علیرضا ابوحسین
استادیار دانشگاه شهید بهشتی
گروه ارگونومی
امیل: alireza.addes@gmail.com
a.abouhossein@sbmu.ac.ir
تلفن موبایل: +98 939 499 6877
orcid.org/0000-0001-8697-1593
Cited:111, h-index: 6

موضوع های مورد علاقه برای تحقیق

Biomechanics, Ergonomics, Injury biomechanics, Biomechatronics, Multibody dynamics and human movement analysis (i.e. normal and pathological gait), Mechanobiology, Head, neck lumbar spine biomechanics and spinal cord injuries, Prostheses design, Biomechanical methods to rehabilitate amputees, Dynamic walking, Control systems, mechanobiology.

SOFTWARE EXPERIENCE AND EXPERTISE

SOFTWARE	LEVEL OF EXPERTISE
Visual 3D	Advance
SolidWorks	Intermediate to advance
NX Unigraphics	Intermediate
MSC.ADAMS	Advance
OpenSIM	Intermediate
MATLAB	Intermediate to advance
Abaqus (Finite Element modeling)	Beginner to intermediate
LS-DYNA (Finite Element modeling)	Beginner to intermediate

HARDWARE EXPERIENCE AND EXPERTISE

HARDWARE	LEVEL OF EXPERTISE
Arduino	Basic to intermediate
System Integration	Intermediate
Embedded systems	Basic to intermediate
Gait analysis & EMG	Advance
Protocol development and gait lab. Setup (CALTESTER)	Advance

سوابق تحصیلی

Institute for Surgical Technology and Biomechanics
The University of Bern, Bern, Switzerland [09/2005-10/2010]
Ph.D. in Science (Biomechanics) (designation Magna Cum Laude)
Dissertation: “A dynamic, non-linear multi-body model to estimate segmental forces in the lumbar spine”

The Swiss Federal Laboratories for Materials Testing and Research (EMPA) funded the project that was initiated by *Synthes spine, Oberdorf, Switzerland* (now part of Johnson & Johnson) with the objective of developing a musculoskeletal model of the lumbar spine to estimate the maximal segmental forces and torques for testing, and re-design of motion preserving implants which are utilized in total disc arthroplasty. About 10% of the patients with low back pain may lead to permanent disability resulting to total arthroplasty of the intervertebral disks. Using VICON motion capture analysis, the model of the lumbar spine in motion capture from subjects without any history of spine pathology were collected. Those kinematics data were integrated

into the musculoskeletal models developed on MSC.ADAMS software with a corresponding apophyseal joint to obtain joint forces and torques during trunk loading rate to understand load bearing characteristics of the different anatomical element of the lumbar spine. The outcome verified that both compressive and shear joint loads may exceed the safe limit of the lumbar spine when subjected to the higher trunk loading rate and that could be a cause of low back pain (Publications). Other outcomes of this dissertation were the effect of the dynamic loads and the role of synovial facet constraint on the load bearing characteristic of the intervertebral disc and ligaments and calculation of the instantaneous center of rotation of a multibody model (Publications).

The University of Western Ontario, London, ON., Canada [09/1999-06/2001]
The Hand and Upper Limb Centre
M.E.Sc. in Mechanical Engineering
Thesis: "A Non-Invasive approach to measuring three-dimensional bone kinematics"

- Used ICP (iterative closest point) algorithm and quaternion to calculate kinematics of the forearm

Ryerson University, Toronto, ON., Canada [09/1993-10/1997]
B.Eng. in Mechanical Engineering
Areas of Concentration: Fluid Dynamics, HVAC, Controls
Thesis: "A Comparative study of Proportional-Integral (PI) control and Fuzzy Logic Control (FLC)"

فعالیتهای کاری

Shahid Beheshti University of Medical Science, Tehran, Iran [01/2019-Present]
School of Ergonomics
Assistant Professor (Biomechanics)

Iran University of Medical Science, Tehran, Iran [03/2018-12/2018]
School of Ergonomics (Biomechanics)
Visiting Senior Research Fellow commissioned by National Elite Foundation (bonyad melli nokjbegan)

- Project: Effect of the follower load on cervical spine injuries: buckling modes
- Teaching: Calculus in ergonomics, principles of ergonomics in design

University of Leeds, Leeds, UK [10/2013-10/2016]
School of Mechanical Engineering, Mechatronics and Robotics Institute of Design, Robotics, and Optimisation (iDRO)
Post-doctoral Research Fellow
Project: biomimetic, self-tuning, fully adaptable smart lower limb prosthetics with energy recovery (Smart Bio-Leg)

