



دانشگاه صنعتی امیرکبیر
(پلی تکنیک تهران)

پست الکترونیک:
grouhi@aut.ac.ir

شماره تماس:

(Scopus) h-index

14

ارجاعات (Scopus):

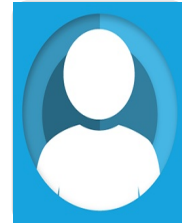
607

غلامرضا روحی

استادیار

دانشکده مهندسی پزشکی

گروه آموزشی بیومکانیک



رساله‌های دکتری

#	عنوان پایان‌نامه	توسط	تاریخ دفاع
1	تحلیل عددی اثر پل دندانی بر الگوی جابجایی ایمپلنت دندانی به شکل دندان طبیعی ساخته شده از کامپوزیت پیک/نانو فلئوئور و هیدروکسی آپاتایت و بررسی آزمایشگاهی رفتار سلولهای بنیادی لیگامان پریو دنتال در مجاورت آن	حسین جوکار و غلامرضا روحی	مهر 1400
2	ارائه معیاری بیو مکانیکی برای بازسازی حفره های ایجاد شده پس از تخلیه تومور سلول غول اسا : تحلیل اجزای محدود و ازمون های تجربی	آزاده قوچانی و غلامرضا روحی	مهر 1398
3	بررسی تاثیر تضعیف یکسویه عضلات بر بهبود انحراف ستون فقرات AIS حین رشد	زینب کمال و غلامرضا روحی	مهر 1398
4	طراحی ،ساخت ، و برآورد عملکرد یک ابزار نوین جهت آناستوموز روده بزرگ در جراحی با حداقل تهاجم	ساناز مسافر خورجستان و غلامرضا روحی	مهر 1395

پایان‌نامه‌های کارشناسی ارشد

#	عنوان پایان‌نامه	توسط	تاریخ دفاع
1	پیش بینی توزیع چگالی ظاهری استخوان در اثر نیل گذاری و پلاک گذاری بعد از ترمیم با استفاده از تئوریهای نوسازی و روش المان محدود	امیرعباس مصلحی و غلامرضا روحی	مهر 1400
2	ساخت و مشخصه یابی داربست نانو کامپوزیتی هیدروکسی آپاتیت و پلی کاپرولاکتون برای نواقص بزرگ استخوانی با استفاده از چاپگر زیستی	فاطمه اسفندیار و غلامرضا روحی	مهر 1400
3	تحلیل المان محدود پایداری اولیه ایمپلنت های دندانی در بارگذاری /بررداری فشاری متناوب با استفاده از تصاویر میکروسیتی	پدرام اخلاقی و غلامرضا روحی	شهریور 1399

