Alireza Mirbagheri Academic Resume (last edited on: Oct. 26. 2013)

Current Position:

Assistant Professor, Physics and Biomedical Engineering Department, School of Medicine, Tehran University of Medical Sciences (TUMS), Tehran, Iran.
Deputy of Research Affairs and Director of Medical Robotics Lab., Research Centre of Biomedical Technology and Robotics (RCBTR), Institute for Advanced Medical Technologies (IAMT). Imam Khomeini Hospital Complex, Keshavarz Blvd. Tehran, Iran
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Education :

(2012-2013): **National Elite Foundation (NEF) Postdoctoral Fellow**, Robotic Surgery Lab., Research Center for Science and Technology in medicine(RCSTIM), Tehran University of Medical Sciences, Tehran, Iran.

(2006-2012): **Ph.D. in Mechanical Engineering**, Applied Design- Biomechanics and Robotics
Mech. Eng. Dept., Sharif University of Technology (SUT), Tehran, Iran.
Thesis: "Design, Analysis, Fabrication and Experimental Study of a Haptic Instrument for Large Organs Laparoscopic surgery"
Supervisor: Prof. F. Farahmand

(2003-2006): **M.Sc. in Mechanical Engineering**, Biomechanics
Mech. Eng. Dept., Sharif University of Technology (SUT), Tehran, Iran.
Thesis: "Design of a Robotic Assistant for Laparoscopic Surgery",
Supervisor: Prof. F. Farahmand Co-Supervisor: Prof. A. Meghdari

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(1999-2003): **B.Sc. in Mechanical Engineering**, Solid Design
Mech. Eng. Dept., School of Engineering, University of Yazd, Yazd, Iran.
Bachelor Project: "Theory and Design of air cushion Craft (Hovercraft) "
Supervisor: Dr. S. Talebi

Research Interests:

- Medical Robotics and Computer Assisted Surgery
- Artificial Prosthesis
- Biomechanics and Biomimics

Current Activity and Research:

- Design, Fabrication and Bilateral Control of a Practical Telesurgical Robotic System with Haptic Feedback (National Project of **Sina** Robotic Surgery System)

Papers in Progress:

1. H. Samiee., Sh. Taslimi, A. Jafari, Z. Asgari, A. Mirbagheri, F. Farahmand, "Comparing the operational related subjective and objective outcomes of newly developed camera holder, RoboLens, and its human counterpart in ovarian laparoscopic cystectomy: a randomized control trial", **Journal of Surgical Endoscopy**, (Under review, 2012), (ISI Index)
2. H. Jamshidifar, A. Mirbagheri, S. Behzadipour, F. Farahmand, "A New High Force 5 DOF Haptic Device for Laparoscopic Tele-surgery/Simulation", The International **Journal of Medical Robotics and Computer Assisted Surgery**, (Under review, 2012), (ISI & PubMed Index).
3. A. Mirbagheri, A. Alamdar, H. Jamshidifar, B. Ghanadi S. Behzadipour, F. Farahmand, "The Sina: A Novel Practical Telesurgery Robotic System with Haptic Sensation", (Under preparation, 2012)

Publications:

- Journal articles (English):

1. A. Mirbagheri, F. Farahmand, "Design, Analysis and Experimental Evaluation of a Novel Three Fingered Endoscopic Large Organ Grasper", **Journal of Medical Devices-Transactions of the ASME**, 7(2), pp. 025001-025001., (2013) (ISI Indexed)
2. A. Mirbagheri, F. Farahmand, "A Triple-Jaw Actuated and Sensorized Instrument for Grasping of Large Organs during Minimally Invasive Robotic Surgery", The International **Journal of Medical Robotics and Computer Assisted Surgery**, Vol. 9, No. 1, pp: 83–93, March 2013. (ISI & PubMed Indexed)
3. M. Hadavand, A. Mirbagheri, S. Behzadipour, F. Farahmand, "A novel remote center of motion mechanism for the force-reflective master robot of haptic telesurgery systems", The International **Journal of Medical Robotics and Computer Assisted Surgery**, (Online Published, 2013), (ISI & PubMed Index)