- Funded as a first class project by EPSRC (Engineering, Physical, and Science Research Council) for the value of over £600,000
  - Development of the protocol for motion-based data capture and sEMG and analyzing the data
  - Multi-body simulation study and integration of experimental data to the simulation data
  - Using 3D printing to fabricate prosthetic and exoskeleton parts
  - Publication of Journal and conference papers
  - Co-supervisor and supervisor of several summer students, graduate and Ph.D. students
  - Teaching robotics, neural networks, solid mechanics courses

University of Bologna, IT [08/2011-07/2013]
Department of Electrical, Computers and System Engineering
Bologna, Italy
Post-doctoral Research Fellow

- Project: DEPICT: addressing the shortcoming of assistive devices related to elderly fall
  Project funded by the ministry of the health of the province Emilio-Romania to address the use of technology to prevent fall in elderly population.
- Worked on postural stability of the elderly during mobility

- Monitor elderly mobility using IMU & mobile robotic platform
- Co-supervision of graduate students
- Teaching controls and biomechanics

Orthopaedic and Injury Biomechanics Group [03/2011-06/2011]
University of British Columbia
Vancouver, Canada
Research Assistance

- Project: Pro-Neck-Tor: A novel helmet that reduces the neck injuries in near crown impacts
- I was involved in testing and developing a model of the Pro-Neck-Tor helmet

Swiss Federal Laboratories for Materials Testing and Research [10/2006-10/2010]
(Laboratory for Mechanical Systems Engineering)
Dübendorf, Switzerland &
University of Bern
Institute for Surgical Technology & Biomechanics
Research Assistant/Spine Research Coordinator

- Setting up motion capture laboraty for the use in EMPA
- Developed motion capture protocol for investigation of joint torque due to upper trunk loading rate and effect on the lumbar spine, data from VICON motion capture system and force plate (Bertec, AMTI) were integrated to a multibody model of human
- Data processing analysis from the hip joint impingement study
- Presentation to stockholders
- Co-Supervised three bachelor students in their biomechanics project

KYA Engineering Co. (Sole agent of ITT FLYGT Company in Iran) [04/2004- 04/2005]
Tehran, Iran
Sales Engineer/Control/Mechanical Engineer

- Sales and marketing of submersible pump with its corresponding control & monitoring system (SCADA & FMS)
- Implemented stepper switch for a pumping station to alternate function of installed pumps using LOGO Siemens controller,
- the proposed control system reduced the control system costs by more than 50%
- Researched innovative and financially effective control systems for water pumping stations
- The best mixer and submersible pump were picked and suggested to the customer based on optimal engineering rules

Saravel Corporation (www.saravel.com) [09/2002- 04/2004]
Tehran, Iran
Mechanical Designer

- Analysis and automated fan-coil sub-assembly production lines
- Conducted pressure vessels parts design based on ASME DIV I standards using Codes developed in MATHCAD
- Investigated new product to improve Saravel manufacturing production lines
- Designed of inner groove bullet to increase the rate of heat exchange in copper pipes
- Supervised three co-op students

Sunnybrook Centre for Independent Living (SCIL) at Sunnybrook hospital [04/2002 -08/2002]
Toronto, Ontario, Canada
Research Assistant to Prof. Brain Maki

- Investigated and analyzed stability parameters affecting human falling mechanism. The parameters were intended to be incorporated into a neuro-fuzzy optimization system to simulate falling process of elderly. A report was submitted by the end of the study.

ATS Automation Tooling Systems Inc. (www.atsautomation.com) [06/2001 -01/2002]
Cambridge, Ontario, Canada
Systems Integrator Engineer

- Assisted in the design, implementation, and installation of high accuracy robotic assembly machines
- for high-technology industries
- Designed, selected, tested and integrated hardware components such as robots, grippers (EAT),
- load cells, motion controllers, sensors, vision systems to automate high precision technologies
- Investigated new product and improved existing product
- Programmed and worked with PMAC controller for robot actuators
- Solved real-time vision problems for certain automation operation by suggesting an enhanced methodology
- Oral presentation of results and solutions to clients' integration systems/ Contacting clients regarding engineering issues and status of projects

The University of Western Ontario [09/1999-09/2000]
Department of Mechanical Engineering
London, Ontario, Canada
Research Assistant

- Project: in-vivo and in-vitro kinematics measurement of the forearm bones

All Season Equipment DIV. ESKO Mfg Ltd [06/1998 -09/1998]
Oakville, Ontario, Canada
Mechanical Engineer
Project: Calculation of maximal forces and torques for an articulated robotic arm to evaluate internal stresses caused fracture of the industrial robotic arm from its stand.