- 4 تحلیل و بررسی آزمایشگاهی پایداری اولیه ایمپلنت دندان در بارگذاری-باربرداری فشاری دوره ای با استفاده از تصاویر μ -CT و روش همبستگی حجمی دیجیتال
شهریور 1399 ستاره خورشیدپرست و غلامرضا روحی
- 5 تحلیل و ارزیابی بیومکانیکی تفاوت های موجود در دو روش درمانی کایفوپلاستی و استنتوپلاستی در مهره ی کمری دچار شکستگی فشاری با استفاده از روش اجزای محدود
شهریور 1399 رژیئا ازادکيا و غلامرضا روحی
- 6 بررسی اثرات پارامترهای سوراخکاری روی پایداری ایمپلنتهای دندان
تیر 1398 طاهره میرزایی و غلامرضا روحی
- 7 تحلیل تنش ایجاد شده بر روی مهره های کمری بر اثر نیروهای وارده از جانب ارتزها در ستون فقرات دچار اسکولیوز خفیف با استفاده از مدل المان محدود
بهمین 1397 علیرضا یحیایی باویل و غلامرضا روحی
- 8 ارائه روش نوین برای پیشگیری از انحراف محور در درمان شکستگی های استخوان درشت نی به روش نیل گذاری داخل کانال
بهمین 1397 محمدعلی باقری و غلامرضا روحی
- 9 مقایسه رفتار سیستم فک- ایمپلنت دندان و سیستم فک- دندان طبیعی در برابر ضربه
بهمین 1397 آیدا کریمی دستگردی و غلامرضا روحی
- 10 اثر هندسه ی پیچ مداخله ای بر روی تثبیت گرافت تاندون همسترینگ در بازسازی رباط صلیبی قدامی
بهمین 1395 نازنین دانشورهشجین و غلامرضا روحی
- 11 ارزیابی و بهینه سازی آناستوموز روده بزرگ به روش المان محدود
بهمین 1394 زهرا کنعانی و غلامرضا روحی
- 12 پیش بینی شکست استخوان بازسازی شده با سیمان با استفاده از تصاویر QCT
بهمین 1394 هدی مصلح و غلامرضا روحی
- 13 بررسی بیومکانیکی اثرات مقدار،جهت و نقطه اثر بار ضربه ای بر مندیبل انسان.
شهریور 1394 بهنام اصغری ریگ ابادی و غلامرضا روحی
- 14 تاثیر فیوژن مفصل ساب تالار بر بیومکانیک مچ پا در مفصل مصنوعی
شهریور 1394 یوسف تقی زاده قلعه جوق و غلامرضا روحی
- 15 تحلیل عملکرد سیستم استخوان - کاشتنی در ناحیه انتهایی استخوان درشت نی به دو روش تثبیت نیل داخل کانالی و پلاک کم تهاجم ، با استفاده از روش اجزاء محدود
بهمین 1393 جلیل نوری سا و غلامرضا روحی
- 16 بررسی مکانیکی و بیو مکانیکی میل استخوان در یک استخوان دراز و جایگزینی یک میل استخوان جدید
بهمین 1393 نیما رادین مجد و غلامرضا روحی
- 17 استخراج خواص مکانیکی پوشش آبرکاری الکتریکی شده هایدروکسی آپاتایت - سیلیکا بر روی الیاز منیزیم برای استفاده در ایمپانتهای استخوان
بهمین 1393 یاسمن محرر و غلامرضا روحی
- 18 به کارگیری بیومکانیک استخوان و مکانیزم سوراخ کاری استخوان برای بهبود فرآیند سوراخ کاری استخوان متراکم
دی 1393 محمدجواد عین افشار و غلامرضا روحی
- 19 .بررسی خواص مکانیکی پوشش های هایدروکسی اپتایت
مهر 1393 فرهاد قدمی و غلامرضا روحی
- 20 ساخت و مشخصه یابی داربست نانو ساختار کایتوسان pIga به منظور کار برد در مهندسی بافت غضروف
شهریور 1393 صادق صابری و غلامرضا روحی
- 21 شبیه سازی تغییر مکان دندان با استفاده از تئوری بازسازی استخوان و روش المان محدود
تیر 1393 اذین ضرغام و غلامرضا روحی
- 22 تست درون تنی و ارزیابی مکانیکی ایمپلنت های تیتانیومی با پوشش کامپوزیتی هایدروکسی آپاتیت/تیتانیوم
تیر 1393 محسن امانی همدانی و غلامرضا روحی
- 23 کاربرد لیزر و تاثیر آن در برهم کنش بیومتریال - استخوان
بهمین 1392 پویا عبدی و غلامرضا روحی
- 24 تأثیر قدرت عضله گاستروکنمیوس بر بیومکانیک مفصل مچ پا در حالت فیوژن مفاصل سابتالار
دی 1392 شیما حجازی و غلامرضا روحی
- 25 تشخیص زمان شکست پاتولوژیک استخوان بر اثر متاستاز استخوان
دی 1392 فاطمه جزینی زاده و غلامرضا روحی

26	تأثیر ارتعاشات مکانیکی بر تمایز سلول های بنیادی مزانشیمی به سلول های کندروسیت	عطیه سادات صفوی و مهر غلامرضا روحی 1392
27	روشهای مختلف تثبیت شکستگی گردن استخوان ران و اثر آنها بر فرآیند التیام استخوان	شبنم مصصامی و بهمن غلامرضا روحی 1391
28	تأثیر ثابت نمودن مفصل ساب تالار بر بیومکانیک مفصل مچ پا در اثر صدمات ورزشی	احمد چیت سازان و بهمن غلامرضا روحی 1390
29	تحلیل فیکساتور خارجی TSF برای کاربردهای ترمیمی و اصلاحی استخوان های اندام تحتانی	محمد نجفی اشتیانی و مهر غلامرضا روحی 1390
30	مدلسازی بیومکانیکی اثرات ارتعاشات کم دامنه و پربسامد بر فرآیند انتقال مکانیکی سلولهای OSTEOCYTE	سید امیر هوشیاراحمدی شهریور و غلامرضا روحی 1388