4. A. Mirbagheri, F. Farahmand, A. Meghdari, F. Karimian, "Design and Development of an Effective Low-Cost Robotic Cameraman for Laparoscopic Surgery: RoboLens", **Scientia Iranica**, Transaction on Mech. Eng., Vol. 18, No. 1, pp. 105- 114, 2011. (ISI Indexed)
5. E. Basafa, Z. Heidari, H. Tamaddoni, A. Mirbagheri, O. Haddad and M. Parnianpour, "The Effect of Fatigue on Recurrence Parameters of Postural Sway", **Journal of Biomechanics**, Vol. 40, Page S362, 2007. (ISI Indexed)
6. M. Tirehdast, A. Mirbagheri, M. Asghari, F. Farahmand, "Modeling of Interaction between a Three-Fingered Surgical Grasper and Human Spleen", **Journal of Studies in Health, Technology and Informatics**, Vol. 163, pp. 663- 9, 2011. (PubMed Indexed)
7. A. Alamdar, A. Mirbagheri, F. Farahmand, M. Durali "Design of a 4 DOF Laparoscopic Surgery Robot for Manipulation of Large Organs", **Journal of Studies in Health, Technology and Informatics**, Vol. 173, pp. 8- 12, 2012. (PubMed Indexed)
8. F. Farahmand, H.R. Amirnia, S. Sarkar, S. Behzadipour, A. Ahmadian, A. Mirbagheri, "An Overview of Medical Robotics in Iran", **REALITES INDUSTRIELLES**, pp. 65- 75, Feb. 2012.
9. S. Saedi, A. Mirbagheri, A. Jafari, F. Farahmand, "A local hybrid actuator for robotic surgery instruments", **Int. J. Biomechatronics and Biomedical Robotics**, (Accepted for publication, Nov. 2012).
10. A. Mirbagheri, M. A. Baniasad, F. Farahmand, S. Behzadipour, A. Ahmadian, "Medical Robotics: State-of-the-Art Applications and Research Challenges". **International Journal of Healthcare Information Systems and Informatics**. 2013;8(2):1-14.
11. H. Dehghani Ashkezari, A. Mirbagheri, F. Farahmand, "A Virtual Environment for Training of Laparoscopic Surgery of Large Intra-abdominal Organs", **International J. of Healthcare Information Systems and Informatics**, (Accepted for publication, Dec. 2012).

- Journal articles (Persian):

1. A. Mirbagheri, R. Narimani, M. Hoviattalab, "Development of 2D Vibration Measurement System Using Image Processing Method; an Investigation on Forced Vibration of Human Body in Vertical Direction", **Sharif Journal of Science & Technology**, No. 30, pp 30-38, 2005. (in Persian)
2. F. Karimian, A. Mirbagheri, F. Farahmand, K. Toulabi, A. Rabani, S. Sarkar, "Clinical Evaluation of a new Camera Holder Robot for Laparoscopic Surgery- Preliminary Results", **Iranian Journal of Surgery**, Vol. 18, No. 2, pp 57-64, 2010.(in Persian)

- Conference articles:

1. Hoviattalab, R. Narimani, A. Mirbagheri, "An Investigation on Human Vibration Analysis Using Image Processing Method", Proceedings of ASME 2005 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, IDETC/CIE, Long Beach, California, USA , Sep. 24-28, 2005. (Scopus indexed)

