza Tahriri, "A Viscoelastic Study of Poly(ϵ -Caprolactone) Microsphere Sintered Bone Tissue Engineering Scaffold", *JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING*, September 2017 Vol. 0, Num. 0, Page 1-11, September 2017,
- 15 Forough Askari Siahooei, Mahdi Shafieian, Atefeh Solouk Mofrad, Seyyed Ataollah Hashemi, "A comparison of the material properties of natural and synthetic vascular walls", *JOURNAL OF THE MECHANICAL BEHAVIOR OF BIOMEDICAL MATERIALS*, March 2017 Vol. 71, Num. 1, Page 209-215, March 2017,
- 16 Iman Zoljanahi Oskui, Seyyed Ataollah Hashemi, Hamid Jafarzadeh, "Biomechanical behavior of bovine periodontal ligament: experimental tests and constitutive model", *JOURNAL OF THE MECHANICAL BEHAVIOR OF BIOMEDICAL MATERIALS*, June 2016 Vol. 62, Num. 0, Page 599-606, June 2016,
- 17 Maryam Kalantari, Seyyed Ataollah Hashemi, "EFFECT OF ANTIBIOTICS AUGMENTATION AND STORAGE CONDITION ON IMPACT RESISTANCE OF ORTHOPEDIC BONE CEMENT", *JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY*, May 2016 Vol. 17, Num. 2, Page 1-16, May 2016,
- 18 Somayye Rabbani Arshad, Iman Zoljanahi Oskui, Seyyed Ataollah Hashemi, "Thermal Analysis of Dental Implants in Mandibular Premolar Region: 3D FEM Study", *JOURNAL OF PROSTHODONTICS-IMPLANT ESTHETIC AND RECONSTRUCTIVE DENTISTRY*, April 2016 Vol. 0, Num. 0, Page 1-6, April 2016,
- 19 Iman Zoljanahi Oskui, Seyyed Ataollah Hashemi, "Dynamic tensile properties of bovine periodontal ligament: A nonlinear viscoelastic model", *JOURNAL OF BIOMECHANICS*, March 2016 Vol. 0, Num. 0, Page 0-0, March 2016,
- 20 Mahsa Jarvand, Seyyed Ataollah Hashemi, "The Effect of Particulate Calcium Phosphate and Crushed Bone Augmentations on Pullout Strength of Pedicle Screws", *Journal of Biomaterials and Tissue Engineering*, January 2015 Vol. 5, Num. 1, Page 45-49, January 2015,
- 21 Rahim Faturechi, Seyyed Ataollah Hashemi, Nasser Fatourae, "Do Mechanical Properties of Human Fetal Membrane Depend on Strain Rate", *JOURNAL OF OBSTETRICS AND GYNAECOLOGY RESEARCH*, January 2015 Vol. 41, Num. 1, Page 84-91, January 2015,
- 22 Seyyed Ataollah Hashemi, Samir Ziada, A. Adili, J. De Beer, "Stem Requirements of Tibial Augmentations in Total Knee Arthroplasty", *EXPERIMENTAL TECHNIQUES*, September 2014 Vol. 38, Num. 5, Page 8-17, September 2014,

- 23 Iman Zoljanahi Oskui, Mohammad N. Ashtiani, Seyyed Ataollah Hashemi, Hamid Jafarzadeh, "Effect of thermal stresses on the mechanism of tooth pain", JOURNAL OF ENDODONTICS, August 2014 Vol. 40, Num. 11, Page 1835-1839, August 2014,
- 24 Goldis Darbemamieh, Seyyed Ataollah Hashemi, Soheila Salah Shour Kordestani, Faramarz Karimian, Siamak Najarian, "A novel haemostatic powder delivery device applicable in minimally invasive surgery A novel haemostatic powder delivery device applicable in minimally invasive surgery", JOURNAL OF MEDICAL ENGINEERING & TECHNOLOGY, January 2014 Vol. 38, Num. 1, Page 32-36, January 2014,
- 25 Iman Zoljanahi Oskui, Mohammed Najafi Ashtiani, Seyyed Ataollah Hashemi, H. Jafarzadeh, "Thermal analysis of the intact mandibular premolar: a finite element analysis", INTERNATIONAL ENDODONTIC JOURNAL, August 2013 Vol. 46, Num. 0, Page 841-846, August 2013,
- 26 Mohammad Shamskolahi, Seyyed Ataollah Hashemi, "The Effects of Evaporation and Convection on Skin Tissue Temperature Distribution", , June 2011 Vol. پنجم, Num. 1, Page 57-66, June 2011,