مقالات ژورنال

داده های ثبت شده در پورتال

- 1 Yousof Mohandes, Masoud Tahani, Gholamreza Rouhi, "Osteosynthesis of diaphyseal tibia fracture with locking compression plates: A numerical investigation using Taguchi and ANOVA", *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN BIOMEDICAL ENGINEERING*, Vol. 37, Num. 9, Page 1-17, September 2021,
- 2 Hossein Jokar, Gholamreza Rouhi, Nabilah Abolfathi, "THE ROLE OF PDL-CEMENTUM ENTESIS IN PROTECTING PDL UNDER MASTICATORY LOADING: A FINITE ELEMENT INVESTIGATION", *JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY*, Vol. 21, Num. 215004, Page 1-15, August 2021,
- 3 Tahereh Mirzaie, Gholamreza Rouhi, Mohammad Mehdi Dehghan, Saeed Farzad-Mohajeri, Hamidreza Barikani, "Dental implants' stability dependence on rotational speed and feed-rate of drilling: In-vivo and ex-vivo investigations", *JOURNAL OF BIOMECHANICS*, Vol. 127, Num. 110696, Page 1-7, August 2021,
- 4 Pedram Akhlaghi, Setareh Khorshidparast, Gholamreza Rouhi, Hamidreza Barikani, "Investigation on primary stability of dental implants during compressive cyclic loading-unloading using μ CT imaging, and digital volume correlation (DVC) method", *Iranian Journal of Biomedical Engineering*, Vol. 15, Num. 2, Page 141-150, July 2021,
- 5 Yousef Taghizadeh, Ahmad Chitsazan, Saeid Pezeshki, Hadi Taghizadeh, Gholamreza Rouhi, "Total ankle replacement along with subtalar joint arthrodesis: In-vitro and in-silico biomechanical investigations", *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN BIOMEDICAL ENGINEERING*, Vol. 37, Num. 7, Page 1-11, July 2021,
- 6 Nazanin Daneshvarhashjin, Mahmoud Chizari, Javad Mortazavi, Gholamreza Rouhi, "Can the body slope of interference screw affect initial stability of reconstructed anterior cruciate ligament?: An in-vitro investigation", *BMC MUSCULOSKELETAL DISORDERS*, Vol. 22, Num. 556, Page 1-11, June 2021,
- 7 Yousof Mohandes, Masoud Tahani, Gholamreza Rouhi, Mohammad Tahami, "A mechanobiological approach to find the optimal thickness for the locking compression plate: Finite element investigations", *PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART H-JOURNAL OF ENGINEERING IN MEDICINE*, Vol. 235, Num. 4, Page 408-418, January 2021,
- 8 Azadeh Ghouchani, Gholamreza Rouhi, Mohammad Hosein Ebrahimzadeh, "Post-operative fracture risk assessment following tumor curettage in the distal femur: a hybrid in vitro and in silico biomechanical approach", *Scientific Reports*, Vol. 10, Num. 21319, Page 1-13, December 2020,
- 9 Zeinab Kamal, Gholamreza Rouhi, "Stress distribution changes in growth plates of a trunk with adolescent idiopathic scoliosis following unilateral muscle paralysis: A hybrid musculoskeletal and finite element model", *JOURNAL OF BIOMECHANICS*, Vol. 111, Num. 109997, Page 0-0, October 2020,
- 10 Amin Baseri, Mohammad Ali Bagheri, Gholamreza Rouhi, Mohammad Reza Aghighi, Nima Bagheri, "Fixation of distal tibia fracture through plating, nailing, and nailing with Poller screws: A comparative biomechanical-based experimental and numerical investigation", *PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART H-JOURNAL OF ENGINEERING IN MEDICINE*, Vol. 234, Num. 10, Page 1129-1138, July 2020,