2. A. Mirbagheri, R. Narimani, M. Hoviattalab, "Vibration Measurement Using Image Processing Method", Proceedings of 13th Annual International Conference of Mechanical Engineering, ISME 2005, Isfahan, Iran, May. 17-19, 2005. (in Persian)
3. A. Mirbagheri, F. Farahmand, A. Meghdari, H. Sayyaadi, "Design of a robotic assistant for Laparoscopic Surgery", The 4th International Congress on Laparoscopic Surgery, Tehran University of medical Science, Milad Hospital, Tehran, Iran, Feb. 23-26, 2006.
4. A. Mirbagheri, H. Sayyaadi, F. Farahmand, A. Meghdari, "Design of a Robotic Cameraman with Three Actuators for Laparoscopic Surgery", in Proceedings of Frontiers in Biomedical Devices Conference, ASME/ NanoBio06, Irvine, California, USA, June 8-9, 2006. (Scopus indexed)
5. A. Mirbagheri, F. Farahmand, F. Karimiyan, K. Toolabi, "Conceptual Design of a Novel Telemanipulator for a laparoscope-Holder Robot", 1st International Telemedicine Conference, Shahid Beheshti Medical School, Tehran, Iran, Nov. 1- 2, 2006.
6. S. Hajizadeh, A. Pashayee, A. Mirbagheri, "An Smart Endoscopic Surgery Suturing Device for Tele Robotic Surgery Operations", 1st International Telemedicine and Electronic Health Conference, Shahid Beheshti Medical School, Tehran, Iran, Nov. 1- 2, 2006.
7. A. Mirbagheri, F. Farahmand, A. Meghdari, H. Sayyaadi, F. Karimiyan, K. Toolabi, "Ergonomic Design and Analysis of a Novel Mechanism for MIS Cameraman Robot", 13th Iranian Conference on Biomedical Engineering, ICBME 2007, Sharif University of Technology, Tehran, Iran, Feb 21-22, 2007. (in Persian)
8. F. Karimian, A. Mirbagheri, F. Farahmand, "Clinical Test of a Robotic Assistant for Laparoscopic Surgery, Primary Results", Proceedings of 33rd Annual Scientific Congress of Iranian Association of Surgeons, `, May. 20-22, 2009. (in Persian)
9. E. Basafa, M. Sheikholeslami, A. Mirbagheri, F. Farahmand, G. R. Vossoughi, "Design and Implementation of Series Elastic Actuators for a Haptic Laparoscopic Device", International Conference of the IEEE/EMBS (Engineering in Medicine and Biology Society), Vol. 31, pp. 6054-6057, September 2009, Minneapolis, USA. (IEEE, Scopus & PubMed indexed)
10. E. Rashedi, A. Mirbagheri, B. Taheri, G.R. Vossoughi, F. Farahmand, M. Parnianpour, "Design and Development of a Hand Robotic Rehabilitation Device for Post Stroke Patients", International Conference of the IEEE/EMBS, Vol. 31, pp. 5026-5029, September 2009, Minneapolis, USA. (IEEE, Scopus & PubMed indexed)
11. H. Mohammadi, A. Mirbagheri, A. Rabani, F. Farahmand, "Design and Analysis of a Suction Gripper for Large Internal Organ Manipulation", 16th Iranian Conference on Biomedical Engineering, ICBME 2009, Tehran University of Medical Science, Tehran, Iran, Dec. 30-31, 2009. (in Persian)
12. H. Mohammadi, A. Mirbagheri, A. Rabani, R. Narimani, "Experimental Study of a Suction Cap for Manipulation of Large Organs with Soft Tissue", 16th Iranian Conference on Biomedical Engineering, ICBME 2009, Tehran University of Medical Science, Tehran, Iran, Dec. 30-31, 2009. (in Persian)
13. K. Amini, A. Mirbagheri, F. Farahmand, S. Bagheri "Instrument Detection in Laparoscopic Images Using Image Processing Method", 16th Iranian Conference on Biomedical Engineering, Tehran University of Medical Science, ICBME 2009, Tehran, Iran, Dec. 30-31, 2009. (in Persian)

