



## **Mohammad Taghi Karimi**

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### **PERSONAL**

**Date of Birth:** March, 3, 1977

**Place of Birth:** Abadeh, Fars, Iran

**Citizenship:** Iranian

### **EDUCATION**

#### **University of Weimar Bauhaus, Germany**

PhD candidate of Computational Mechanics (2017-)

Thesis: Design and evaluation of spinal brace for scoliotic subjects based on Finite Element Analysis

#### **University of Strathclyde, Glasgow, UK**

PhD in Bioengineering (2006- July 2010)

Thesis: Design and evaluation a new type of Reciprocal Gait Orthosis for paraplegic walking

**University of Social Welfare and Rehabilitation Sciences, Tehran, Iran**

MSc in orthotics and Prosthetics (1999-2001)

Thesis: Evaluation the performance of the upper limb amputees with various prostheses

**Isfahan University of Medical Sciences, Isfahan, Iran**

BSc in Orthotics and Prosthetics (1995-1999)

Thesis: Low back pain orthoses

**Gust Scientist of:**

Lyon University, France (2019)

Darmstadt University of Technology, Germany (2018)

Heidelberg Hospital University, Germany (2016)

Eastern Finland University, Finland (2015)

KTH University, Sweden (2014)

UTM University, Malaysia (2013)

Malaya University, Malaysia (2013)

**Academic appointments**

**July 2019 to Now**

Full Professor of Rehabilitation Faculty of Shiraz University of Medical Sciences, Shiraz Iran.

**September 2016 to June 2019:**

Associate Professor of Rehabilitation Faculty of Shiraz University of Medical Sciences, Shiraz Iran.

**October 2014 to September 2016**

Associate professor of Department of Orthotics and Prosthetics, Faculty of Rehabilitation, Isfahan University of Medical Sciences, Isfahan, Iran

**September 2013 to September 2016**

Visiting Fellow, Metropolitan Manchester University, Manchester, UK

**September 2010 to 214**

Assistant professor of Department of Orthotics and Prosthetics, Faculty of Rehabilitation, Isfahan University of Medical Sciences, Isfahan, Iran

**September 2006 to June 2010**

Research student of Bioengineering Unit, University of Strathclyde, Glasgow, UK

**October 2001 to March 2006**

Lecturer of Department of Orthotics and Prosthetics, Faculty of Rehabilitation, Isfahan University of Medical Sciences, Isfahan, Iran

## **Work History**

Associate Dean of Research of Rehabilitation Faculty of Shiraz University of Medical Sciences (2019-continued)

Editor in Chief of Journal of Research in Rehabilitation Sciences, Scopus indexed (2017-continued)

Secretary of Ethical Committee of Research of Shiraz University of Medical Sciences (2018-continued)

Head of Orthotics and prosthetics Department of Rehabilitation Faculty of Isfahan University of Medical Sciences (2013-2015)

Member of Technology and Research in Medical sciences committee of Shiraz University of Medical Sciences (2019-continued)

Member of publication committee of Shiraz University of Medical sciences (2019-continued)

Head of Spinal cord injury rehabilitation research group of Isfahan University of Medical Sciences (2010-2016)

## **Awards**

- Top Researcher in Science and Technology in Shiraz University of Medical Sciences (2023)
- Top Researcher in Science and Technology in Shiraz University of Medical Sciences (2022)
- Top Researcher of Rehabilitation Faculty of Shiraz University of Medical Sciences (2022)
- Top editor in Chief of journals of Shiraz university of Medical Sciences (2022)
- Top Young Researcher of Shiraz University of Medical Sciences (2020)
- Top Researcher in Science and Technology in Shiraz University of Medical Sciences (2018)
- Top Researcher amongst all Universities of Isfahan province (2015)
- Top researcher of Isfahan University of Medical Sciences (2014)
- Top Researcher of Rehabilitation Faculty of Isfahan University of Medical Sciences, 2013
- Member of Talent graduated PhD students of Iran
- First position in the Entrance exam of Master degree of Orthotics and Prosthetics, Iran (1999)
- First position in the Entrance exam of PhD in Isfahan University of Medical Sciences (2004)
- Research Day's award from the chancellor, University of Strathclyde (2009)

## **Research Interests and experiences**

- Designing orthosis and prosthesis components for handicapped people
- Evaluating the performance of the subjects with various musculoskeletal disorders
- Gait, stability and energy consumption analysis
- Modeling of musculoskeletal systems based on OpenSIM and Visual 3d
- Finite Element analysis

## **Teaching Experiences**

- Advanced modeling in Ergonomy (for PhD students)
- Analysis of sensory system mechanism (for PhD students of Physical Therapy)

