



DR. SAIFULLAH SAMO

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Permanent address:

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C/o Mehran Decoration Service, Heerabad, Hyderabad, Sindh, Pakistan.

An organized and innovative professional with proven teaching, guidance, and counseling skills with doctorate degree in mechanical engineering with major mechatronics. Having 2½ years field experience as assistant manager in private engineering firm. Team-oriented, creative, and technically experienced.

Currently, from March-2015, serving as Assistant Professor at Mechatronic Engineering Department of Mehran University of Engineering & Technology Jamshoro, Sindh, Pakistan.

[OBJECTIVES]

To utilize, the teaching methodologies and provide the students with a positive learning experience, and to utilize field experience for giving the practical knowledge, which makes the student's career progressive. Looking to contribute my knowledge and skills in an institution that offers a genuine opportunity for career progression.

[RESEARCH INTERESTS]

Intelligent Control,	Robotics and Control
Robust Decentralization Control,	Mechatronics and Artificial Intelligence,
Industrial Automation,(PLC/CNC)	Optimization and Robust Control,

[TEACHING DIFFERENT SUBJECTS IN FOLLOWING PROGRAMS]

Bachelor (Undergraduate) Students of **B.E Mechatronic and B.E Mechanical Programs**
Masters Students of **M.E Mechatronics and M.E Manufacturing Programs**
Ph.D. Students of **Mechatronics Program**
Taught the **Modern Control System** subject to Bachelor (**Undergraduate**) students, during PhD. at BIT, Beijing China.

[TEACHING INTERESTS]

Kinematics and Dynamics,	Robotics,	Actuators & Sensors
Feedback Control,	Mechatronics,	Industrial Automation
Optimization and System Identification,	Nonlinear Control,	Robust Control

[PROJECT & THESIS TOPIC]

Ph.D.	RESEARCH ON A FUEL DRIVEN HOPPING ROBOT
M.E.	DESIGN OF A NON-LINEAR STEERING CONTROLLER FOR A VESSEL
B.E.	MATERIAL HANDLING EQUIPMENT AT ZEAL PAK CEMENT FACTORY

[FUNDS & GRANTS]

<i>Sr. #</i>	<i>Project</i>	<i>Funding Agency</i>	<i>Fund (Rs.)</i>
1	Design and Control of Smart Service Robot for office Use.	Ignite Pakistan	Rs.74255/-
2	Development of Surveillance Spider Robot for Inspection of Mines and Dangerous Terrain.	Ignite Pakistan	Rs.70210/-

[DEVELOPMENT OF PHYSICAL SYSTEMS]

- Electro Pneumatic Educational Trainer,
- 3 axis CNC Milling Machine Educational Trainer
- PLC & Arduino based Industrial Automation Trainers.
- Commissioning of 3D Printer at Mechatronic Lab, MUET Jamshoro.

[RESEARCH ACHIEVEMENTS]

- Designed a new miniature pneumatic pressure regulator for small and portable robotics and mechatronics applications. Prototype also fabricated for experiments.
- Designed a new structure for piston type hopping robot to increase the mobility with system protection.
- Fabricated a prototype of piston type hopping robot for exploration for mars/moon surface.
- Development of physical educational trainers and commissioning of equipment.

[HOBBIES & INTERESTS]

Reading books, newspaper, listening to music, badminton, watching news.

[TEACHING EXPERIENCE]

Assistant Professor, Mechanical Engineering Department, Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan from March 2nd, 2015.

(Experience till 30 April 2021: 6 years, 1 Month, 28 days)

Activities:

- Member of Board of Studies for Mechatronic Engineering Undergraduate program.
- Member of Curriculum Development Committee of Mechanical/Mechatronics Department.
- Member of Departmental Management Review Committee (DMRC) of Mechanical/Mechatronics Department.
- Designed course curriculum (syllabi) for courses in the Mechatronic Engineering Undergraduate program
- Responsibilities in the department include supervising students of Masters & Undergraduate programs, teaching classes of Masters & Undergraduate programs.

[RESEARCH EXPERIENCE]

Full-time Researcher (PhD. Research student) at School of Mechanical Engineering, Beijing Institute of Technology (BIT) from 1st September 2010 to 3rd July 2014. During my Ph.D. studies I also assisted my supervisor for conducting classes/labs.

[FIELD EXPERIENCE]

Assistant Manager, Engineering Service Department, Baluchistan Engineering Works Ltd. (BEWL) HUB, Baluchistan, Pakistan. from March 1st, 2008 to August 15th, 2010.