14. K. Amini, A. Mirbagheri, F. Farahmand, S. Bagheri, "Marker-free detection of instruments in laparoscopic images to control a cameraman robot", Proceedings of the ASME 2010 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE 2010, Montreal, Quebec, Canada, August 15-18, 2010. (Scopus & ASME indexed)
15. M. Tirehdast, A. Mirbagheri, F. Farahmand, M. Asghari, "Finite Element Modeling of Spleen Tissue to Analyze Its Interaction with a Laparoscopic Surgery Instrument", Proceedings of the ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis, ESDA2010, Istanbul, Turkey, July 12-14, 2010. (Scopus & ASME indexed)
16. M. Shariatmadar Ahmadi, M.J. Shamsolahi, A. Mirbagheri, F. Farahmand, "Design, Optimization and Experimental Evaluation of a Novel Tactile Sensor for Large Surgical Grasper", 2nd International Conference on Mechanical and Electronics Engineering, ICMEE 2010, Kyoto, Japan. August 1-3, 2010. (Scopus indexed)
17. A. Mirbagheri, M. Yahyazadehfar, and F. Farahmand, "Conceptual Design of a Novel Laparoscopic instrument for Manipulation of Large Internal Organs," in Proceedings of ASME 2010 5th Frontiers in Biomedical Devices Conference, BioMed2010, Newport Beach, California, USA, Sept. 20- 21, 2010. (Scopus & ASME indexed)
18. A. Mirbagheri, F. Farahmand, "Design and Analysis of an Actuated Endoscopic Grasper for Manipulation of Large Body Organs", International Conference of the IEEE/EMBS (Engineering in Medicine and Biology Society), Buenos Aires, Argentina, August 31 - September 4, 2010. (IEEE, Scopus & PubMed indexed)
19. H. Jamshidifar, S. Behzadipour, A. Mirbagheri, F. Farahmand, "Conceptual Design of a 5 DOF Force Feedback Master Robot for Laparoscopic Surgery Training in Virtual Reality Environment", 17th Iranian Conference on Biomedical Engineering, Esfahan University, ICBME 2010, Esfahan, Iran, Nov. 3-5, 2010. (in Persian)
20. M. Hadavand, A. Mirbagheri, F. Farahmand, "Design and prototyping of a 5 DOF Master Robot for a Tele-Surgery Robotic System", Proceedings of 19th Annual International Conference of Mechanical Engineering, ISME 2011, Birjand, Iran, May. 17-19, 2011. (in Persian)
21. M. Hadavnd, A. Mirbagheri, F. Farahmand, "Design of a Force-Reflective Master Robot for Haptic Telesurgery Applications: RoboMaster1", International Conference of the IEEE/EMBS (Engineering in Medicine and Biology Society), Boston, USA, August 31 - September 4, 2011. (IEEE, Scopus & PubMed indexed)
22. S. Saedi, A. Mirbagheri, F. Farahmand, "Conceptual Design of a Miniaturized Hybrid Local Actuator for Minimally Invasive Robotic Surgery (MIRS) Instruments", International Conference of the IEEE/EMBS (Engineering in Medicine and Biology Society), Boston, USA, August 31 - September 4, 2011. (IEEE, Scopus & PubMed indexed)
23. M. Khadem, S. Behzadipour, F. Farahmand, A. Mirbagheri, "Design of a Robotic Actuator for Laparoscopic Instrument with Force Measuring Capability", 18th Iranian Conference on Biomedical Engineering, Tarbiat Modares University, ICBME 2011, Tehran, Iran, Dec. 14- 16, 2011. (in Persian)

24. S. A. Pedram, S. Behzadipour, F. Farahmand, A. Mirbagheri, "Design and simulation of a Novel System for Instrument Actuation of a Tele-surgery Robotic System", 18th Iranian Conference on Biomedical Engineering, Tarbiat Modares University, ICBME 2011, Tehran, Iran, Dec. 14- 16, 2011. (in Persian)
25. H. Dehghani Ashkezari, A. Mirbagheri, F. Farahmand, S. Behzadipour, k. Firouzbaksh "Real time simulation of grasping procedure of large internal organs during laparoscopic surgery", International Conference of the IEEE/EMBS (Engineering in Medicine and Biology Society), Boston, USA, Aug. 28 - Sept. 1, 2012. (IEEE,Scopus & PubMed indexed)

-Book Chapters & Sections

- **A. Mirbagheri**, "Training of MSC.visualNastran 4D", in Mechanical Engineering Software Training Book Series (in Farsi), M. Forouzan (Editor), 2005, Sajad Publication.
- F. Farahmand, A. Ahmadian, **A. Mirbagheri**, T. Rezaeian, M. Bahari, E. Basafa, R. Narimani, N. Moradi, "**Telemedicine and Therapy**", Chapter two in: Telemedicine & e-Health B00k, F. Farahmand et al. (Editors), Persia Network Information Institute of Biomedical Engineering, Shahid Beheshti Medical School, Tehran, Iran, 2006.