- Advanced orthoses and Assistive devices (for Msc students of orthotics and prosthetics)
- Biomechanics (Msc students of orthotics and prosthetics)
- Control systems in Orthoses and Prostheses (Msc students of orthotics and prosthetics)
- Lower limb biomechanics (undergraduate students)
- Upper limb biomechanics (undergraduate students)
- Spine Biomechanics (undergraduate students)
- Spinal orthoses (undergraduate students)
- Designing orthoses and prostheses components based on various softwares (undergraduate students)
- Designing orthoses for the subjects with neurological diseases (undergraduate students)
- Foot orthoses (undergraduate students)
- Designing of foot orthoses (undergraduate students)
- Designing of spinal orthoses (undergraduate students)

## **Supervision and advisor of theses**

I have supervised the following students:

Post doctorate students, with PhD in mechanical Engineering and PhD in orthosis and prosthesis, (two candidate)

Orthopedic surgery residents (15 candidates)

Head and neck surgery residents (2 candidate)

Physical medicine and rehabilitation residency

PhD of Physical therapy (5 students)

PhD of orthosis and prosthesis (10 students)

Msc of orthosis and prosthesis (20 students)

Msc of physical education (10 students)

Msc of physical therapy (4 students)

Msc of Mechanical engineering (10 students)

PhD of mechanical engineering (2 students)

## **Research Grants**

**Grant number 27896:** Evaluation of the effect of different types of shoe insoles in terms of design and material on the forces applied on the knee joint.

**Grant number 27305:** Investigating the effectiveness of the Milwaukee brace in correcting the lateral deviation of the spine, a systematic review

**Grant number 27933:** Investigating the reduction of lunate stress after radius wedge osteotomy: a biomechanical study

**Grant number 55118:** Designing and manufacturing a new foot-ankle orthosis for patients with osteoarthritis of the internal compartment of the knee and a preliminary study of its effect on intra-articular force, and gait parameters.

**Grant number 26576:** Evaluation of the effects of transverse force on postural control and lower limb loading in patients with scoliosis

**Grant number 26599:** Investigating the impact of the new multicenter stationary phase controller knee joint on the biomechanical components of walking

**Grant number 2653:** Investigating the effect of gluteus medius muscle force changes on patellofemoral joint stress while going down stairs by modeling in people with patellofemoral joint pain syndrome compared to healthy people

**Grant number 26574:** Comparing the effect of three orthoses Jewett, CASH and TLSO with anterior support in controlling spinal movements

**Grant number 26569:** Comparison of the effect of elastic and non-elastic orthosis on the range of motion and postural stability of people with non-specific chronic back pain

**Grant number 26181:** Investigating the effect of Action Observation (AO) therapeutic method on balance and kinetic and kinematic parameters of walking in patients with multiple sclerosis

**Grant number 26132:** Investigating the effects of using Soft hip brace on pain, kinetic and kinematic parameters of walking and quality of life in the subjects with knee osteoarthritis

**Grant number 25917:** Prostheses based on osseointegration, a systematic review of literature

**Grant number 24108:** Design and manufacture of a robotic orthosis for hand rehabilitation in stroke patients

**Grant number 25277:** The difference in the kinematics of the trunk and upper limb (shoulder complex) in healthy and adult idiopathic scoliosis and its relationship with the location and severity of the curves

**Grant number 38045:** Investigating tools and methods for determining prosthesis alignment: a systematic review

**Grant number 24909:** Comparison of chewing force in different methods of using reconstruction plate in mandibular continuity defect with finite element analysis method

**Grant number 25187:** Comparing the strength of fixation methods in acute and complete scapholunate dislocation using computer modeling

**Grant number 21110:** Investigating the posture, walking pattern and balance of people with congenital visual impairment and the effect of cane height, and paving design on them

**Grant number 24777:** Investigating the dynamic balance of people with anterior cruciate ligament reconstruction in walking and turning movements

**Grant number 25246:** Non-surgical treatment of metatarsus adductus rotation, a review of literature

**Grant number 25107:** Investigating the effect of braces on the deformity of the pigeon's chest, a systematic review

**Grant number 24344:** Investigating the biomechanics of the transfer of the Lattismus dorsi muscle to the rotator cuff of the shoulder in a bipolar manner in irreparable rotator cuff tears with computer simulation and cadaver

**Grant number 24625:** Evaluation of movement of different parts of the trunk in inhaling and exhaling movements in adults with idiopathic scoliosis and comparison with healthy individuals

**Grant number 23865:** Investigating the effect of hip brace on the kinematics of the lower limb joints and the forces exerted on the knee joint during walking in patients with knee osteoarthritis

**Grant number 23628:** Investigating the effect of Minerva cervical orthosis on the forces and movements of the cervical spine in healthy people