Ryerson University [1996 -1997]
Department of Mechanical Engineering
Toronto, Ontario, Canada
Research Assistant

- Project: Digital Image Correlation Using Newton-Raphson Method of partial differential correlation to measure strain and stress using a None-Destructive method." (A none-destructive test to evaluate mechanical effects of the heat on an engine part, project commissioned by FORD Company, Canada.)
- My duty was to come up with a method to measure the strains on the newly designed Ford-Canada PCB to measure the temperature inside the combustion engine.

تولید محتوای رسانی برای اطلاع رسانی علمی

- National Intelligent Robotics Prototype Workshop (https://www.youtube.com/watch?v=ilIGHxOom0k&list=WL&t=6s&index=4)
- Regular sandpit meeting with amputees and public to address amputees' challenges
- Student tutors and starting member of after school makeup tutorials, a Central library of Waterloo, Canada
- Interviewed by Guardian as one of the experts on artificial intelligence & Robotics to encourage young people choose robotics as career path (https://www.theguardian.com/careers/2017/oct/15/reboot-your-career-with-a-job-in-robotics-live-chat)

واحدهای تدریس کرده

Iran University of Medical Science

General Calculus for Ergonomic Students (Co-Lecturer): Fall semester 2018.
Principles of ergonomics and human factors in Design (co-lecturer): Winter Semester – 2018

Shahid Beheshti University of Medical Science

A Short Course on EEG and application: Winter Semester- 2018

The University of Leeds, Leeds, UK

MECH1230 (co-tutor): Semester 1- 2015
Undergraduate Solid Mechanics (static, dynamics and strength of materials)

MECH5605M (Co-lecturer) Semester 1-2015
Biomechatronics and Medical Robotics, Principles of Fuzzy logic and Neural networks with applications in Robotics

MECH3460 (Co-lecturer, Co-tutor): Semester 1,2-2013 to 2016
Robotics and Machine Intelligence

The University of Bologna, Bologna, Italy

Automatic Control and System Theory M (Adjunct Professor, Co-lecturer/ Co-tutor): Semester-2 2012
State-space, controllability, observability, system approach in controller design, lead-lag, the Lyapunov stability criterion

- Graduate Course in AlmaTong program (A joint program between University of Bologna and Tongji University (Shanghai, China)
- University of Bologna my website: http://www-lar.deis.unibo.it/people/alireza/CAT.html

University of Bern

Tissue Biomechanics (co-tutor) 2009
Bone, joint, synovial joint, ligament, cartilage, spine, tendon, and muscle biomechanics

University of Western Ontario, London, ON, Canada

MME2259 (tutor): semester 1, 2 1999-2001
Product Design and Development

MME 4452(tutor): semester 1, 2 1999-2001
Robotics and Automated Manufacturing

Ryerson University, Toronto, ON., Canada

MTH 108 - Linear Algebra (tutor)
MTH 207 - Calculus and Computational Methods I (tutor)
MTH 310 - Calculus and Computational Methods II (tutor)
KPS 115 - Physics I (tutor)
MEC 222 - Engineering Graphical Communication (tutor)
MEC 311 - Dynamics (tutor)

راهنمايي و مشاوره پايان نامه هاي تحصيلي

Hafiz Farhan Maqbool, PhD student — Oct. 2013- June 2017
University of Leeds
Dissertation: Real-Time Estimation of Temporal Gait Parameters in Lower Limb Amputees using Inertial Sensors

Role: Co-advisor

Liam Davis, summer internship, 2015, 2016
University of Leeds
Gait data acquisition, analysis using visual 3D software
Pelvis rotation and effect on amputees' gait
Role: Advisor/Mentor

David Maher, Summer internship, 2016
University of Leeds,
Parametrized human Gait model, Co-simulation of human gait MSC.ADAMS-MATLAB
Role: Advisor/Mentor

Joe Anderson, Summer Internship 2014
University of Leeds
Model Development of walking in MSC.ADAMS environment
Role: Advisor

Pouyan Mehyar, Ph.D. Student Oct. 2013-Present
University of Leeds
Dissertation: Neural connectivity for the future generation of prosthetic devices
Role: Member of advising the committee