Computer Programmer/Secrecy Officer, Examination Department, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan from July 23rd, 2002 to December 19th, 2007.

[ACADEMIC QUALIFICATIONS]

Degree/Certificate	Major subject (duration)	Passing year	University/Institute
Doctorate (PhD)	Mechanical Engineering (Robotics-Mechatronics)	July 2014	Beijing Institute of Technology, China
Master of Engineering	Information Technology	January 2007	Mehran University Jamshoro, Pakistan
Bachelor of Engineering	Mechanical Engineering	March 2002	Mehran University Jamshoro, Pakistan
Intermediate	Pre-Engineering	1994	B.I.S.E Hyderabad
Matriculation	Science	1992	B.I.S.E Hyderabad

[MODERN TOOLS / COMPUTER SKILLS]

- ◆ AutoCAD, MatLab,
- ◆ CNC Simulator,
- ◆ Advanced user of MS Office.
- ◆ Automation Studio (Fluid control systems)
- ◆ PLC Simulator
- ◆ Advanced proficiency in MS Excel

[MEMBERSHIPS]

- Member of Pakistan Engineering Council (PEC) and membership number is MECHANICAL-16644, from May 2002 to present. <http://www.pec.org.pk/getpecno.aspx>
- IEEE Membership from January 2017
- IEEE Robotics and Automation Society (RAS) from January 2017
- IEEE Symbiotic Autonomous Systems Community, from January 2018

[STUDENT SUPERVISION / PRODUCED]

Undergraduate				Masters				Ph.D.			
Supervision		Produced		Supervision		Produced		Supervision		Produced	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
104	08	86	06	04	05	06	01	01	-	-	-

[PERSONAL]

Father's name : ABDUL AZIZ SAMO
 CNIC No. : 41303-3958400-1
 Passport No. : A E 5 2 9 4 0 0 2
 Date of birth : 0 8 - 0 2 - 1 9 7 7
 Nationality : Pakistani
 Marital status : Married
 Proficient languages : English, Urdu, Sindhi
 Beginner language : Chinese

[CONTACT DETAILS]

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Address: ☒ House No. 366/2, A/116 Saman-Jo-Paro, Near Roop Mahal
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[PATENT]

Patent “一种活塞驱动式跳跃机器人” (Piston-driven hopping robot)
 Publication number CN103895727 A
 Publication type Application
 Application number CN 201410151835
 Publication date 2nd July, 2014
 Inventors 马树元, 塞夫乐(Ma Shuyuan, Samo Saifullah)
 Applicant 北京理工大学 (Beijing Institute of Technology, Beijing, China)

[AWARDS]

- Excellent international student award for year 2010-2011 at Beijing Institute of Technology, Beijing China.
- Excellent student award for year 2012-2013 at Beijing Institute of Technology, Beijing China.
- Distinguished student award for year 2010-2013 at Beijing Institute of Technology, Beijing China.

[REVIEWER]

International Journal of Intelligent and Robotic Systems, Springer,

[SHORT COURSES]

Control of Mobile Robots, Georgia Institute of Technology, (Duration 7 weeks)

Industrial IoT Markets and Security, University of Colorado Boulder, (Duration 5 weeks)

[ACADEMIC JOURNAL (PUBLICATIONS)]