**Grant number 23651:** Investigating the effect of intra-abdominal pressure from orthoses on correcting the curvature of patients with lateral deviation of the spine

**Grant number 23663:** Investigating the effect of medical insoles on intra-articular forces and kinetic and kinematic walking parameters of people with flexible soles

**Grant number 23479:** Evaluation of the effect of conservative treatments in the treatment of thoracolumbar fractures

**Grant number 23359:** Investigating the effect of rocker shoes on patellofemoral joint contact pressure in healthy people: a pilot study

**Grant number 21390:** Investigating the effect of multifunctional lower limb orthosis in patients with ankle sprain

**Grant number 19790:** Evaluation of the effectiveness of scoliosis braces designed based on CAD/CAM and manual approaches, A systematic review of Literature

**Grant number 19974:** A comparison between surgical and orthotic management of scoliosis, A systematic review of literature

**Grant number 21008:** The effects of orthoses on health aspects of the spinal cord injury patients: a systematic review using International Classification of Functioning, Disability and Health (ICF) as a reference framework

**Grant number 20991:** Investigating the effect of computer workstation parameters on effective variables in predicting upper limb musculoskeletal disorders using biomechanical modeling

**Grant number 20390:** Investigating the effects of bone mineral changes on femoral head blood supply in patients with avascular necrosis of the hip joint

**Grant number 19029:** A comparative study of the effect of visual dual task on postural stability and the complexity of motor behavior of postural control between people with stroke and healthy people

**Grant number 19905:** Comparison of the effect of roller sole shoes with two different rocker angles on the inter-articular coordination of the lower limb during walking in the elderly

**Grant number 18831:** Design, manufacture and performance evaluation of active standing orthosis for people with spinal cord injury

**Grant number 18996:** Topographic comparison of the results of two surgical methods in the treatment of pseudo-paralysis caused by irreparable rupture of the cuff tendons: Gerber transfer versus transfer of the clavicular head of the pectoralis major muscle along with the Latissimus dorsi muscle.

**Grant number 18916:** Biomechanical comparison of three different techniques of pinning in the fixation of elbow fracture using wire tension band method

**Grant number 18772:** Investigating the immediate effect of insoles with memory foam on pain and kinematics and kinetics of lower limb joints during walking in people with heel pain

**Grant number 18292:** The effect of roller sole shoes with different rocker angles on static and dynamic balance during walking in the elderly subjects

**Grant number 18110:** Investigating the effectiveness of functional brace in the treatment of tibia fracture, a systematic review of literature

**Grant number 17451:** Investigating the biomechanics of supinator muscle transfer to extensor tendons in C7-T1 injuries based on cadaver study and computer simulation

**Grant number 17170:** Investigating the forces on the joints of the lower limbs during walking of children with internal rotation of the foot due to the increase in the angle between the head and condyles of the femur.

**Grant number 16172:** Investigating the effect of Boston brace on scoliosis

**Grant number 15920:** Investigating the function of new knee orthosis on kinetic, kinematic parameters and energy consumption during walking in people with knee osteoarthritis

**Grant number 15556:** Investigating balance in athletes with chronic ankle instability compared to healthy athletes during 5 minutes standing on two legs

**Grant number 15464:** Investigating the relationship between the most stuck position in the 3D print model of the shoulder and the position of the most feeling of pain in patients with anterior shoulder instability

**Grant number 14253:** Investigating the effect of action observation (AO) training on gait

kinetics and kinematics parameters and QEEG patterns in chronic stroke patients with hemiparetic gait disorder

**Grant number 14756:** Investigating the effect of electrical stimulation on bowel and bladder control in people with spinal cord injury

**Grant number 13910:** Comparison of postural balance and walking biomechanics of female nurses working in the night shift with female nurses working in the day shift

**Grant number 14016:** Comparison of the biomechanical results of three surgical methods in reducing pressure on the lunate bone

**Grant number 13716:** Investigating the anatomical compatibility of carpometacarpal cartilage and carpometacarpal joint surfaces as a replacement autograft in distal radius joint defects

**Grant number 13421:** Investigating the relationship between the craniovertebral angle in the sagittal plane and the angles and criteria determined in the frontal plane, at the moment of FHP induction in the head and neck region

**Grant number 12389:** Investigation of femoral bone density in people with perthes

**Grant number 11632:** The efficacy of knee orthoses following anterior cruciate ligament injury: A review of literature

**Grant number 11567:** Finite element analysis to determine spine correction in scoliosis patients

**Grant number 10867:** Evaluation of the influential parameters affecting one-year mortality of elderly patients after surgery for hip fracture