Muhammad A. Husman, Ph.D., Jan. 2014-Mar. 2018
University of Leeds
Dissertation: Development of a haptic feedback system for transfemoral amputees
Role: Member of advising the committee

Carl Crisp, Masters, Oct.2014- Jul. 2018
University of Leeds
Thesis: Postural balance in lower extremity prosthetic leg users
Role: Co-Advisor, Mentor

Cinzia Farneti, Masters of Science Engineering, Jan.2012-Jan2013
University of Bologna
Thesis: Low-level control of companion robot
Role: Advisor

David Peretz, B. Sc. Sept.2006-2007
From Rensselaer Polytechnique Institute visiting ETHZ Summer of 2008
Internship topic: 2D-Analysis of squat data captured by NDi and AMTI force platform
Role: Co-Advisor

Co-advisor of several students in Department of Mechanical Engineering at the University of Western Ontario, London, ON., CA during 2000-2001

مقاله چاپ شده در ژورنال

Alireza Abouhossein, Mohammed I Awad, Hafiz F. Maqbool, Carl Crisp, Todd D. Stewart and Neil Messenger, R. Richardson, Abbas A. Dehghani-Sanij1, David Bradley, "*Foot trajectories and loading rates in a transfemoral amputee for six different commercial prosthetics knees: an indication of adaptability*". Journal of medical engineering and physics, **under review**. (impact factor 1.819)

H. F. Maqbool, M. A. B. Husman, M. I. Awad, A. Abouhossein, N. Iqbal, Member, IEEE, and A. A. Dehghani-Sanij, "*Heuristic real-time detection of temporal gait events for lower limb amputees", IEEE Sensors Journal, (*10.1109/JSEN.2018.2889970) (impact factor 2.512).

H. F. Maqbool, M. A. B. Husman, M. I. Awad, *Member,* A. Abouhossein, Nadeem Iqbal, and A. A. Dehghani-Sanij, *"A Real-Time Gait Event Detection for Lower Limb Prosthesis Control and Evaluation", IEEE-Journal of Neural Systems and rehabilitation,* (10.1109/TNSRE.2016.2636367) (Impact Factor 3.410)

Zhen W L., M. I Awad, A. Abouhossein, A. A. Dehghani and N. Messenger, "*Virtual prototyping of a semi-active transfemoral prosthetic leg*", IMechE, Part H: Journal of Engineering in Medicine, 229(5): 350-361 2015. (DOI: 10.1177/0954411915581653) (Corresponding author) (Impact Factor 1.005)

H. Maqbool, P. Mehryar, M. Husman, M. Awad, A. Abouhossein, and A. Dehghani-Sanij, "Towards Intelligent Lower Limb Prostheses with Activity Recognition," *Towards Autonomous Robotic Systems*. vol. 9287, C. Dixon and K. Tuyls, Eds., ed: Springer International Publishing, 2015, pp. 180-185. (DOI 10.1007/978-3-319-22416-9_21) (Proceeding book)

A. Abouhossein, B. Weisse, Stephen J. Ferguson, "*Quantifying the center of rotation pattern in a multi-body model of lumbar spine*", Journal of Computer Methods in Biomechanics and Biomedical Engineering, March 2012 (DOI**:** 10.1080/10255842.2012.671306) (Impact Factor 1.909)

A. Abouhossein, B. Weisse, Stephen J. Ferguson, "*A multibody modeling approach to determine load sharing between passive elements of the lumbar spine*", Journal of Computer Methods in Biomechanics and Biomedical Engineering, 2011 April 1; 16(6). (Featured on the cover of the respective journal) (DOI:10.1080/10255842.2010.485568) (Impact Factor 1.909)

مقاله ها و سخنرانی ها در کنفرانسها

A. Abouhossein, Uriel Martinez-Hernandez, Mohammed I. Awad, David Bradley, Abbas A. Dehghani-Sanij, "Human-activity-centered measurement system: challenges from laboratory to the real environment in assistive gait wearable robotics", Mechatronics Conference 2018, Glasgow, IET and IME-UK, SEPT. 2018, Accepted for podium presentation and full publication in the proceeding.

A. Abouhossein, M. I. Awad, C. Crisp, A. A. Dehghani-Sanij, N. Messenger, T.D. Stewart, O. M. Querin, R. Richardson, D. Bradley," Gait abnormalities of above-knee amputees, is it a design deficiency or compensatory strategy?", submitted in International Conference on neurorehabilitation, Segovia, Spain, 18-21 Oct. 2017, accepted for podium presentation, Published in the Taylor and Francis proceeding.

