

Prof. Dr. Muhammad Asif

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PROFILE

- Team Lead and Principal Investigator for Data Acquisition, Processing Predictive Analytics Lab - Ziauddin University, NATIONAL CENTER IN BIG DATA AND CLOUD COMPUTING (NCBC).
- HEC Approved Ph.D. Supervisor
- Two years' research experience in USM Robotic Research Group (URRG), Malaysia
- Supervised various BS and MS projects on Embedded Systems, Automation and intelligent control.
- Successfully completed various funded projects as Principal investigators.
- Conducted, participated and organized various events such as conferences, seminar, open house and job fair and robotics competitions.
- Received research funding from ICT R&D on various projects.

PROFESSIONAL EXPERIENCE

PROFESSOR & PRINCIPAL INVESTIGATOR

January 2020 – till date

Electrical Engineering Department,
Faculty of Engineering Science and Technology,
Ziauddin University,
Karachi, Pakistan.

PROFESSOR & CHAIRPERSON

June 2017 – December 2020

Electrical Engineering Department,
Faculty of Engineering Science and Technology,
Ziauddin University,
Karachi, Pakistan.

ASSOCIATE PROFESSOR

Jan. 2016 – May 2017

Electronic Engineering Department,
Sir Syed University of Engineering and Technology (SSUET),
Karachi, Pakistan.

ASSISTANT PROFESSOR

June 2008 – Jan. 2016

Electronic Engineering Department,
Sir Syed University of Engineering and Technology (SSUET),
Karachi, Pakistan.

LECTURER*Oct. 2006 – June 2008*

Department of Telecommunication and Computer Engineering,
National University of Computer and Emerging Sciences, FAST,
Karachi, Pakistan.

RESEARCH OFFICER*Sept. 2004 – Aug. 2006*

School of Electrical and Electronic Engineering,
University Science Malaysia,
Pinang, Malaysia

LECTURER*March 2004 – Aug. 2004*

Faculty of Engineering and Applied Sciences,
Riphah International University,
Islamabad, Pakistan

ASST. SERVICE MANAGER*Feb. 2003 – Feb. 2004*

Biologic Medical System,
Karachi, Pakistan

EDUCATION**PHD in ELECTRICAL (CONTROL) ENGINEERING***Sept. 2009 – Nov. 2015*

National University of Sciences and Technology, (NUST), Pakistan

- **Research Title:** Modelling and Control for Trajectory Tracking and Multi-Robot formation of Nonholonomic Mobile Robot
- **Research Area:** Control and Embedded Systems

MS by RESEARCH in ELECTRICAL ENGINEERING*Sept. 2004 – Jan. 2007*

University Science Malaysia,
Pinang, Malaysia

- **Research Title:** A Bayesian Approach for Image-Based Underwater Target Tracking and Navigation
- **Research Area:** Control and System Design

BS in BIOMEDICAL ENGINEERING*Jan. 1999 – Dec.2002*

Sir Syed University of Engineering and Technology,
Karachi, Pakistan

- CGPA **3.44 / 4.0**
- Final Year Project: **Bio Tele-monitoring System**
- PEC No. **Biomedical / 0188**