## Journal Publications

1. Rasouli Kahaki, Z., A. Choobineh, M. Razeghi, M.T. Karimi, and A.R. Safarpour, [2024]; Dynamic stability evaluation of trunk accelerations during walking in blind and sighted individuals. *BMC ophthalmology*. 24(1): p. 1-8.
2. Parvan, M., M.S. Khaghaninejad, and M.T. Karimi, [2024]; *The comparison between various methods of mandibular reconstruction based on finite element analysis*. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine: p. 1-9.
3. Niknam, S., H. Namazi, and M.T. Karimi, [2024]; *Evaluation of the Effect of Ununion Percentage of Scaphoid on Stress and Displacement of Fragment Part of Scaphoid in Various Degrees of Wrist Extension with and without External Force*. *Journal of Wrist Surgery*.
4. Kaviani Broojeni, M. and M.T. Karimi, [2024]; *Evaluation of the Effects of Ankle Foot Orthosis on the Performance of the Subjects with Knee Joint Osteoarthritis*. *Physical & Occupational Therapy In Geriatrics*: p. 1-11.
5. Karimi, M.T. and M. Kavyani, [2023]; *Evaluation of the Effects of Helmet Therapy on Head Deformities: A Systematic Review of Literature*. *Journal of Head & Neck Physicians and Surgeons*. 11(2): p. 74-82.
6. Karimi, M.T. and M. Kavyani, [2023]; *Evaluation of the effectiveness of soft braces on idiopathic*



*scoliosis: A review of literature*. Journal of Orthopaedics, Trauma and Rehabilitation: p. 22104917231191800.

7. Karimi, M.T., A. Ashraf, M.A. Vafaei, K. Barati, and F. Shamsi, [2023]; Evaluation of kinetic and kinematic changes in the gait of patients with foot drop disorder. Journal of Rehabilitation Sciences & Research.
8. Hoseini, Y. and M.T. Karimi, [2024]; Ground reaction force analysis in flexible and rigid flatfoot subjects. Journal of Bodywork and Movement Therapies.
9. Fallahzadeh Abarghuei, A. and M.T. Karimi, [2023]; Wrist joint Finite Element analysis: A review. Trauma Monthly. 28(6): p. 965-971.
10. Gholami M, Choobineh A, Karimi MT, Dehghan A, Abdoli-Eramaki M. Investigating Glenohumeral Joint Contact Forces and Kinematics in Different Keyboard and Monitor Setups using Opensim. Journal of Biomedical Physics & Engineering. 2023;13(3):281-90.
11. Hemmati F, Tafti N, Nourouzi E, Turk SB, Karimi MT, Sharifmoradi K, Kashani RV. Custom-Made Ethyl Vinyl Acetate Insoles with Arch Support Could Improve Static Balance in Diabetic Women with Neuropathic Foot. Journal of the American Podiatric Medical Association. 2023;113(3):1-6.
12. Kahaki ZR, Razeghi M, Karimi MT, Sanjari MA, Safarpour AR, Choobineh A. Assessment of the effects of white cane variables on step symmetry of blind individuals. Oman Journal of Ophthalmology. 2023;16(2):298.
13. Karimi M. Evaluation of the effects of bracing on correction of Pectus Carniatum, A review of literature. J Rehabil Res Pract. 2023;4(1):1-4.
14. Karimi M, Sharifmoradi K, Sharbafi M. Evaluation of stability of the subjects with toe in gait due to increase in femoral head anteversion angle during quiet standing. Retos: nuevas tendencias en educación física, deporte y recreación. 2023(49):782-5.
15. Karimi MT. Toe-in Gait, Associated Complications, and Available Conservative Treatments: A Systematic Review of Literature. J Korean Foot & Ankle Society. 2023;27(1):17-23.
16. Karimi MT, Kavyani M. Evaluation of the effectiveness of soft braces on idiopathic scoliosis: A review of literature. Journal of Orthopaedics, Trauma and Rehabilitation. 2023;5(2):1-6.
17. Kavyani Boroujeni M, Karimi MT, Akbari-Aghdam H. Evaluation of Static and Dynamic Stability and Its Relationship With Fear of Falling in Patients With Mild to Moderate Knee Osteoarthritis. Archives of Rehabilitation. 2023;24(1):76-95.
18. M.T. Karimi MK. A comparison between long term outcomes of surgical and orthotic management of scoliosis in adolescents. RUSSIAN JOURNAL OF BIOMECHANICS. 2023;2(6):51-7.
19. M.T. Karimi RT. EVALUATION OF THE EFFECTIVENESS OF SCOLIOSIS BRACES DESIGNED BASED ON CAD/CAM AND MANUAL APPROACHES: A REVIEW OF LITERATURE. RUSSIAN JOURNAL OF BIOMECHANICS. 2023;1:55-63.
20. Saadatian A, Sahebozamani M, Karimi MT. Contrast of Maximum Functional Torque in the Shoulder Joint in Overhead Athletes with and without Sub-acromion Impingement during Sitting Throw. Journal of Rehabilitation Sciences & Research. 2023;10(1):44-8.
21. Shaghayeghfard B, Karimi MT, Abbasi L, Razeghi M. Respiratory Function Assessment through Kinematic Analysis of Chest Wall Movements: Effects of Position and Gender. Journal of Biomedical Physics and Engineering. 2023;7:1-8.
22. Ziaiee M, Sadeghi H, Karimi MT. Evaluation of Mandibular Movements in Patients with Bell's Palsy Using Kinematic Variables. Medical Journal of the Islamic Republic of Iran. 2023;37:1-7.
23. Ziaiee M, Sadeghi H, Karimi MT, Rafiaei M. Assessment of Mandibular Kinematic Variables using a Motion Analysis System and a Regular Mobile Phone. Journal of Biomedical Physics and Engineering. 2023;8:1-6.