- 11 Hossein Jokar, Gholamreza Rouhi, Nabilah Abolfathi, "The Effects of Splinting on the Initial Stability and Displacement Pattern of Periodontio-Integrated Dental Implants: A Finite Element Investigation", *JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING*, Vol. 40, Num. 1, Page 719-726, June 2020,
- 12 Ayda Karimi Dastgerdi, Gholamreza Rouhi, Mohammad Mehdi Dehghan, Saeed Farzad-Mohajeri, Hamid Reza Barikani, "Linear Momenta Transferred to the Dental Implant-Bone and Natural Tooth—PDL-Bone Constructs Under Impact Loading: A Comparative in-vitro and in-silico Study", *Frontiers in Bioengineering and Biotechnology*, Vol. 8, Num. 544, Page 0-0, June 2020,
- 13 Gholamreza Rouhi, Mohammad Ali Bagheri, "Design and numerical investigation of an adaptive intramedullary nail with a novel interlocking mechanism", *Journal of Computational Design and Engineering*, Vol. 7, Num. 6, Page 722-735, June 2020,
- 14 Hoda Mosleh, Gholamreza Rouhi, Azadeh Ghouchani, Nima Bagheri, "Prediction of fracture risk of a distal femur reconstructed with bone cement: QCSRA, FEA, and in-vitro cadaver tests", *Physical and Engineering Sciences in Medicine*, Vol. 43, Num. 1, Page 269-277, February 2020,
- 15 Shabnam Samsami, Peter Augat, Gholamreza Rouhi, "Stability of femoral neck fracture fixation: A finite element analysis", *PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART H-JOURNAL OF ENGINEERING IN MEDICINE*, Vol. 233, Num. 9, Page 892-900, September 2019,
- 16 Zahra Kanani, Gholamreza Rouhi, Sanaz Mosafer Koorjestaan, "Investigating the effects of various suturing parameters on the leakage from the intestinal anastomosis site: finite element analyses", *BIOCYBERNETICS AND BIOMEDICAL ENGINEERING*, Vol. 39, Num. 4, Page 983-991, September 2019,
- 17 Azadeh Ghouchani, Gholamreza Rouhi, M H Ebrahimzadeh, "Investigation on distal femoral strength and reconstruction failure following curettage and cementation: In-vitro tests with finite element analyses", *COMPUTERS IN BIOLOGY AND MEDICINE*, Vol. 112, Num. 1, Page 1-8, September 2019,
- 18 Gholamreza Rouhi, Zeinab Kamal, "Significance of spine stability criteria on trunk muscle forces following unilateral muscle weakening: A comparison between kinematics-driven and stability-based kinematics-driven musculoskeletal models", *MEDICAL ENGINEERING & PHYSICS*, Vol. 73, Num. 1, Page 51-63, August 2019,
- 19 Jalil Nourisa, Gholamreza Rouhi, "PREDICTION OF THE TREND OF BONE FRACTURE HEALING BASED ON THE RESULTS OF THE EARLY STAGES SIMULATIONS: A FINITE ELEMENT STUDY", *JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY*, Vol. 19, Num. 5, Page 195-210, July 2019,
- 20 Atiyeh Sadat Safavi, Gholamreza Rouhi, Nooshin Haghighipour, Fatemeh Bagheri, Mohamadreza Baghaban Eslaminejad4, Frough Azam Sayahpour, "Efficacy of mechanical vibration in regulating mesenchymal stem cells gene expression", *IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY-ANIMAL*, Vol. 55, Num. 5, Page 387-394, April 2019,
- 21 Zeinab Kamal, Gholamreza Rouhi, Navid Arjmand, Samer Adeeb, "A stability-based model of a growing spine with adolescent idiopathic scoliosis: A combination of musculoskeletal and finite element approaches", *MEDICAL ENGINEERING & PHYSICS*, Vol. 64, Num. 1, Page 46-55, December 2018,
- 22 Farhad Ghadami, Saeed Saber Samandari, Gholamreza Rouhi, Mohsen Amani Hamedani, Mohammad Mehdi Dehghan, Saeed Mohajeri, Fatemeh Mashhadi Abbas, Hossein Gholami, "The effects of bone implants' coating mechanical properties on osseointegration: In vivo, in vitro, and histological investigations", *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A*, Vol. 106, Num. 10, Page 2679-2691, November 2018,
- 23 Sanaz Mosafer, Gholamreza Rouhi, "An Automatic Suturing Machine for Intestinal Anastomosis: Advantages Compared With Hand-Suturing Technique", *SURGICAL INNOVATION*, Vol. 26, Num. 2, Page 209-218, October 2018,
- 24 Azadeh Ghouchani, Gholamreza Rouhi, Mohammad Hossein Ebrahimzadeh, "Prediction of Distal Femoral Mechanical Strength Following Tumor Curettage and Cementation Using Quantitative Computed Tomography-based Finite Element Method", *Iranian Journal Of Orthopaedic Surgery*, Vol. 16, Num. 3, Page 288-296, July 2018,
- 25 Azadeh Ghouchani, Mohammad Hossein Ebrahimzadeh, Gholamreza Rouhi, "The Most Appropriate Reconstruction Method Following Giant Cell Tumor Curettage: A Biomechanical Approach", *Archives of Bone and Joint Surgery*, Vol. 6, Num. 2, Page 85-89, March 2018,
- 26 Ahmad Chitsazan, Walter Herzog, Gholamreza Rouhi, Mostafa Abbasi, "Alteration of Strain Distribution in Distal Tibia After Triple Arthrodesis: Experimental and Finite Element Investigations", *JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING*, Vol. 38, Num. 3, Page 469-481, October 2017,