RESEARCH & PUBLICATIONS

JOURNALS AND BOOK CHAPTERS

1. Meghani, S. K., **Asif, M.**, Awin, F., & Tepe, K. (2019). Empirical Based Ranging Error Mitigation in IR-UWB: A Fuzzy Approach. *IEEE Access*, 7, 33686-33697 (**Sci citation indexed with impact factor: 4.098**).
2. **Asif, M.**, Khan, M.J., & Memon, A.Y. (2017). Integral Terminal Sliding Mode Control for Leader Follower Formation Control. *Robotica* (**Sci citation indexed with impact factor: 1.184**)
3. Safwan, M., Uddin, V. and **Asif, M.** (2016), Nonholonomic Mobile Robot Trajectory Tracking using Hybrid Controller. *Mehran University Research Journal of Engineering and Technology*, Vol. 35, No. 2, April 2016.
4. **Asif, M.**, Memon, A.Y., & Khan, M.J. (2015). Output Feedback Control for Trajectory Tracking of Wheeled Mobile Robot. *Intelligent Automation & Soft Computing*, pp: 1-13. doi: 10.1080/10798587.2015.1044184 (**Sci citation indexed with impact factor: 0.652**)
5. Alvi, B.A., **Asif, M.**, Siddiqui, F.A., Israr, A., Kamal, M.S., & Yasir, M. (2015). Robust Controller Design for Satellite Attitude Determination, Stabilization and Control Using LQG/LTR. *Wireless Personal Communication*, DOI: 10.1007/s11277-015-2741-3. (**Sci citation indexed with impact factor: 1.20**)
6. **Asif, M.**, Khan, M.J., Safwan, M., & Rehan, M. (2015). Feedforward and Feedback Kinematics Controller for Wheeled Mobile Robot Trajectory Tracking. *Journal of Automation and Control Engineering*, Vol, 3(3).
7. Alvi, B. A., **Asif, M.**, Siddiqui, F. A., Safwan, M., & Bhatti, J. A. (2014). Fast Steering Mirror Control Using Embedded Self-Learning Fuzzy Controller for Free Space Optical Communication. *Wireless Personal Communications*, 76(3), 643-656. (**Sci citation indexed with impact factor: 1.20**)
8. **Asif, M.**, Khan, M. J., & Cai, N. (2014). Adaptive sliding mode dynamic controller with integrator in the loop for nonholonomic wheeled mobile robot trajectory tracking. *International Journal of Control*, 87(5), 964-975. (**Sci citation indexed with impact factor: 1.28**)
9. Amir, S., Hashmani, M., Chowdhry, B. S., & **Asif, M.** (2012). Experimental Study to Evaluate the Significance of Musical Stimuli in Reorientation of Fetal Head Position. *International Journal of Computer Applications*, 48(3), 39-44.
10. Alvi, B. A., **Asif, M.**, & Israr, A. (2012, January). Measurement of complex mode amplitudes in multimode fiber. In SPIE OPTO (pp. 82840K-82840K). *International Society for Optics and Photonics*. (**Sci citation indexed**)
11. Ali, S.F.A., **Asif, M.**, Mirza, E.H., & ul Hassan, S.N. (2013, January). Reduction in Increased Cadmium Concentration from Human Blood and Urine of Cigarette Smokers by using Cystus-Sud. *In World Congress on Medical Physics and Biomedical Engineering*, May 26-31, 2012, Beijing, China (pp. 132-135). Springer Berlin Heidelberg.
12. Ali, S.F.A., **Asif, M.**, ul Hassan, S.N., & Mirza, E.H. (2013, January). To Observe the Effects of Cystus-Sud on Mercury Concentration in Blood and Urine of Tobacco Smokers. *In World Congress on Medical Physics and Biomedical Engineering*, May 26-31, 2012, Beijing, China (pp. 126-129). Springer Berlin Heidelberg.
13. Amir, S., Chowdhry, B. S., **Asif, M.**, & Chowdhry, B. (2012). An External Approach to Improve the Information Content of Diagnostic Ultrasound Images. *In Emerging Trends and Applications in Information Communication Technologies*, (pp. 101-109). Springer Berlin Heidelberg.
14. Wallam, F., & **Asif, M.** (2011). Dynamic Finger Movement Tracking and Voice Commands Based Smart Wheelchair. *International Journal of Computer and Electrical Engineering*, 3(4), 497.

15. **Asif, M.**, Amir, S., Israr, A., & Faraz, M. (2010). A vision system for autonomous weed detection robot. *International Journal of Computer and Electrical Engineering*, 2(3), 486-491.
16. **Asif, M.**, Arshad, M. R., Yousuf, M., Zia, I., & Yahya, A. (2007). An implementation of active contour and Kalman filter for road tracking. *International Journal of Applied Mathematics*, 37(2), 1-7.
17. **Asif, M.**, & Arshad, M. R. (2006). An active contour and kalman filter for underwater target tracking and navigation. *INTECH Open Access Publisher*.