24. Abarghuei AF, Karimi MT. Evaluation the Efficiency of Electrical Stimulation Advanced Methods on Management of Bowel and Bladder Functions in Spinal Cord Injury Subject; A Systematic Review of Literature. *Bulletin of Emergency & Trauma*. 2022;10(1):1-8.
25. Aghdam HA, Haghghat F, Rezaie M, Kavyani M, Karimi MT. Correction: Comparison of the knee joint reaction force between individuals with and without acute anterior cruciate ligament rupture during walking. *Journal of Orthopaedic Surgery and Research*. 2022;17(1):294-.
26. Fadayeveatan MTKFHSHMAMR. The effect of toe-only rocker sole shoes on gait variability of the elderly. *Medical & Biological Engineering & Computing*. 2022;60(9):2493-8.
27. Fallahzadeh Abarghuei A, Karimi MT. The Effects of Lower Limb Orthoses on Health Aspects of the Spinal Cord Injury Patients: A Systematic Review Using International Classification of Functioning, Disability, and Health (ICF) as a Reference Framework. *Medical Journal of The Islamic Republic of Iran (MJIRI)*. 2022;36(1):1160-73.
28. Gholami M, Choobineh A, Abdoli-Eramaki M, Dehghan A, Karimi MT. Investigating effect of keyboard distance on the posture and 3D moments of wrist and elbow joints using OpenSim. *Applied Bionics and Biomechanics*. 2021;2022:1-10.
29. F, Haghpanah SA, Karimi MT, Mardani MA, Fadayeveatan R. Nonlinear analysis of dynamic stability in walking with toe-only rocker sole shoes in elderly. *Medical Engineering & Physics*. 2022;99:1-8.
30. Hossein Akbari Aghdam FH, Mohammad Reza Rezaee, Mahsa Kavyani, Karimi MT. Comparison of the knee joint reaction force between individuals with and without acute anterior cruciate ligament rupture during walking. *Journal of Orthopaedic Surgery and Research*. 2022;17(250):1-11.
31. Karimi M, Kavyani M, Tahmasebi R. Conservative Treatment for Metatarsus Adductus, A Systematic Review of Literature. *The Journal of Foot and Ankle Surgery*. 2022;61(4):914-9.
32. Karimi MT, Sharifmoradi K. Static and local dynamic stability of subjects with knee joint osteoarthritis. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*. 2022;236(8):1100-5.
33. M. Kavyani HAA, M. Reza Rezaie, M. Taghi Karimi. Evaluation of Joint Contact Forces in Subjects with Knee Osteoarthritis. *Muscles, Ligaments and Tendons Journal*. 2022;12(2):144-9.
34. MT Karimi FH. Knee joint osteoarthritis in obese subjects, effects of diet and exercise on knee joint loading: a review of literature. *Current Orthopaedic Practice*. 2022;33(4):376-83.
35. Shamsi F, Nami M, Aligholi H, Borhani-Haghghi A, Kavyani M, Karimi MT. The effect of action observation training on gait and balance of patients with neurological and musculoskeletal disorders: A systematic review. *British Journal of Occupational Therapy*. 2022;85(11):842-58.
36. Cherabin M, Sedaghat H, Karimi M. Designing Pattern Conceptual Model of Organizational Health Model Based on Quantum Management in Municipal Employees. *Public Policy In Administration*. 2021;12(41):57-69.
37. Ghaem-Maghani A, Fallah E, Namazi H, Karimi M-T, Hosseini SI. The Comparison of Biomechanical Volar and Dorsal Plating in Distal Part Radius Fractures; a Finite Element Analysis Study. *Bulletin of Emergency & Trauma*. 2021;9(1):9-14.
38. Karimi M, Mahdavinezhad R. Effect of Eight Weeks of Selective MELT Exercises on Balance, Speed of Walking, Quality of Life and Expanded Disability Status Scale in Women with Multiple Sclerosis. *Journal of Paramedical Sciences & Rehabilitation*. 2021;10(3):59-73.
39. Karimi MT, Hemmati F, Mardani MA, Sharifmoradi K, Hosseini SI, Fadayeveatan R, Esrafilian A. Determination of the correlation between muscle forces obtained from OpenSim and muscle activities obtained from electromyography in the elderly. *Physical and Engineering Sciences in Medicine*. 2021;44:243-51.
40. Karimi MT, Hosseini SI, Lari YB. DETERMINATION OF THE STRESS OF ANTERIOR

