



Prof. Dr. Ali Raza Jafri

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Educational Qualification

<i>Ph.D. (Mechatronics)</i>	2007
Beijing Institute of Technology, Beijing, P.R. China	
<i>M. E. (Mechanical Engineering)(specialization in manufacturing)</i>	2002
NED University of Engineering & Technology, Karachi, Pakistan	
<i>B.E. (Mechanical Engineering)</i>	1996
NED University of Engineering & Technology, Karachi, Pakistan	

Professional Experience

Professor (Sept. 2022—till date)

Department of Automotive & Marine Engineering
NED University of Engineering & Technology, Karachi, Pakistan

Professor (2010 — Sept. 2022)

Department of Biomedical Engineering (LEJ Campus)
NED University of Engineering & Technology, Karachi, Pakistan

Associate Professor (2007—2010)

Department of Biomedical Engineering (LEJ Campus)
NED University of Engineering & Technology, Karachi, Pakistan

Assistant Professor (2002—2007)

Department of Industrial & Manufacturing Engineering
NED University of Engineering & Technology, Karachi, Pakistan

Lecturer (2000 to 2002)

Department of Industrial & Manufacturing Engineering
NED University of Engineering & Technology, Karachi, Pakistan

Lecturer (1997 to 2000)

Department of Mechanical Engineering
NED University of Engineering & Technology, Karachi, Pakistan

Undergraduate Teaching

- Taught following courses at undergraduate level since 1997
 - Mechatronics (currently teaching to Senior level students)
 - Computer aided Engineering Graphics
 - Introduction to Biomedical Engineering
 - Engineering Mechanics
 - Automation and Robotics
 - Introduction to Robotics
 - Control systems Engineering
 - CAD/CAM
 - Manufacturing Processes
 - Product Design in Biomedical Engineering

Postgraduate Teaching

- Taught various courses at Masters and Ph. D. level
 - Introduction to Mechatronics
 - Mechatronics systems Design
 - Medical Robotics
 - Robotics and its application to Industrial Electronics
 - Industrial Automation and Robotics
 - Regulatory Framework for Medical Devices
 - Mobile Robotics (at CS dept. IBA)
 - Humanoid Robotics (at CS dept. IBA)

Administrative Responsibilities (from 1997 till date)

- Worked as Chairman, Department of Biomedical Engineering from Oct. 2011 till July 2022 (around 11 years)
- Worked as Co Chairman, Dept. of Biomedical Engineering from 2009 till 2011
- Worked as Masters Program Coordinator from 2012 till Aug. 2016
- Worked as Area Coordinator for ISO 9000 certification for almost 3 years
- Become part of ISO 9000 and QEC Audit process
- Have been actively involved in Biomedical Curriculum development process as well as member committee of HEC curriculum guidelines (NCRC)
- Have been involved in University's Entry test process (as Invigilator and Head Invigilator)
- Involved in departmental resource development (Library, Laboratory equipment etc)
- Involved in Pakistan Engineering Council accreditation process since 2009
- Member of Different statutory bodies (Board of studies, Board of faculty, Academic Council, Syndicate, Senate, BOR Finance Department and library committee)
- Conducting Undergraduate and Post graduate examination as Factotum and Head Invigilator (since 2007)

Final year Projects and Master Thesis Supervision

- Have supervised various undergraduate and Masters projects and thesis since 2007

Research Interests

Mechatronics, Control systems, Humanoid Robots, Mobile Robots, Medical Robotics and Biomechanics, Biomedical Engineering, Medical Device Design, Regulatory Affairs for Medical Devices, Industrial Automation and Automotive Engineering

Research Publications

1. Ali Raza Jafri, Qiang Huang, Lige Zhang, Jie YANG, etc. "Realization and Trajectory Planning for Obstacle Stepping Over by Humanoid Robot BHR-2", IEEE International Conference on Robotics and Biomimetics, 2006, China: pp1384-1389(EI Indexed)
2. Ali Raza Jafri , Qiang HUANG, Jie YANG, Lige ZHANG, Zhijie WANG and Tao XIAO "Motion Planning for Stepping On/Off Obstacles by Humanoid Robot", IEEE International Conference on Mechatronics and Automation 2007 (EI Indexed)
3. Ali Raza Jafri, Qiang HUANG, Jie YANG, Weimin ZHANG, "Motion Planning of Humanoid Robot for Obstacle Negotiation", Journal of Beijing Institute of Technology 2008 (EI Indexed)