M. I. Awad, A. Abouhossein, B. Chong, A. A. Dehghani-Sanij, R. Richardson, D. Moser and S. Zahedi, "Investigation into Energy Efficiency and Regeneration in an Electric Prosthetic Knee", submitted in International Conference on neurorehabilitation, Segovia, Spain, 18-21 Oct. 2017, accepted for podium presentation.

M. I. Awad, A. Abouhossein, A. A. Dehghani-Sanij, R. Richardson, O. M. Querin, Estimation of Actuation System Parameters for Lower Limb Prostheses, Mechatronics-REM conference, Compiègne, France 2016, Accepted for publication with minor revision

M. I. Awad, A. Abouhossein, A. A. Dehghani-Sanij, R. Richardson, D. Moser, S. Zahedi, D. Bradley," Towards a Smart Semi-Active Prosthetic Leg: Preliminary Assessment and Testing, UKSIM conference 2016, Cambridge, UK (accepted for publication, Podium presentation)

Hafiz F. Maqbool, Muhammad A. B. Husman, Mohammed I. Awad, Alireza Abouhossein, Nadeem Iqbal and Abbas A. Dehghani-Sanij "Stance Sub-Phases Gait Event Detection in Real-time for Ramp Ascent and Descent", International conference on neurorehabilitation, ICN2016, submitted, (accepted, oral presentation)

A. Abouhossein, M. Awad, C. Crisp, A. Dehghani-Sanij, N. Messenger, T. Stewart, O. Querin, R. Richardson, and D. Bradley, "Effect of different prosthetic knees/foot on the Roll-over shapes", in 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Orlando, FL, USA, 16-20 August 2016. (Poster presentation)

H. Maqbool, M. Husman, M. Awad, A. Abouhossein, N. Iqbal, and A. Dehghani-Sanij, "Real-time gait event detection for lower limb amputees using a single wearable sensor", in 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Orlando, FL, USA, 16-20 August 2016. (Podium presentation)

M. Husman, H. Maqbool, M. Awad, A. Abouhossein, and A. Dehghani-Sanij, "A Wearable Skin Stretch Haptic Feedback Device: Towards Improving Balance Control in Lower Limb Amputees", in 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Orlando, FL, USA, 16-20 August 2016. (Podium presentation).

A. Abouhossein, M.I. Awad, A.A. Dehghani-Sanij, O.M. Querin, R. Richardson, TD. Stewart, N. Messenger, D. Bradley, D. Moser, S. Zahedi, "Controller design for a Semi-Active Transfemoral Prosthetic Knee based on Angular Velocity Monitoring", CMBBE 2015 Conference, Montreal, Canada, (podium presentation).

A. Abouhossein, M. I. Awad, Crisp Carl, Abbas A. Dehghani - Sanij, Neil Messenger, Todd D. Stewart, O.M. Querin, Robert Richardson, D. Moser, S. Zahedi D. Bradley, "Impact of viscoelastic parameters of a prosthetic ankle on the knee power over level ground walking", 2015 IEEE/RSJ International Conference on Intelligent Robotics and Systems (IROS), Hamburg, Germany (Poster).

H.F. Maqbool, M.A.B. Husman, M. I. Awad, A. Abouhossein, A. A. Dehghani, "Real-time gait event detection for transfemoral amputees during ramp ascending and descending" IEEE/RSJ International Conference on Intelligent Robots and Systems-2015, (podium presentation).

M. I. Awad, A. Abouhossein, T. Stewart, N. Messenger A. A. Dehghani-Sanij, R. Richardson, D. Moser, S. Zahedi;" Estimation of Actuation System Parameters for Lower Limb Prostheses", Submitted to IEEE/EMBC International conference, Milan, IT, 2015 (Poster)

A. Abouhossein, I. M. Awad, A. Dehghani, N. Messenger, "Understating the mechanism of transient impulsive forces during activities of daily living (ADLs) for amputees and able-bodied subjects", abstract for Royal Academy of Engineering, one of the 25 abstracts picked to give talk in Young researchers futures meeting Engineering for orthopaedic applications, Sept. 15-18, 2015, Leeds, UK

A. Abouhossein, Lorenzo Marconi, Lorenzo Chiari, Ligaments degeneration May affect body sway in the elderly, ESB 2013, Greece, (podium presentation).