- 27 Azadeh Ghouchani, Gholamreza Rouhi, "The Great Need of a Biomechanical-Based Approach for Surgical Methods of Giant Cell Tumor: A Critical Review", *JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING*, Vol. 37, Num. 1, Page 454-467, June 2017,
- 28 Azin Zargham, Allahyar Geramy, Gholamreza Rouhi, "Evaluation of long-term orthodontic tooth movement considering bone remodeling process and in the presence of alveolar bone loss using finite element method", *Orthodontic Waves*, Vol. 75, Num. 4, Page 85-96, September 2016,
- 29 Shabnam Samsami, Sadegh Saberi, Nima Bagheri, Gholamreza Rouhi, "Interfragmentary motion assessment for three different fixation techniques of femoral neck fractures in young adults", *BIO-MEDICAL MATERIALS AND ENGINEERING*, Vol. 27, Num. 4, Page 389-404, September 2016,
- 30 Mahdi Rajaei Jafarabadi, Gholamreza Rouhi, Gholamreza Kaka, Sh Sadraie, Javad Arum, "The effects of photobiomodulation and low-amplitude high-frequency vibration on bone healing process: a comparative study", *LASERS IN MEDICAL SCIENCE*, Vol. 31, Num. 9, Page 1827-1836, August 2016,
- 31 Shima Hejazi, Gholamreza Rouhi, J. Rasmussen, "The effects of gastrocnemius-soleus muscle forces on ankle biomechanics during triple arthrodesis", *COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING*, Vol. 20, Num. 2, Page 130-141, July 2016,
- 32 Gholamreza Rouhi, Ali Vahdati, Xianjie Li, Les Jozef Sudak, "An Investigation into the Effects of Osteocytes Density and Mechanosensitivity on Trabecular Bone Loss in Aging and Osteoporotic Individuals", *Biomedical Engineering Letters*, Vol. 5, Num. 1, Page 302-310, January 2016,
- 33 Dooman Akbarian, Gholamreza Rouhi, Seyyed Mohammad Mousavi, Walter Herzog, "Biomechanics of cervical spine following implantation of a semi-constrained mobile core artificial disc: a finite element investigation", *JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY*, Vol. 15, Num. 5, Page 1-13, January 2016,
- 34 Zeinab Kamal, Gholamreza Rouhi, "A PARAMETRIC INVESTIGATION OF THE EFFECTS OF CERVICAL DISC PROSTHESES WITH UPWARD AND DOWNWARD NUCLEI ON SPINE BIOMECHANICS", *JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY*, Vol. 16, Num. 2, Page 1-15, November 2015,
- 35 Jalil Nurisa, Gholamreza Rouhi, "Biomechanical evaluation of intramedullary nail and bone plate for the fixation of distal metaphyseal fractures", *JOURNAL OF THE MECHANICAL BEHAVIOR OF BIOMEDICAL MATERIALS*, Vol. 56, Num. 0, Page 34-44, November 2015,
- 36 Shabnam Samsami, Sadegh Saberi, Sanambar Sadighi, Gholamreza Rouhi, "Comparison of Three Fixation Methods for Femoral Neck Fracture in Young Adults: Experimental and Numerical Investigations", *JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING*, Vol. 35, Num. 5, Page 566-579, October 2015,
- 37 Sanaz Mosafer, Gholamreza Rouhi, Karamoalah Toolabi, "EXPERIMENTAL INVESTIGATIONS ON INTESTINAL ANASTOMOSIS: A COMPARISON BETWEEN AUTOMATIC AND HAND SUTURING TECHNIQUES", *JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY*, Vol. 16, Num. 2, Page 1-13, October 2015,
- 38 Jalil Nurisa, Amin Baseri, Leszek Sudak, Gholamreza Rouhi, "The effects of bone screw configurations on the interfragmentary motion in a long bone fixed by a limited contact locking compression plate", *Journal of Biomedical Science and Engineering-OPEN*, Vol. 8, Num. 9, Page 590-600, September 2015,
- 39 Gholamreza Rouhi, Masoud Tahani, Behnoud Haghghi, Walter Herzog, "Prediction of stress shielding around orthopaedic screws: a time dependent bone remodeling analysis using finite element approach", *JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING*, Vol. 35, Num. 4, Page 545-555, August 2015,
- 40 Ahmad Chitsazan, Gholamreza Rouhi, Mostafa Abbasi, Saeed Pezeshki, Seyyed Amir Hossein Tavakkoli, "Assessment of stress distribution in ankle joint: simultaneous application of experimental and finite element methods", *International Journal of Experimental and Computational Biomechanics*, Vol. 3, Num. 1, Page 45-61, February 2015,
- 41 Gholamreza Rouhi, Ali Vahdati, Xianjie Li, Leszek Sudak, "A Three-dimensional Computer Model to Simulate Spongy Bone Remodeling under Overload Using a Semi-mechanistic Bone Remodeling Theory", *JOURNAL OF MECHANICS IN MEDICINE AND BIOLOGY*, Vol. 15, Num. 4, Page 1-18, September 2014,
- 42 Mokhtar Arazpour, Ahmad Chitsazan, Monireh Ahmadi Bani, Gholamreza Rouhi, Farhad Tabatabae Ghomshe, Stephen W Hutchins, "The effect of a knee ankle foot orthosis incorporating an active knee mechanism on gait of a person with poliomyelitis", *PROSTHETICS AND ORTHOTICS INTERNATIONAL*, Vol. 37, Num. 5, Page 411-414, April 2014,