CRUCIATE LIGAMENT IN VARIOUS DEGREES OF KNEE FLEXION, COMPARISON OF NORMAL AND RECONSTRUCTED LIGAMENT. *Journal of Mechanics in Medicine and Biology*. 2021;21(04):1-8.

41. Karimi MT, Khademi S. Investigation of the range of motion of the shoulder joint in subjects with rotator cuff arthropathy while performing daily activities. *Clinics in Shoulder and Elbow*. 2021;24(2):88-92.
42. Molaeifar S, Yazdani F, Yoosefinejad AK, Karimi MT. Correlation between craniovertebral angle in the sagittal plane and angles and indices measured in the frontal plane at the moment of inducing forward head posture. *Work*. 2021;68(4):1221-7.
43. Namazi H, Ghaedi E, Karimi MT. Comparison of biomechanical results about the effect of three surgery methods in decompression of lunate bone. *Journal of Wrist Surgery*. 2021;10(04):296-302.
44. Sadeghisani M, Manshadi FD, Kalantari KK, Karimi MT, Azimi H, Aghazadeh A. Kinematics of the lumbar spine and hip joints in people with persistent low back pain during sit to stand and stand to sit activities. *Medical Journal of the Islamic Republic of Iran*. 2021;35(13):165-70.
45. Taghi Karimi M, Kamali M. The effectiveness of functional brace in the treatment of tibia fracture: A review of literature. *Archives of Trauma Research*. 2021;10(3):109-13.
46. Vahabi Z, Mokhtarian A, Karimi MT, Jahanshah F, Arefi R. Design and Control of an Active Wrist Orthosis for Rehabilitation. *Journal of Rehabilitation Sciences & Research*. 2021;8(1):46-50.
47. Aghdam HA, Kavyani M, Bosak M, Karimi MT, Motififard M. Evaluation of the stability of the subjects with anterior cruciate injuries reconstruction. *The Journal of Knee Surgery*. 2020;34(14):1527-30.
48. Asiabi H, Arazpour M, Bahramizadeh M, Karimi MT, Asiyaeimehr H. Evaluation of Static and Dynamic Stability of Spinal Cord Injuries: What Are the Gaps? *Ortopedia Traumatologia Rehabilitacja*. 2020;22(1):1-6.
49. Farhadi M, Hashemi Oskouei A, Emamian Shirazi SA, Karimi MT. Reliability of kinematic parameters of the lower limb joints during walking on the ground and treadmill. *Studies in Sport Medicine*. 2020;12(27):53-66.
50. Ghadikolaee MS, Sharifmoradi K, Karimi MT, Tafti N. Evaluation of a functional brace in acl-deficient subjects measuring ground reaction forces and contact pressure: A pilot study. *JPO: Journal of Prosthetics and Orthotics*. 2020;32(2):142-8.
51. Karimi MT, Kaviani Boroojeni M. Thermostatic Material in structure of Orthosis (A Brief Note). *Iranian Journal of Orthopedic Surgery*. 2020;14(1):42-6.
52. Karimi MT, Rabczuk T. Evaluation of the efficiency of Boston brace on scoliotic curve control: A review of literature. *The Journal of Spinal Cord Medicine*. 2020;43(6):824-31.
53. Karimi MT, Rabczuk T, Luthfi M. Evaluation of the effects of various force configurations and magnitudes on scoliotic curve correction by use of finite element analysis: a case study. *Current Orthopaedic Practice*. 2020;31(5):457-62.
54. Kavyani M, Nasiri E, Karimi MT, Fatoye F. The effect of spinal bracing on stability in patients with adolescent idiopathic scoliosis. *Journal of Back and Musculoskeletal Rehabilitation*. 2020;33(1):139-43.
55. Mohammad Taghi Karimi TR, Pourabbas B. Evaluation of the efficiency of various force configurations on scoliotic, lordotic and kyphotic curves in the subjects with scoliosis. *Spine Deformity*. 2020;8(3):361-7.
56. Namazi H, Askari K, Karimi MT, Fereidooni M. A Pilot Biomechanical Study to Evaluate the Efficiency of New Implant to Fix Acromioclavicular Joint. *Techniques in Shoulder & Elbow Surgery*. 2020;21(2):33-6.
57. Rastegar MR, Namazi H, Shafiee E, Karimi MT. New Techniques of Olecranon Tension Band Fixation: Biomechanical Evaluation Using Finite Element Method. *Techniques in Shoulder & Elbow*