A. Abouhossein, Stephen J. Ferguson, "Lumbar Spine Facet Joint Loads and Effect of Loading Rate in a low Speed rear-end Impact Collision", Submitted to International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE) 2013, Utah, (accepted as poster presentation).

A. Abouhossein, Christopher R. Dennison, Daniel Dressler, Peter A. Cripton, "Validation and dynamic responses of a 3-dimensional multibody model of a physical surrogate neck and head under compressive follower load and during axial impact", Canadian Society of Biomechanics, June 2012 (podium presentation)

A. Abouhossein, B. Weisse. G. Piskoty, C. Affolter, Stephen J. Ferguson, "*A Dynamic, multi-body model of the human lumbar spine*", Proceeding of 8th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE) 2008, Porto, Portugal, (podium presentation).

A. Abouhossein, G. K. Knopf, J. A. Johnson, (2001), "Robust Registration of Coordinate Data Sets for Noninvasive Measurements of Bone Kinematics", SMC-IEEE Proceedings, Page(s): 1999 - 2005 vol.3, Tucson, Arizona, U.S.A., (podium presentation)

G. K. Knopf, A. Abouhossein, (2000), "Adaptive Reconstruction of Anatomical Surfaces from Human Body Measurements Using Neural Networks", SMC-IEEE proceedings, Nashville, Tennessee, U.S.A., Pages: 1181 - 1186 vol.2, (podium presentation).

مقاله ها یی که هنوز روی انها کار میکنم

A. Abouhossein, Chris Dennison, Dan Dressler, Peter A. Cripton, "Dynamic responses of a 3-Dimensional multibody model of a physical biofidelic surrogate neck and head under compressive follower load and effects of varying impact velocity in a head-first impact". Prepared for Journal of Computer Methods in Biomechanics and Biomedical Engineering

A. Abouhossein, M.I. Awad, A.A. Dehghani-Sanij, T. Stewart and N. Messenger, "Pelvis rotation and obliquity in transfemoral amputees and control groups: is it an indication of low back pain?" prepared for the journal of gait and posture.

A. Abouhossein, M.I. Awad, A.A. Dehghani-Sanij, T. Stewart and N. Messenger, "Power and moments: A case study from a single amputee with six different commercial prosthetic knees for ramp and level ground walking". Prosthetics and Orthotics International.

C. Crisp, M.I. Awad, A. Abouhossein, A.A. Dehghani-Sanij, Comparison of energy consumption of a healthy subject and a TF amputee in walking activities using PCI estimation

PATENT

A Skin Stretch Haptic Feedback System for Lower Limb Amputees Pending approval of US-patent office

کارهای داوری

Paid Reviewer for a book proposal sent to Elsevier Publication house, titled: *The biomechanics and mechanobiology of the lumbar spine as revealed by computational approaches: from research to in silico medicine*

داوری و عضویت در بورد ژورنالهای بین المللی

Elsevier: Journal of Computer in Biology and Medicine *(Received Certificate of excellent reviewer-2016)*
Elsevier: Journal of Biomedical Engineering and Informatics
Springer: Journal of Medical and Biological Engineering (JMBE)
Robotica*: Cambridge publication*
IOPScience*: Smart Materials and Structures*
Sensor*: open access*
MDPI Applied Science*, Journal of Mechanical Engineering*
Proceedings of the Institution of Mechanical Engineers*, Journal of Medical Engineering Part H*

Editorial board of the International Journal of Engineering and Mathematics
Editorial board of foot & ankle: studies
Conference Reviewer
IEEE-EMCS
IEEE-IROS
IEEE-AIM

عضویت در مجامع علمی

IEEE (The Institute of Electrical and Electronics Engineers)
ASME (American Society of Mechanical Engineering)
European Society of Biomechanics (ESB)

UK/Japan Mobility Award to travel to Osaka University to attend the RENKEI Interdisciplinary Workshop and tackle projects related to mobility and elderly challenges
25 Young Researchers Future Forum 2014: Engineering for Orthopedic Applications, full payment of 4 days conference, Royal Academy of Engineers, Leeds, UK
Post-Doctoral Fellow at University of Bologna, health and government of Emilia Romagna/ University of Bologna
MSC Company award free full Dynamics analysis software MSC.ADAMS) for best research: Research Assist Program
Ph.D. Scholarship (3.5 years) to study at Swiss Federal Laboratories for Materials Testing and Research
Graduate tuitions fee waiver scholarship at University of Western Ontario (M.E.Sc.)

زبانها

English (Fluently), German (Intermediate), Persian (Fluently), Italian (basic)