Conference Papers

Portal Records

- 1 Mohammad Javad Ein-Afshar, Pedram Mozhgani, Mohammad Mojtaba Kazemi Majdabadi, Seyyed Ataollah Hashemi, "Initial stability analysis of spine pedicular screws using modal analysis method ", The Biennial International Conference on Experimental Solid Mechanics, February 2020
- 2 Haniyeh Altafi, Yasaman Sedghi, Seyyed Ataollah Hashemi, "Biomechanical Analysis of the effect of Temperature and Humidity on intervertebral Segments under Impact Io ", The Biennial International Conference on Experimental Solid Mechanics, February 2020
- 3 Mohammad Javad Ein-Afshar, Seyyed Ataollah Hashemi, "NEW METHOD FOR BIO MECHANICAL INVESTIGATION OF ORTHOPEDIC BONE SCREWS WITH MODAL ANALYSIS ", 25th Congress of the European Society of Biomechanics 2019, July 2019
- 4 Zahra Rashed, Seyyed Ataollah Hashemi, Solmaz Skandarion, "The effect of thermal cycling on dental fracture toughness ", 2016 23rd Iranian Conference on Biomedical Engineering and 2016 1st International Iranian Conference on Biomedical Engineering, November 2016
- 5 Shima Tajahmadi, Iman Zoljanahi Oskui, Seyyed Ataollah Hashemi, "Measurement of mechanical properties of ligament ", 23rd Iranian Conference on Biomedical Engineering and 2016 1st International Iranian Conference on Biomedical Engineering (ICBME),, November 2016
- 6 Haleh Imani, Seyyed Ataollah Hashemi, "An experimental Study to Measure the Resonance Frequency of a Submerged Beam in Fluid ", The International Conference on Experimental Solid Mechanics, February 2016
- 7 Somayye Rabbani Arshad, Seyyed Ataollah Hashemi, Iman Zoljanahi Oskui, "Thermal stress analysis of dental implants by using finite element modeling ", 22nd Iranian Conference on Biomedical Engineering, November 2015
- 8 Rahim Faturechi, Seyyed Ataollah Hashemi, Nabilolah Abolfathi, "Design & manufacturing of a novel tensile testing machine to measure mechanical properties of the soft biological tissue ", 21st Iranian Conference on Biomedical Engineering (ICBME 2014), Biomedical Engineering Faculty, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran, Nov 26-28,, November 2014
- 9 Mina Karimi, Seyyed Ataollah Hashemi, Iman Zoljanahi Oskui, "Thermal Analysis of post-core restored tooth ", 21st Iranian Conference on Biomedical Engineering (ICBME 2014), Biomedical Engineering Faculty, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran, Nov 26-28, November 2014
- 10 Vahideh Karbasi, Nabilolah Abolfathi, Seyyed Ataollah Hashemi, Saeid Ahmadiania, "Development Of a Low - Cost Profile Scanner Using DVD Pickup head and CCD image sensor ", st Iranian Conference On Biomedical 21 Engineering (ICBME2014) , Biomedical engineering Faculty , Amirkabir University Of Technology ,(Tehran Polytechnic, November 2014
- 11 Saeed Salehipour, Nabilolah Abolfathi, Seyyed Ataollah Hashemi, "Design and fabrication of cell adhesion measuring device ", 21st Iranian Conference on Biomedical Engineering (ICBME 2014), Biomedical Engineering Faculty, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran, Nov 26-28, November 2014

- 12 Saeed Salehipour, Nabiolah Abolfathi, Seyyed Ataollah Hashemi, "Design and fabrication of cell adhesion measuring device ", st Iranian Conference On Biomedical 21 Engineering (ICBME2014) , Biomedical engineering Faculty , Amirkabir University Of Technology ,(Tehran Polytechnic, November 2014
- 13 Fatemeh Motaghidastanaei, Seyyed Ataollah Hashemi, "Effect of drinking sugar-water in dry sauna: a comparison of skin temperature curves ", اولین کنفرانس ملی علوم مهندسی ، ایده های نو ، موسسه آموزش عالی آیندگان , May 2014
- 14 Ayda Memar, Seyyed Ataollah Hashemi, "Does the Probe Velocity Affect the Mechanical Behavior of Human Chorioamnion in Biaxial Puncture Test ", The Bi-Annual International Conference on Experimental Solid Mechanics, February 2014
- 15 Arezou Hosseinzadeh Rostamroudi, Nabiolah Abolfathi, Seyyed Ataollah Hashemi, "Design & manufacturing of a centrifugal microfluidic system for separation of blood particles ", ICMEMS2014 International conference for microelectro mechanical systems2014, February 2014
- 16 Mahmoud Amirkhani, Nabiolah Abolfathi, Seyyed Ataollah Hashemi, "Manufacturing a low cost valveless micropump using soft lithography for disposable drug delivery system ", ICMEMS2014 International conference for microelectro mechanical systems2014, February 2014
- 17 Mahnaz Seddigh, Nabiolah Abolfathi, Seyyed Ataollah Hashemi, "Developing a new equation for Adsorption Performance of separation micro columns Developing a new equation for Adsorption Performance of separation micro columns ", ICMEMS 2014 INTERNATIONAL CONFERENCE FOR MICRO ELECTRO MECHANICAL SYSTEMS, February 2014
- 18 Nima Sarrafzadeh Ghadimi, Nabiolah Abolfathi, Seyyed Ataollah Hashemi, "Evaluation of putting a set screw for jet pressur control of needle free injection system. ", ICMEMS2014 International conference for microelectro mechanical systems2014, February 2014
- 19 Mahmoud Amirkhani, Nabiolah Abolfathi, Seyyed Ataollah Hashemi, "Three dimensional analysis for a peristaltic micropump using fsi method ", ICMEMS 2014 INTERNATIONAL CONFERENCE FOR MICRO ELECTRO MECHANICAL SYSTEMS, February 2014
- 20 Rahim Faturechi, Seyyed Ataollah Hashemi, Nasser Fatourae, "Measurement of mechanical properties of human chorioamnion ", 21th Annual International Conference on Mechanical Engineering, May 2013

Taught Courses

#	Course title	Description	Headlines	Date
1	Continuum Mechanics	Introduction to theory of continuum mechanics		Fall 2021
2	ORAL BIOMECHANICS	Dental & Mandibular Bio-Mechanics		Spring 2021
3	Vibrations	Theory of Vibration and its application		Spring 2021
4	Continuum Mechanics	Introduction to theory of continuum mechanics		Fall 2020

Inventions/Patents

#	Invention title	Reg. number	Country	contributors	Reg. date	Exp. date
1	Design and fabrication of uniaxial tensile test device to measure mechanical properties of soft tissue	84699			2014/01/1	2034/01/1