- Surgery. 2020;21(4):101-6.
58. Sadeghi M, Ghasemi GA, Taghi Karimi M. Effects of A 12-Week Rebound Therapy Exercise on Energy Consumption and Body Mass Index in Patients With Spinal Cord Injury. *Sport Sciences and Health Research*. 2020;12(1):69-74.
  59. Sharifmoradi K, Karimi M. The Effect of High Heel Shoes on Muscles Forces and Joint Contact Forces. *Journal of Paramedical Sciences & Rehabilitation*. 2020;8(4):7-15.
  60. Sharifmoradi K, Karimi MT, Kamali Ardekani M. Effect of High Heel Shoes on Spatiotemporal and Dynamic Balance during Walking in Young Women. *The Scientific Journal of Rehabilitation Medicine*. 2020;9(2):93-100.
  61. Daneshvar P, Ghasemi G, Zolaktaf V, Karimi MT. Comparison of the effect of 8-week rebound therapy-based exercise program and weight-supported exercises on the range of motion, proprioception, and the quality of life in patients with Parkinson's disease. *International journal of preventive medicine*. 2019;10(131):1-8.
  62. Dastmanesh S, Sahebzamani M, Karimi MT. Effectiveness and durability of whole body vibration exercise on balance in elderly men. *Journal of Advanced Pharmacy Education & Research* | Apr-Jun. 2019;9(S2):59-68.
  63. Dastmanesh S, Sahebzamani M, Karimi MT. Effect of otago and tai chi exercise programs on balance and risk of falls in elderly men. *The Scientific Journal of Rehabilitation Medicine*. 2019;8(1):156-64.
  64. Fatahi F, Ghasemi G, Karimi M, Beyranvand R. The effect of eight weeks of core stability training on the lower extremity joints moment during single-leg drop landing. *Baltic Journal of Health and Physical Activity*. 2019;11(1):34-44.
  65. Irvani Rad MA, Mokhtarian A, Karimi MT. Design and Fabrication of an Active Knee Orthosis for Rehabilitation of lower limbs. *Journal of Rehabilitation Sciences & Research*. 2019;6(3):109-16.
  66. Jahanshah F, Mokhtarian A, Karimi MT. Design, Modeling and Fabrication of an Active External Orthosis for Rehabilitation of Lower of Peolple with Disability. *Journal of Modeling in Engineering*. 2019;17(56):407-20.
  67. Karimi M. The efficacy of knee orthoses following anterior cruciate ligament injury. Review of literature. *Muscles, Ligaments & Tendons Journal (MLTJ)*. 2019;9(2):282-94.
  68. Karimi M, Kamali M. Evaluation of the Influence of a New Design of Orthosis on the Loads Applied on the Knee Joint. *J Ann Bioeng*. 2019;1:1-8.
  69. Karimi M, Rabczuk T, Luthfi M, Pourabbas B, Esrafilian A. An evaluation of the efficiency of endpoint control on the correction of scoliotic curve with brace: A case study. *Acta of Bioengineering and Biomechanics*. 2019;21(2):3-10.
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## List of Conference Presentations

1. KARIMI, M. T. 1998. Designing a new knee joint and foot complex with different degrees of motion. Second Iranian O&P Conference. Tehran, Iran.
2. KARIMI, M. T. 1999. Low back pain orthoses. Bachelor Esfahan University of the medical sciences.
3. KARIMI, M. T. 2001. Evaluation the performance of upper limb prosthesis during daily activities. Master, University of Rehabilitation and Welfare Sciences.
4. KARIMI, M. T. 2001. The new orthoses for Spinal Cord Injury (SCI) patients. Spinal Cord Injuries. Tehran, Iran.
5. KARIMI, M. T. 2001. The suitable orthoses for parkinson patients. New Orthoses. Isfahan.
6. KARIMI, M. T. 2002. Evaluation the functional performance of below knee prosthesis suspension during walking. Fourth Iranian O&P Conference. Tehran, Iran.
7. KARIMI, M. T. 2002. Evaluation the efficiency of the below knee prosthesis suspension on the mediolateral stability of the knee joint. Fourth Iranian O&P Conference. Tehran, Iran.