-Magazine Article

- A. Mirbagheri, "Hovercraft", Takin Scientific Magazine, Isfahan University of Technology, 2001 (summer), No. 4, pp. 5- 8.
- A. Mirbagheri**, "Robotic Surgery",** Sharif Mechanical letter, Mechanical Eng. Applied & Specialized Magazine, Sharif University of Technology, 2006 (summer), No.28, pp. 62- 66.
- A. Mirbagheri**, "Robolens: The First Robotic Surgery Assistant in Iran"**, MED & LAB Engineering Magazine, Issue NO. 73, May 2007, pp. 4- 5.
- A. Mirbagheri**, "da Vinci and ZEUS: Masters of Robotic Surgery"**, MED & LAB Engineering Magazine, Issue NO. 74, June 2007, pp. 40- 44.
- A. Mirbagheri**, "Robolens: Surgeon Assistant Robot",** Sharif Mechanical letter, Mechanical Eng. Applied & Specialized Magazine, Sharif University of Technology, 2008 (winter), No.32, pp. 58- 60.

- Selected Technical Reports and Proposal:

- **A. Mirbagheri**, F. Farahmand, "Proposal for Design and Fabrication of a Robotic Assistant for Laparoscopic Surgery", Sharif University of Technology, Biomechanics Lab, Proposal for **Ministry of Industries of I. R. IRAN**, Jun. 2004.
- **A. Mirbagheri**, F. Farahmand, A. Meghdari, "Introduction to Surgical Robot", Sharif University of Technology, Biomechanics Lab, Technical Report for **ISBME** (Iranian Society of Biomedical Engineering), Jun. 2004.
- **A. Mirbagheri**, F. Farahmand, M. Behzad, "Smoothing and Curve Fitting Methods in Processing of Bio-Signals", Sharif University of Technology, Biomechanics Lab, Technical Report for **ISBME**, Sep. 2004.

- **A. Mirbagheri**, F. Farahmand, I. Shadravan, “Automatic Cardio Pulmonary Resuscitation System”, Sharif University of Technology, Biomechanics Lab, Technical Report for **ICMED** (Incubation Center for Medical Equipments and Devices), Dec. 2004.
- **A. Mirbagheri**, F. Farahmand, A. Meghdari, “Computer-Integrated Surgery and Medical Robotics”, Sharif University of Technology, Biomechanics Lab, Technical Report for **ISBME**, Mar. 2005.
- F. Farahmand, **A. Mirbagheri**, M. Abdi, “Economical Analysis of Using Computer-Integrated Surgery and Medical Robotics Technology”, Sharif University of Technology, Biomechanics Lab, Technical Report for **ISBME**, Jun. 2005.
- **A. Mirbagheri**, F. Farahmand, "**Proposal for Constitution and Fit out of a Robotic Surgery Lab**", Sharif University of Technology, Biomechanics Lab, Proposal for **Ministry of sciences; Research & Technology of I. R. IRAN**, Jul. 2005.

Invited Lectures and Workshops

- “Design, Analysis and Experimental Study of a Haptic Endoscopic Instrument for Manipulation of Large Organs”, at “Doctoral Consortium for Medical Simulation and Robotics”, **Chicago, Illinois, USA**, March 11th, 2010.
- “Introducing of RCSTIM Robotic Surgery Lab. and Development of Robolens”, at Robotic & Computer Assisted Surgery Workshop, 34rd Annual Scientific Congress of Iranian Association of Surgeons, **Tehran, Iran**, May. 1- 5, 2010.
- “Haptic Endoscopic Instrument for Large Organ Manipulation”, at “2010 North American Summer School in Surgical Robotics and Simulation”, **Uni. of Washington at Seattle, WA, USA**, Aug. 23-27, 2010.
- “Overview of Robotic Surgery Projects at RCSTIM/RSL”, at Laboratory for Computational Sensing and Robotics (LCSR), **Johns Hopkins University, Baltimore, MD, USA**, Sept. 10. 2010.
- “Overview of Robotic Surgery Projects at RCSTIM/RSL”, at the **School of Engineering, University of California, Irvine, CA, USA**, Sept. 21. 2010.