- 43 Nicholas Ali, Michael Skipper Andersen, John Rasmusse, Gordon Robertson, Gholamreza Rouhi, "The application of musculoskeletal modeling to investigate gender bias in non-contact ACL injury rate during single-leg landings", *COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING*, Vol. 17, Num. 14, Page 1602-1616, March 2014,
- 44 Ryan Lewinson, Gholamreza Rouhi, Gordon Robertson, "Influence of snow shovel shaft configuration on lumbosacral biomechanics during a load-lifting task", *APPLIED ERGONOMICS*, Vol. 45, Num. 2, Page 234-238, March 2014,
- 45 Nicholas Ali, Gordon Robertson, Gholamreza Rouhi, "Sagittal plane body kinematics and kinetics during single-leg landing from increasing vertical heights and horizontal distances: Implications for risk of non-contact ACL injury", *KNEE*, Vol. 0, Num. 0, Page 38-46, September 2013,
- 46 Kristina Haase, Gholamreza Rouhi, "Prediction of stress shielding around an orthopedic screw: Using stress and strain energy density as mechanical stimuli", *COMPUTERS IN BIOLOGY AND MEDICINE*, Vol. 43, Num. 11, Page 1748-1757, August 2013,
- 47 Fateme Ezzodini Ardekani, Alireza Navabazm, Farhad Fatehi, Mohammad Danesh Ardakani, Somaiyyeh Khadem, Gholamreza Rouhi, "Histologic evaluation of chitosan as an accelerator of bone regeneration in microdrilled rat tibias", *Dental research Journal*, Vol. 9, Num. 6, Page 694-699, December 2012,
- 48 K. C. Geoffrey Ng, Gholamreza Rouhi, Mario Lamontagne, Paul E. Beaulé, "Finite Element Analysis Examining the Effects of Cam FAI on Hip Joint Mechanical Loading Using Subject-Specific Geometries During Standing and Maximum Squat", *The Musculoskeletal Journal of Special Surgery*, Vol. 8, Num. 3, Page 206-212, September 2012,
- 49 Nicholas Ali, Gholamreza Rouhi, G.R Robertson, "APPROACHES TO NON-CONTACT ANTERIOR CRUCIATE LIGAMENT INJURY STUDIES: UTILITY OF OPERATIONS RESEARCH AND ARTIFICIAL INTELLIGENCE", *TRANSACTIONS OF THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING*, Vol. 35, Num. 2, Page 145-159, October 2011,
- 50 Gholamreza Rouhi, "A tri-phasic mixture model of bone resorption: Theoretical investigations", *JOURNAL OF THE MECHANICAL BEHAVIOR OF BIOMEDICAL MATERIALS*, Vol. 4, Num. 0, Page 1947-1954, September 2011,
- 51 Nima Jamilpour, Abdolhossein Fereidoon, Gholamreza Rouhi, "The effects of replacing collagen fibers with carbon nanotubes (CNTs) on the rate of bone remodeling process", *JOURNAL OF BIOMEDICAL NANOTECHNOLOGY*, Vol. 7, Num. 4, Page 542-548, June 2011,
- 52 Kaveh Pourakbar Saffar, Ahmadreza Arshi, Nima Jamilpour, Ahmad Raeisi Najafi, Gholamreza Rouhi, Les Sudak, "A crosslinking model for estimating Young's modulus of artificial bone tissue grown on a carbon nanotube scaffold", *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A*, Vol. 94, Num. 2, Page 594-602, August 2010,
- 53 Kristina Haase, Gholamreza Rouhi, "A discussion on plating factors that affect stress shielding using finite element analysis", *Journal of Biomechanical Science and Engineering*, Vol. 5, Num. 2, Page 129-141, July 2010,
- 54 Nicholas Ali, Gholamreza Rouhi, "Barriers to Predicting the Mechanisms and Risk Factors of Non-Contact Anterior Cruciate Ligament Injury", *The Open Biomedical Engineering Journal*, Vol. 4, Num. 0, Page 178-189, April 2010,
- 55 Hamed Pishdast, Farzam Farahmand, Gholamreza Rouhi, "Using a truss-inspired model in combination with the uniform strength optimization theory to predict spongy bone geometry in proximal femur", *American Journal of Applied Sciences*, Vol. 6, Num. 3, Page 449-455, January 2010,
- 56 Ali Vahdati, Gholamreza Rouhi, "A model for mechanical adaptation of trabecular bone incorporating cellular accommodation and effects of microdamage and disuse", *MECHANICS RESEARCH COMMUNICATIONS*, Vol. 36, Num. 3, Page 284-293, November 2009,
- 57 Seyyed Amir Hooshair Ahmadi, Gholamreza Rouhi, Hamid Reza Katoozian, Seyyed Ali Hooshair Ahmadi, "Simultaneous presence of growth and remodeling in the bone adaptation theory", *American Journal of Applied Sciences*, Vol. 6, Num. 1, Page 1816-1824, May 2009,
- 58 Kaveh Pourakbar Saffar, Nima Jamilpour, Ahmad Raeisi Najafi, Gholamreza Rouhi, Ahmadreza Arshi, Abdolhossein Fereidoon, "A finite element model for estimating Young's modulus of carbon nanotube reinforced composite incorporating elastic cross-links", *International Journal of Mechanical and Industrial Engineering (IJMIE)*, Vol. 2, Num. 11, Page 1209-1212, May 2008,
- 59 S. P. Cere, David Redekop, Cere Lormand, Gholamreza Rouhi, "Simulation of the three-dimensional flow in the human larynx", *Canadian Acoustics- Acoustique Canadienne*, Vol. 35, Num. 3, Page 116-117, April 2008,

- 60 Ali Vahdati, Gholamreza Rouhi, Farzan Ghalichi, Masoud Tahani, "Mechanically induced trabecular bone remodeling including cellular accommodation effect: a computer simulation", *TRANSACTIONS OF THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING*, Vol. 32, Num. 3, Page 371-382, February 2008,
- 61 Gholamreza Rouhi, Marcelo Epstein, Les Sudak, Walter Herzog, "Modeling bone resorption using mixture theory with chemical reactions", *JOURNAL OF MECHANICS OF MATERIALS AND STRUCTURES*, Vol. 2, Num. 6, Page 1141-1156, October 2007,
- 62 Gholamreza Rouhi, Marcelo Epsetin, Les Sudak, Walter Herzog, "Free surface density & microdamage in the bone remodeling equation: theoretical considerations", *INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE*, Vol. 44, Num. 7, Page 456-469, November 2006,