8. KARIMI, M. T. 2002. The functional Performance of the upper limb prosthesis during daily activities. Fourth Iranian O&P Conference. Tehran, Iran.
9. KARIMI, M. T. 2002. Thermoplastic sheet with different degrees of flexibility. Fourth Iranian O&P Conference. Tehran, Iran.
10. KARIMI, M. T. 2004. The new orthosis for low back pain treatment. Low back pain. Esfahan, Iran.
11. KARIMI, M. T. 2009. Designing a New Orthosis For The Patients With Knee Osteoarthritis Disorder. The 5th ASEAN Rehabilitation Medicine Association Congress Queen's Park Hotel, Bangkok, THAILAND.
12. KARIMI, M. T., SPENCE, W. & NICOL, A. 2007. The impact of the new Reciprocal Gait Orthosis on the functional performance of the normal subjects during walking. Research day, University of Strathclyde, Engineering Faculty. Glasgow, Scotland.
13. KARIMI, M. T., SPENCE, W. & NICOL, A. 2008. The impact of the new Reciprocal Gait Orthosis on the functional performance of the normal subjects during walking. University of Strathclyde, Research day. University of Strathclyde, Glasgow, UK.
14. KARIMI, M. T., SPENCE, W. & NICOL, A. 2009. Comparison between the functional performance of the normal subjects during walking and standing with HGO and a new RGO orthoses. WACBE World Congress on Bioengineering 2009.
15. KARIMI, M. T., SPENCE, W. & NICOL, A. 2009. Comparison between the functional performance of the normal subjects during walking and standing with HGO and a new RGO orthoses. XXII Congress of the International Society of Biomechanics. 2009. Kramer Building, Middle Campus, University of Cape Town.
16. KARIMI, M. T., SPENCE, W. & NICOL, A. 2009. Evaluation the amount of the loads applied on the hip joint complex during walking the normal subjects with a new Reciprocal Gait Orthosis. XXII Congress of the International Society of Biomechanics 2009. Kramer Building, Middle Campus, University of Cape Town.
17. KARIMI, M. T., SPENCE, W. & NICOL, A. 2009. Evaluation the amount of the loads applied on the hip joint complex during walking the normal subjects with a new Reciprocal Gait Orthosis. WACBE World Congress on Bioengineering 2009.
18. KARIMI, M. T., SPENCE, W. & NICOL, A. 2009. What are the key steps in designing an orthosis for SCI subjects? Second national SCI conference Tehran, Iran.
19. KARIMI, M. T., SPENCE, W. & NICOL, A. 2009. What would be the best performance of paraplegic subjects during walking with a RGO orthosis? WACBE World Congress on Bioengineering 2009.
20. KARIMI, M. T., SPENCE, W. & NICOL, A. 2009. What would be the best performance of paraplegic subjects during walking with a RGO orthosis? XXII Congress of the International Society of Biomechanics 2009. Kramer Building, Middle Campus, University of Cape Town.
21. KARIMI, M. T., SPENCE, W., NICOL, A. & SOLOMONIDIS, S. 2010. What would be the best function of paraplegic subjects in using an orthosis? 13th ISPO World Congress. Frankfurt, Germany.
22. Karimi, M. T. Designing a New Orthosis For The Patients With Knee Osteoarthritis Disorder The 4th International Congress of Chinese Orthopaedic Association. 2010; Xiamen, China
23. KARIMI, M. T., SPENCE, W., NICOL, A. & SOLOMONIDIS, S. 2010. Is There Any DifferencBetween New Designed and Traditional Orthoses While Standing and Walking?
24. KARIMI, M. T., The Suitability of the Force Plate to Evaluate the Stability During Quiet Standing and Analyzing the Effects of Shoes, Gender and Age on the Standing Stability. 2010 3rd International Conference on BioMedical Engineering and Informatics. 2010; Yantai, China
25. Karimi, M. T., Spence, W. What are the next steps in designing orthoses for SCI patients? Dubai

International Rehabilitation Forum-REHAB 2010. 2010; Dubai.

26. Karimi, MT. What are the benefits of walking with orthoses for paraplegic subjects, Second International conference of Spinal Cord Injury, 2011, Tehran, Iran
27. Karimi, MT. A new Reciprocal Gait Orthosis for walking of paraplegic subjects, Second International conference of Spinal Cord Injury, 2011, Tehran, Iran.
28. Karimi, MT. reliability and validity of parameters used to evaluate standing stability, First international conference of musculoskeletal disorders, 2011, Isfahan. Iran
29. Karimi MT. Esrafilian, A. Amiri, P. Evaluation the stability of paraplegic subjects during standing with MTK orthosis. 8<sup>th</sup> conference of Occupational Therapy, 2012, Tehran, Iran.
30. Karimi MT.Esrafilian, A. Amiri, P. Can walking with orthosis reduce bone mineral density? International conference of Sport Medicine, 2012, Isfahan, Iran.

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