1. "Dynamic Structural Analysis of Engine Crankshaft at Different Angle of Crank Turns For Three Different Materials" Journal of Mechanics of Continua and Mathematical Sciences, Vol.16, No.03, March 2021, pp 86-98. ISSN 0973-8975.
2. "One Way Fluid-structure Interaction Analysis of Vertical Axis Hydrokinetic Turbine" International Journal on Emerging Technologies, Vol.12, No.01, January 2021, pp 19-24. ISSN 2249-3255.
3. "Improving Cooling Capacity of HVAC System, A Case Study to Determine Efficient and Cost-Effective Opportunities at Pharma Company" International Journal on Emerging Technologies, Vol.11, No.05, December 2020, pp 623-627. ISSN 2249-3255.
4. "Experimental Analysis of Lead Acid Battery by Introducing Graphene & Lead Composite" Sukkur IBA Journal of Emerging Technologies (SJET), Vol.03, No.02, December 2020, pp 1-12. ISSN 2616-7069.
5. "Analytical Analysis and Performance Characterization of Hexagonal Grid Configuration of Wet Cell Battery" International Journal on Emerging Technologies, Vol.11, No.05, October 2020, pp 459-464. ISSN 2249-3255.
6. "Analysing the effectiveness of Lean Six-Sigma Approach on Reduction of MUDAS (Wastes). A case study at SME (Small Manufacturing Enterprise) of Pakistan", International Journal on Emerging Technologies, Vol.11, No.05, September 2020, pp 339-345. ISSN 2249-3255.
7. "Modification and Simulation of a Fin & Tube Cooling battery using SOLIDWORKS and ANSYS", International Journal for Research in Applied Science & Engineering Technology, Vol.08, No.03, March 2020, pp 480-484. ISSN 2321-9653.
8. "Design and Analysis of Plastic Extruder as 3D Printer Head (FDM).", Pakistan Journal of Science (PJS), Vol.71, No.4, Dec 2019, pp 283-287. ISSN 2411-0930,
9. "Novel Design and Modeling of Shutter Valves for Camless Engines", International Journal of 3C Tecnología, Vol.1, No.2, May 2019, pp 520-533. ISSN 2254-4143
10. "Modeling and Development of Pneumatic Accumulating System", International Journal of Modern Research in Engineering & Management (IJMREM), Vol.1, No.10, November 2018, pp 46-54. ISSN 2581-4540.
11. "Influence of convergent Section Length and Angle on Performance of Supersonic Nozzle", Sindh University Research Journal (Science Series), Vol.49, No.4, Dec 2017, pp 727-732. ISSN:1813-1743.
12. "Aerodynamic Performance Analysis of Rough Rectangular Aircraft Wing for Subsonic Flow", Sindh University Research Journal (Science Series), Vol.49, No.2, April 2017, pp 403-408. ISSN: 1813-1743.
13. "Novel miniature pneumatic pressure regulator for hopping robots" Journal of Beijing Institute of Technology (BIT), Vol. 24, No. 1, 2015, pp. 42-48. ISSN 1004-0579,
14. "Slip Enhancement in Continuously Variable Transmission by Using Adaptive Fuzzy Logic and LQR Controller", Indonesian Journal of Electrical Engineering and Computer Science (IJECS), Vol. 12, No. 8, August 2014, pp. 6101-6110 ISSN: 2302-4046,

15. "Control Speed Ratio Electro-Hydraulic System of Continuously Variable Transmission (CVT) By Robust PI Controller" International Journal of Engineering Technology (IJET), IACSIT, Vol. 5, No.5, October 2013, pp. 561-565. ISSN 1793-8236,
16. "An Overview on Control Concepts of Push-Belt CVT", International Journal of Engineering Technology (IJET), IACSIT, Vol. 4, No. 4, August 2012, pp.392-395, ISSN 1793-8236,

[CONFERENCE PROCEEDINGS (PUBLICATIONS)]

1. "ZigBee-Based Wireless Torque Measuring Gadget" ,2012 Proceedings of the 2012, IEEE 2nd International Conference on Instrumentation and Measurement, Computer, Communication and Control, IMCCC 2012, Harbin, Heilongjiang, China, pp 1211-1214, 2012
2. "Modeling and Simulation of Continuously Variable Transmission (CVT) hydraulic system" 3rd International Conference on Manufacturing Science and Technology, ICMST 2012, New Delhi, India, August 2012. MST-III, pp 1221-1225, Vols. 622-623 (2013)
3. "Comparison of PID, Pole Placement and LQR Controllers for Speed Ratio Control of Continuously Variable Transmission (CVT)" IISRO multi-conference 2013, Pataya, Thailand, pp 149-153, (2013)
4. "Improvement Shifting Control of Continuously Variable Transmission (CVT) by using PID, Pole Placement and LQG", 2nd International Conference on Mechanics and Control Engineering, ICMCE 2013, Beijing, China, September 2013. MSME, pp 1165-1170 Vols. 446-447 (2014).
5. "The Control of Fuel System for Combustion Piston Type Hopping Robot", 3rd International Conference on Advanced Design and Manufacturing Engineering, ADME 2013, Anshan, China, July 2013. ADMT, pp 1574-1579, Vols. 397-400 (2013)
6. "The design of Hopping Angle control by using PID and LQR techniques", 2013 International Conference on Mechanics and Mechatronics, ICMME 2013, Guilin, Guangxi, China, October 2013. MM, pp 693-700, Vol. 419 (2013)
7. "Steer Mechanism for Combustion Piston Type Hopping Robot with Adjustable Hop Angle", 2013 International Conference on Mechatronics, Robotics and Automation, ICMRA 2013, Guangzhou, China, June 2013. 3MRA, pp 173-180, Vols. 373-375 (2013)
8. "New method of plane to plane parallelism error measurement based on flatness plane", 5th International Conference on Manufacturing Science and Engineering, 2014, Shanghai China, April 2014. MPT, pp 2209-2218, Vols. 941-944 (2014)
9. "Modeling and simulation of robotic finger using gear train mechanism", 2019 4th International Electrical Engineering Conference (IEEC 2019), January 2019 at IEP Centre, Karachi, Pakistan, pp 01-04, (2019)
10. "Exploring Productivity Enhancement Option for Pulp and Paper Industry in Pakistan", 2019 2nd International Conference on Sustainable Development in Civil Engineering (ICSDE 2019), December 2019 at CEDIEEM MUET Jamshoro, pp 524-526, (2019)