مقالات کنفرانس






داده های ثبت شده در پورتال

- 1 Azadeh Ghouchani, Mohammad H Ebrahimzadeh, Gholamreza Rouhi, "Management of tumorous bone defects in distal femur using experimentally validated finite element models ", Orthopaedic Research Society annual meeting (ORS 2019), February 2019
- 2 Nazanin Daneshvarhashjin, Gholamreza Rouhi, Mhmoud Chizari, Sm Javad Mortazavi, "Reducing damage and slippage of graft in anterior cruciate ligament reconstruction by controlling the slope of tapered interference screw ", Orthopaedic Research Society Annual Meeting (ORS 2018),, March 2018
- 3 Nazanin Daneshvar, Gholamreza Rouhi, Mahmoud Chizari, Seyed Mohammad Javad Mortazavi, "Reducing Damage and Slippage of Graft in Anterior Cruciate Ligament Reconstruction by Controlling the Slope of Tapered Interference Screw ", Orthopaedic Research Society Annual Meeting (ORS 2018), March 2018
- 4 Azadeh Ghouchani, Gholamreza Rouhi, Mohammad Hosein Ebrahimzadeh, "A non-invasive patient-specific finite element method for predicting bone fracture risk following giant cell tumor ", 25th annual of Iranian orthopedic association, November 2017
- 5 Hoda Mosleh, Gholamreza Rouhi, Azadeh Ghouchani, Jalil Nurisa, Nima Bagheri, "Prediction Of The Fracture Risk Of Reconstructed Bone With Cement Using QCT Based Structural Rigidity And Finite Element Analysis ", Orthopedic Research Society Annual Meeting (ORS 2017, March 2017
- 6 Mehdi Rajaei Jafarabadi, Gholamreza Kaka, Seyed Hoomayoon Sadraei, Jamshid Arum, Ehsan Sadeghian Dehkord, Amir Hooshyar, Gholamreza Rouhi, "The Anabolic Effects of Low-level Laser Therapy and Low-Amplitude High-Frequency Whole Body Vibration on Bone Healing Process in the Presence of a Metallic Impact ", Orthopedic Research Society annual meeting (ORS 2017), March 2017
- 7 Atiyeh Sadat Safavi, Nooshin Haghhighipour, Fatemeh Bagheri, Mohamadreza Baghaban Eslaminejad, F. A. Sayahpour, Gholamreza Rouhi, "Early effect of mechanical vibration on osteogenic and chondrogenic differentiation of mesenchymal stem cell ", orthopedic research society annual meeting (ORS 2017), March 2017
- 8 Azadeh Ghouchani, Mohammad Hossein Ebrahimzadeh, Gholamreza Rouhi, "Voxel-based finite element model of a reconstructed bone: Simulating a bone tumor surgery ", 3rd Biomedical Engineering and Expo, 3rd international conference on medical physics and biomedical engineering, November 2016
- 9 Farhad Ghadami, Saeed Saber Samandari, Gholamreza Rouhi, Mohsen Amani, Mehdi Dehghan, Farzad Mohajeri, Fatemeh Mashhadi Abbas, "The influence of hydroxyapatite coating techniques on osseointegration: An animal study ", Orthopaedic Research Society 2016, March 2016
- 10 Yasaman Moharrer, Saeed Saber Samandari, Gholamreza Rouhi, "In vitro degradation of HA?silica coated AZ91 magnesium alloy in SBF ", 7th Int Symposium on Biodegradable Metals for Biomedical Applications, Italy, Aug. 23-28, 2015, August 2015
- 11 Yasaman Moharrer, Saeed Saber Samandari, Gholamreza Rouhi, "In vitro corrosion behaviour of MAO and silica coated AZ91 magnesium alloy ", 7th Int Symposium on Biodegradable Metals for Biomedical Applications, Italy, Aug. 23-28, 2015, August 2015