4. Lige Zhang, Qiang Huang, Shusheng Lv, You Shi, Ali Raza Jafri. "Humanoid Motion Design Considering Rhythm Based on Human Motion Capture", IEEE/RSJ International Conference on Intelligent Robots and Systems, China: 2006. pp 2491-2496 (EI Indexed)
5. Zhaoqin Peng, Qiang Huang, Lige Zhang, Ali Raza Jafri, Weimin Zhang, Kejie Li. "Humanoid On-line Pattern Generation Based on Parameters of Off-line Typical Walking Patterns", IEEE International Conference on Robotics and Automation. Spain:2005. pp 3769-3774(EI Indexed)
6. 张利格, 黄强, 杨洁等, Ali Raza Jafri. 仿人机器人复杂动态动作设计及相似性研究。自动化学报, 2006 (已录用, EI 收录)
7. ZHANG Li-Ge, HUANG Qiang, YANG Jie, SHI You, WANG Zhi Jie, JAFRI Ali Raza, "Design of Humanoid Complicated Dynamic Motion with Similarity Considered", Zidonghua Xuebao/Acta Automatica Sinica, Volume 33, Issue 5, year 2007, pp. 522-528.
8. Muhammad Usman KEERIO, Lei ZHANG, Yuepin LU, Ali Raza Jafri, and Jia peng YANG "Control Scheme for Stable Bilateral Teleoperation with Time Delay", IEEE International Conference on Robotics and Biomimetics, 2006, China: pp433-489 (EI Indexed)
9. Nasir Rahman and Ali Raza Jafri, "Two Layered Behaviour Based Navigation of a Mobile Robot in an Unstructured Environment using Fuzzy Logic" Proceedings - IEEE 2005 International Conference on Emerging Technologies, ICET 2005, v 2005, Proceedings - Thirteenth International Symposium on Temporal Representation and Reasoning, TIME 2006, 2005, pg. 230-235 (EI Indexed)
10. Nasir Rahman, Ali Raza Jafri, M. Usman Keerio, "Fuzzy Behaviour Based Navigation of a Mobile Robot for Tracking Multiple Targets in an Unstructured Environment", WSEAS TRANSACTIONS on SYSTEMS Issue 6, Volume 5, June 2006 (EI Indexed)
11. Attaullah Khawaja, Abdul Fattah Chandio, Ali Raza Jafri, Altaf Rajpar, "Comparison of the classification of Printed Chinese Characters by adding different types of Noise with the use of Neural Network", WSEAS TRANSACTIONS on SIGNAL PROCESSING Issue 5, Volume 2, May 2006 (EI Indexed)
12. KM Junaid, MU Keerio, AU Khawaja, Ali Raza Jafri , "A Neural Network based adaptive autopilot for marine applications" , Proceeding of IEEE Intl. Conf. of Cybernetics & Intelligent Systems (CIS) and Robotics, Automation & Mechatronics (RAM), Bangkok, Thailand 2006,pg 359-364, (EI Indexed)
13. Muhammad Usman keerio , Abdul Fattah Chandio, Attaullah Khawaja and Ali Raza Jafri "Virtual Scene for Telerobotic Operation", IEEE-ICET 2006 2nd International Conference on Emerging Technologies Peshawar, Pakistan , Pg 670-675. (EI Indexed)
14. Muhammad Usman keerio , Altaf Hussain Rajpar, Noor Muhammad Memon and Ali Raza Jafri "A Control Strategy for Robot Joint Model" IEEE INMIC 2006 International Multi Topic Conference 2006, Pg.410-414, (EI Indexed)
15. Muhammad Usman keerio, Weimin Zhang & Ali Raza Jafri "Cooperation of Humanoid Robots using Teleoperation for Transferring an Object" International Journal of Advanced Robotic Systems, Vol. 5, No. 1 (2008) ISSN 1729-8806, pp. 31-40. (EI Indexed)
16. Muhammad Usman keerio, Altaf Hussain Rajpar , Attaullah Khawaja and Ali Raza Jafri, "Collaboration of Teleoperated Multiple Humanoid Robots" DCDIS Proceedings of the

International Conference on Life System Modeling and Simulation (LSMS2007), pp 381-385.

17. Nisar Ahmed Shar, Samreen Feroz, Amatal Habib, Ali Raza Jafri, Maryam Siddiqua, Sobia Saleem “Association of Anti-Histamine Drugs with Brain Tumor”. ICONIP (1) 2012
18. Tabinda Rasool, Syed Rehan Ahmed, Iqra Ather, Madeeha Sadia, Rashid Khan and Ali Raza Jafri “Synthesis and Characterization of Hydroxyapatite Using Egg-Shell” , ASME 2015 International Mechanical Engineering Congress and Exposition Volume 3: Biomedical and Biotechnology Engineering Houston, Texas, USA, November 13–19, 2015
19. Fatima Sughra Zaidi, Ubaida Fatima, Bilal Ahmed Usmani, Ali Raza Jafri “Comprehending Nodes Essentiality through Centrality Measures in Biological Networks”, IJCSNS International Journal of Computer Science and Network Security, VOL.19 No.9, September 2019
20. Aqsa Khan, Ghazna Hassan Khan, Eraj Humayun Mirza, Alidad Chandio, Maliha Mohsin, Mahnoor Hassan, Manal Naushad and Ali Raza Jafri “Development and Characterization of Acrylic Based Bone Cements” Journal of Biomaterials and Tissue Engineering, 2021
21. Assistive glove for Pakistani Sign Language translation, Kehkashan Kanwal; Saad Abdullah; Yusra Binte Ahmed; Yusra Saher; Ali Raza Jafri 17th IEEE International Multi Topic Conference 2014

Professional Membership

- Life time member, Pakistan Engineering Council (MECH-12489)
- Member, Institution of Engineers Pakistan

Extracurricular Activities

- Cycling
- Playing Badminton
- Woodworking/Carpentry