[SEMINARS, TRAININGS & WORKSHOPS ATTENDED]

1. Conference on "Developing and assessing research proposal" Organized by: Center for executive education (CEE), Institute of Business Administration, Karachi at center for executive education (CEE), Institute of Business Administration, Karachi, from 27th to 30th July 2015.
2. Workshop on "Outcome Based Education and Accreditation System", Organized by: ORIC, MUET at Mehran University of Engineering & Technology, Jamshoro, Sindh, on 5th May 2016.
3. One day Workshop on "Biomass Energy", Organized by: MUET in Collaboration with Coventry University London at Mehran University of Engineering & Technology, Jamshoro, Sindh, on 4th November 2016.

4. *Controls & Robotics Seminar*, organized by: Quanser Innovate Educate and Rastek Technologies Karachi. At DHA Suffa University Karachi, from 3rd to 5th April 2017.
5. *3-Days Curriculum Based Workshop on Mechatronics Engineering*, organized by: Learning Innovation Division HEC Islamabad at EME, NUST, Islamabad from 18th to 20th October 2017
6. *5-days Workshop on "Development of Assessment Pack for Mechatronics Technology (level-5)"*, Organized by: National Vocational & Technical Training Commission, Islamabad from 4th to 8th November 2019 at Arena Karachi.
7. *5-days Workshop on "Development of Qualification Pack for Mechatronics Technology (level-5)"*, Organized by: National Vocational & Technical Training Commission, Islamabad from 11th to 15th January 2020 at Mehran Hotel Karachi.
8. *Capacity Building Workshop on "Development SAR as per PEC Accreditation Manual 2014 for OBE & A Implementation"*, One CPD Credit point, Organized by: Pakistan Engineering Council and MUET at ISAID, Mehran University of Engineering & Technology, Jamshoro, Sindh, on 5th December 2017.
9. *One Day CPD Workshop on "OBE Software Hands-on Practice"*, Organized by: Pakistan Engineering Council and Indus University at Indus University, Karachi, on 27th January 2018.
10. *Two days' Workshop on "Technology Program Evaluators"*, Organized by: NTC in Collaboration with QAA-HEC at HEC Regional Center, Karachi on 18th and 19th April 2018.
11. *Five days' Training Workshop on "Computer Intergraded Manufacturing System"*, Organized by: MUET in Collaboration with intelitek at Mehran University of Engineering & Technology, Jamshoro, Sindh, 26th - 30th August 2018.
12. Online Software Training on OBE organized by MUET, Dated: 18-September 2019 at Video Conference Hall, IICT Building, MUET Jamshoro.
13. Online Software Training on OBE organized by MUET, Dated: 1st -January 2020 at Computer Lab. Mechanical Engineering Department, MUET Jamshoro.
14. "Outcome Based Education", Video Conference Room, IICT, MUET, Jamshoro, 17.02.2020, Speaker: Prof. Dr. Muhammad Junaid Mughal, Comsat, Islamabad.

[COURSES / TRAINING CONDUCTED]

1. 5 days Training workshop on Arduino: 'Sketching & Automation', of 20 credit hours, from November 26th to 30th 2018, at Mechatronic Engineering Lab. MUET Jamshoro.
2. 4 days hands-on workshop on PLC Training with HMI, VFD & Servo Motor, of 20 credit hours, from April 24th to 25th and May 2nd to 3rd 2019. at Mechatronic Engineering Lab. MUET Jamshoro.
3. Workshop on Arduino: 'Make Things Move', of 4 credit hours, on March 18th, 2021, at Computer Lab. Mechatronic Engineering Department. MUET Jamshoro.