Patents:

- An **Assistant Robot** for Laparoscopic Surgery (**Robolens**). Iran **Nation-Wide Patent** No. 40674 (2007)
- A Hand Robotic Rehabilitation Device for Post Stroke Patients. Iran **Nation-Wide Patent** No. 80212 (2009)
- A Haptic Endoscopic Instrument for Large Organ Manipulation. Iran **Nation-Wide Patent** No. ***** (filed- 2011)
- An Endoscopic Suction gripper for Large Organ Grasping. Iran **Nation-Wide Patent** No. ***** (filed- 2010)
- A 5 DOF Master robot for a Tele-robotic Surgery System. Iran Nation-Wide Patent No. ***** (filed- 2011)

- A 5 DOF Slave robot for a Tele-robotic Surgery System. Iran Nation-Wide Patent No. 69928 (2010)
- A 5 DOF Haptic Robotic System for Laparoscopic Surgery Training. Iran Nation-Wide Patent No. 69921 (2010)
- A 3 finger Master Interface Robot for Sense of Large Organ Grasping, . Iran Nation-Wide Patent No. ***** (filed- 2011)

Honors and Achievements:

- **Razi Award** (1st rank in the 17th **Razi Research Festival on Medical Sciences**, Innovations and Inventions division), (2011)
- **Khwarizmi Youth Award** (1st rank in "The 11th **Khwarizmi Youth Nation-Wide Festival**", Robotic surgery Competition division), (2009)
- **Iranian National Elite Foundation** (**NEF**) Research and Innovation Grant (2009)
- 1st rank in "**sharif Technopreneurship and Job Developer Festival**", in the best Idea Planners section), (2008)
- Sharif University of Technology **Exceptional Talents Fellowship (2008- 2009)**
- **Honor of Sharif Stars** (2008)
- **Sheikh Bahae'i Gold Board (**2nd rank in "The 4th **Sheikh Bahai Technopreneurship Nation-Wide Festival**", in the best Business Planners section), (2008)
- **Iranian National Elite Foundation** (**NEF**) **Award** (about 30.000 $ awarded to the PhD student selected as an elite by NEF) (2008-2011)
- **Khwarizmi Youth Award** (2nd rank in "The 9th **Khwarizmi Youth Nation-Wide Festival**", in the Applied researches Division), (2007)
- "**The Best Nation-Wide Applied M.S Thesis Award of the Year**" selected by Iranian Society of Mechanical Engineers (2007), (ISME, Dr. Afshari's Award)
- 2nd rank in **Iran Nation-Wide Health Research** Selected by Ministry Of Health and Medical Education (2007)
- Distinguished student selected by **SUT Exceptional Talents Development Office** for Ph.D. program in SUT without Entrance Examination (2006)
- Be amongst top five Department Students – Sharif University of Technology (2003- 2005)
- 3rd Rank amongst Department Alumni – University of Yazd (2003)
- 1st Rank amongst Department and Engineering School Students – University of Yazd (1999- 2000)
- 4th rank in nation-wide Pre-university entrance examination (1998)
- Awarded honor of Distinguished Student in Emam Mohamad Bagher Festival – Emam Mohamad Bagher Educational Institute (1998)
- Selective Student in the Nation-Wide Scientific Olympiad of Physics at the First Stage- Iran (1998)
- 1st Rank in the Nation-Wide (shahed) Scientific Olympiad– Iran (1995)

Teaching and Research Assistantship:

- Research Assistant, "Robotic Surgery", **CEDRA** (Center of Excellence in Design, Robotics, and Automation), Department of Mechanical Engineering, Sharif University of Technology, (2004 – Present.)
- Research Assistant in **Biomechanics Lab**, Sharif University of Technology, Mechanical Engineering Department, Oct. 2003- Present.
- Research Assistant, "Computer Integrated Surgery and Medical Robotics", **ISBME** (Iranian Society for Biomedical Engineering), Nov. 2003 – Present.
- Research Assistant, "Application of Robotic Surgery in Minimally Invasive Surgery", **ICMED** (Incubation Center for Medical Equipments and Devices), Dec 2003 – Present.
- Teacher, "ANSYS", scientific society of Yazd University, Fall 2002.
- Teacher, "MSC.visualNastran 4D and Working Model", scientific society of Yazd University, Spring 2003.
- Teacher, "Automatic Control", Avesta Educational institute, Tehran, Iran, Since Spring 2006.
- Teaching Assistant, "Automatic Control", Mechanical Engineering Department, School of Engineering, University of Yazd, Spring 2002 & Spring 2003.
- Teaching Assistant, "Applied Electronic", Mechanical Engineering Department, Sharif University of Technology, Fall 2004.
- Teaching Assistant, "Material Science", Mechanical Engineering Department, Sharif University of Technology, Fall 2006- Present.
- Teaching Assistant, "Bio Instrument", Mechanical Engineering Department, Sharif University of Technology, Spring 2009- Present.