CONFERENCE PUBLICATIONS

1. Israr, A., Rakocevic, V., Alvi B.A., Aamir, M., & **Asif, M.** (2015). Analysis of Greedy Decision Making for Geographic Routing for Randomly Moving Object. *International Multitopic Conference 2015 (IMTIC'15)*
2. Alvi, B.A., Abbas, N., Israr, A., & **Asif, M.** (2014, May). Optimized design of sun sensor and centroid algorithm for small satellite mission. In *Wireless Communications, Vehicular Technology, Information Theory and Aerospace & Electronic Systems (VITAE)*, 2014 4th International Conference on (pp. 1-4). IEEE.
3. Meghani, S.K., & **Asif, M.** (2014, April). Localization of WSN node based on RTT ToA using ultra wide band & 802.15. 4a channel. In *Networking, Sensing and Control (ICNSC)*, 2014 IEEE 11th International Conference on (pp. 380-385). IEEE.
4. Alvi, B.A., **Asif, M.**, Siddiqui, F.A. & Safwan, M. (2013). Fast Steering Mirror Control using Fuzzy Logic Controller For Free Space Optical Communication. *Second International Conference on Mobility for Life: Technology, Telecommunication and Problem Based Learning 2013(TTPBL 2013)*; 01/2013
5. Mirza, E. H., Ali, S. F. A., **Asif, M.**, Azhar bin Ibrahim, W. M., & Najam ul Hassan, S. (2012, February). Evaluation of anti-corrosion properties of DLC coatings for medical devices. In *Biomedical Engineering (ICoBE)*, 2012 International Conference on (pp. 117-122). IEEE.
6. Meghani, S. K., **Asif, M.**, & Amir, S. (2012, April). Localization of WSN node based on time of arrival using ultra wide band spectrum. In *Wireless and Microwave Technology Conference (WAMICON)*, 2012 IEEE 13th Annual (pp. 1-4). IEEE.
7. Ali, S. F. A., Mehdi, S. U., **Asif, M.**, Hassan, S. N. U., & Mirza, E. H. Detection of Iron and Manganese Concentrations in Human Biological Fluid with Flame Atomic Absorption Spectroscopy (FAAS). *International Conference on Bioscience, Biochemistry and Pharmaceutical Sciences (ICBBPS'2012)*, Penang, Malaysia; 01/2012
8. Azhar bin Ibrahim, W. M., Ali, S. F. A., **Asif, M.**, & Mirza, E. H. (2012, February). Release of excessive iron concentration from human blood and urine of cigarette smokers by using Cystus-Sud. In *Biomedical Engineering (ICoBE)*, 2012 International Conference on (pp. 133-138). IEEE.
9. Mehmood, N., Ali, Z. A., Siddiqui, A. A., **Asif, M.**, & Wasi, S. (2011, August). Electronic meter reader & data base management system. In *Information Technology and Artificial Intelligence Conference (ITAIC)*, 2011 6th IEEE Joint International (Vol. 1, pp. 68-71). IEEE.
10. Siddiqui, F. A., Amir, S., **Asif, M.**, & Ali, Z. A. (2011, April). Lane tracking and autonomous cruise control for automatic highway system. In *Signal Processing and Communications Applications (SIU)*, 2011 IEEE 19th Conference on (pp. 542-545). IEEE.
11. Amir, S., **Asif, M.**, & Mustafa, M. (2010, January). The pivotal role of Tera-scale performance in Future Networks: Sequoia vs Multi-core Teraflop Chip. In *Future Networks, 2010. ICFN'10. Second International Conference on* (pp. 265-268). IEEE.
12. Qadri, M.T., & **Asif, M.** (2009, April). Automatic number plate recognition system for vehicle identification using optical character recognition. In *Education Technology and Computer, 2009. ICETC'09. International Conference on* (pp. 335-338). IEEE.