- 12 Jalil Nurisa, Gholamreza Rouhi, Ghadir Shaygan, "Can the octahedral shear strain solely predict tissue differentiation during normal fracture healing? ", International Conference and Expo on Biomechanics & Implant Design July 27-29, 2015 Orlando, USA, July 2015
- 13 Jalil Nurisa, Ghadir Shaygan, Gholamreza Rouhi, "Can we improve shear stability of intramedullary nail for the fixation of distal tibial fractures? ", International Conference and Expo on Biomechanics & Implant Design July 27-29, 2015 Orlando, USA, July 2015
- 14 Atiyeh Sadat Safavi, Gholamreza Rouhi, Nooshin Haghighipour, "A Novel Mechanobioreactor for Regulating Mesenchymal Stem Cell Fate ", International congress on tem cells and regenerative medicine, May 2015
- 15 Dooman Akbarian, Mahmoud Mousavi Mashhadi, Walter Herzog, Gholamreza Rouhi, "Evaluation of Kinematic and Load Transmission due to Implantation of a Cervical Artificial Disc ", Orthopaedic Research Society (ORS 2014) Annual Meeting, March 2015
- 16 Shima Hejazi, John Rasmussen, Gholamreza Rouhi, "Influence Of Gastrocnemius-soleus Muscle Force On Ankle Stress Distribution During Triple Arthrodesis ", Orthopaedic Research Society 2015 (ORS 2015 Annual Meeting, March 2015
- 17 Shabnam Samsami, Sadegh Saberi, Nima Bagheri, Nazanin Daneshvarhashjin, Mohammad Javad Ein Afshar, Gholamreza Rouhi, "Experimental Investigations On Three Fixation Methods (CSs, DHS+DS, And PFLP) Of Femoral Neck Fractures In Young Adults ", Orthopaedic Research Society 2015 (ORS 2015 Annual Meeting, March 2015
- 18 Atiyeh Sadat Safavi, Gholamreza Rouhi, Nooshin Haghighipour, Ahad Emami, "Mechanical vibration as a physical means to influence stem cell fate- promoting bone specific gene expression ", Royan International Twin Congress 10th Congress on Stem Cell Biology and Technology, September 2014
- 19 Ahmad Chitsazan, Gholamreza Rouhi, , Pezeshki Said , , Abbasi Mostafa , Tavakkoli Seyed Amir Hossein, "The Effects of Sub-talar Joints Fusion on Biomechanics of Tibio-talar Joint ", Orthopaedic Research Society 2013 (ORS 2013 Annual Meeting, January 2013
- 20 Gholamreza Rouhi, "Bone Remodeling Theories: Some Modifications on the Existing Theories ", International Conference on Mechanical Engineering and Mechatronics (ICMEM12),. August 2012
- 21 Behnoud Haghighi, Gholamreza Rouhi, Masoud Tahani, "BONE REMODELING ANALYSIS AROUND FUNCTIONALLY GRADED AND FULLY METALLIC ORTHOPAEDIC SCREWS: CONSIDERING DISUSE AND OVERLOADING RESORPTION ", CSB2012, Canadian Society for Biomechanics, June 2012
- 22 Ahmad Chitsazan, Gholamreza Rouhi, Saeed Pekeshki, Mostafa Abbasi, Seyed Amir Hossein Tavakoli, "STRAIN DISTRIBUTION ON TIBIA SURFACE DURING GAIT CYCLE: EXPERIMENTAL INVESTIGATIONS ", CSB2012, Canadian Society for Biomechanics, June 2012
- 23 Nima Jamilpour, Abdolhosein Fereidoon, Gholamreza Rouhi, "Cracks' Behavior in Artificial and Natural Bones: A Comparison from Bone Remodeling Point - of - View ", ICNFA 2011 - 2nd International Conference on Nanotechnology: Fundamentals and Applications, July 2011
- 24 Seyyed Amir Hooshair Ahmedi, Ahmadreza Arshi, Gholamreza Rouhi, Ahmad Raeisi Najafi, Hamid Reza Katoozian, "An Investigation on the effects of low-amplitude, high frequency (LAHF) Mechanical Stimuli on Matrix-Extracellular Fluid-Osteocyte Complex ", 56th Annual Meeting of the Orthopaedic Research Society, March 2010

دروس ارائه شده

#	عنوان درس	توصیف درس	دوره سرفصل ها درسی
1	Engineering Materials (I): Structure & Properties	Getting familiar with basic concepts of material science and engineering	Fall 2021

2	Biomechanics of Bone & Bone Injuries	Introducing basic principles related to hard biological tissues with the final goal of employing what they have learned in practical and useful orthopaedic and dental biomechanics projects in order to increase the quality of life of human beings		Fall 2021
3	Continuum Mechanics	Definition of a continuous media, Math concepts needed in continuum mechanics, Kinematics of continua, Kinetics of Continua, Conservation laws, 1st and 2nd laws of thermodynamics, Constitutive equations, Continuum Mechanics application in Biomec		Spring 2021
4	Introduction to Finite Element Methods in Biomechanics	Introduction to finite element methods and their applications in Biomechanics; Introduction to stiffness method; Development of truss equations; Development of beam equations; Practical considerations in modeling; Development of linear strain triangl		Spring 2021
5	Research Methodology & Technical Writing	The students will get familiar with different research methods, and they will learn how to choose a research subject, how to write down a proposal, and how to present their research results orally and in the written forms.		Spring 2021
6	Introduction to Finite Element Methods in Biomechanics	Introducing finite element methods and their applications in mechnaical engineering and biomechanics		Fall 2020
7	Research Methodology & Technical Writing	The students will get familiar with different research methods, and they will learn how to choose a research subject, how to write down a proposal, and how to present their research results orally and in the written forms.		Fall 2020