Scientific and Industrial Training Course:

- "2010 North American Summer School in Surgical Robotics and Simulation", BioRobotics Lab., **Uni. of Washington** at Seattle, WA, USA, Aug. 23-27, 2010.
- Visiting student at Laboratory for Computational Sensing and Robotics (LCSR), **Johns Hopkins University,** Baltimore, MD, USA, Sept. 2010.
- Visiting student at Harvard Biorobotics Laboratory, **Harvard University,** School of Eng. and Applied Science, Cambridge, MA, USA, 2010.
- Visiting student at MIT computer Science and Artificial Intelligence Lab., **Massachusetts institute of Tech. (MIT),** Cambridge, MA, USA, 2010.
- "Applied CNC Programming", Isfahan Occupational and Technical Center, Jun. 2001- Sep. 2001.
- "Applied Die Casting", Isfahan Occupational and Technical Center, Jun. 2001- Sep. 2001.
- "Applied Auto Mechanic", Isfahan Occupational and Technical Center, Jun. 2000- Sep. 2000.

Industrial Experiences:

- **Internship**: "Saba Expansion Project", **Isfahan Steel Corporation**, Isfahan, Iran, Jun. 2002- Sep. 2002.
- **R & D Member**: Mobarez Research Corporation, Isfahan, Iran, Jun. 2003- Sep. 2003.

Selected Projects:

- Design and Development of a New Vibration Measurement System Using Image Processing Method (Sharif University of Technology 2003-2005)
- Design, Fabrication and Clinical Test of the First Assistant Robot for Laparoscopic Surgery (**Robolens**) in Iran (IDRO- SUT- RCSTIM 2004-2007)
- Design, Fabrication and Clinical Test of a Practical Telesurgical Robotic System with Haptic Feedback (**Sina**) (SUT, RCSTIM 2007-Continuing)

Affiliations:

- Referee expert of research proposal at **Tehran Uni. of Medical Science.** .(Since Nov. 2011)
- Editorial Board Member of "**Advances in Robotics and Automation**" journal.(Since Sept. 2011)
- Master adviser of **Industrial Development and Renovation Organization of Iran (IDRO),** in Robotics Project, Feb. 2007- Present.
- Member: **ASME** (American Society of Mechanical Eng.). (Since May. 2010)
- Member: **IEEE** (Institute of Electrical and Electronics Engineers), (Since May. 2010)
- Member: **IEEE/EMBS** (Engineering in Medicine and Biology Society), since Fall 2010.
- Member: **ISBME** (Iranian Society for Biomedical Engineering), Fall 2003- Present.
- Member**: Nano-Technology Expertness Committee** in Biomedical Engineering, under Supervision of ISBME, Fall 2003- Present.
- Member: Research Center for Science and Technology in Medicine (**RCSTIM**), Robotic Surgery Group, Fall2005- Present.
- Member: Alumni Association of Engineering Faculty of University of Yazd, Sep. 2003-Present
- Member: Biomechanics Laboratory, Mechanical Engineering Department, Sharif University of Technology, Sep. 2003- Present.
- Student Member: Mobile Robot Group, Isfahan University of Technology, Fall 2000- Spring 2001.
- Student Member: Mobile Robot Group, Yazd University, Fall 2001- Spring 2003.

Computer and Programming Skills:

- **Proficient in:**
  - **Software**: AutoCAD, Mechanical Desktop, Autodesk Inventor™ & MechSoft, Solid Works, Working Model, Visual Nastran 4D, MATLAB (Simulink/ Quarc), Maple.
- **Familiar with:**
  - **Programming**: C++/C, Basic, Visual Basic.
  - **Software**: Abacus, ANSYS, Solid Edge, ADAMS, SurfCAM, CATIA, ProE, Mathematica.

Interests and Activities

Maintenances and Technical hand job, Drawing, Riding and Traveling.