13. Ali, S. F. A., **Asif, M.**, Johannisson, R., & Siegers, C. P. (2009, December). Measurement of thiocyanate in human blood as a function of smoke. *In Multitopic Conference, 2009. INMIC 2009. IEEE 13th International* (pp. 1-5). IEEE.
14. Amir, S., & **Asif, M.** Analytical Study of MC-CDMA-TCM over Multi-path Rayleigh Fading Channels. *2009 International Conference on Computer Engineering and Applications, IPCSIT vol.2* (2011), IACSIT Press, Singapore.
15. Ali, S. A., Alvi, B. A., & **Asif, M.** (2008, October). OPGW – our experience in KESC. *In Electric Power Conference, 2008. EPEC 2008.* IEEE Canada (pp. 1-6). IEEE.
16. **Asif, M.**, Arshad, M. R., & Yahya, A. (2006, July). Visual tracking system for underwater pipeline inspection and maintenance application. *In First International Conference on Underwater System Technology, USYS06* (pp. 18-20).
17. **Asif, M.**, Arshad, M. R., & Wilson, P. A. (2005, June). AGV guidance system: an application of simple active contour for visual tracking. *In Proceedings of World Academy of Science, Engineering and Technology* (Vol. 6, pp. 74-77).

CERTIFICATES

TITLE	ORGANIZER	DATE
LabVIEW Core 2	NI Customer Education	May 31, 2018
LabVIEW Core 1	NI Customer Education	May 28, 2018
Quality Assurance and Governance	Higher Education Commission, Pakistan	April 18-20, 2017
International Conference on Engineering Science and Technology (ICEST-16)	Sir Syed University of Engineering and Technology, Karachi	August 30-31, 2016
Asian Regional School on FPGA Design For Scientific Instrumentation	The Abdus Salam International Centre for Theoretical Physics	December 7-18, 2015
Faculty Development Workshop Network Simulator-2 (NS-2)	Sir Syed University of Engineering and Technology, Karachi	October 17, 2015
Estimating Reliability of Electronic and Telecommunication Devices	IEEEP, Karachi Center	February 04, 2015
ROBOCOM'15 "Robo Soccer"	Sir Syed University of Engineering and Technology, Karachi	April 30, 2015
CPD Framework for Professional Development of Engineers	Sir Syed University of Engineering and Technology, Karachi	August 26, 2014

3 rd In-House Project Exhibition of Digital Logic Design	Sir Syed University of Engineering and Technology, Karachi	May 15, 2014
Pakistan National Student Satellite-1 (PNSS-1)	SUPARCO, Pakistan	February 19-20, 2014
2 nd International Conference on Mobility for Life Technology, Telecommunication & Problem Based Learning	Sandip Institute of Engineering and Management, India	March 14-15, 2013
Project Exhibition: Transistor Logic Competition	Sir Syed University of Engineering and Technology, Karachi	May 18, 2013
Refresher Course on Modern Trends in Control Engineering	Usman Institute of Technology-Karachi	May 24, 2012
1 st Pak-German Workshop on FIELD ROBOTICS	Lahore University of Management Sciences, Pakistan	October 28-29, 2011
14 th IEEE International Multitopic Conference 2011	Sir Syed University of Engineering and Technology, Karachi	December 22-24, 2011
Certificate Course in Teaching skills	Sir Syed University of Engineering and Technology, Karachi	August, 2007
Biometrics: Recent Advances, Future Prospects and Applications in Pakistan	National University of Computer and Emerging Sciences	July 07, 2007
Occupational Safety and Health Course for Post Graduate Students	Universiti Sains Malaysia, Malaysia	May 26, 2005
Research Methodology	Universiti Sains Malaysia, Institute of Graduate Studies	December 7-9, 2004
Scientific Writing	Universiti Sains Malaysia, Institute of Graduate Studies	December 29-30, 2004

REFERENCES

Available on request