



## Rana Javed Masood

### *Lecturer*

Email : [rjmasood@uit.edu](mailto:rjmasood@uit.edu)

Ext. : 3098

## Qualification

- **Ph.D. Scholar. (Control Theory and Engineering)**  
Nanjing University of Aeronautics and Astronautics Nanjing-China.  
In Progress.
- **Masters of Engineering (Industrial control and Automation)**  
Usman Institute of Technology Hamdard University Karachi, Sindh-Pakistan.  
2009-2011 (Gold Medalist)
- **Bachelor of Science (BS Electronics)**  
Sir Syed University of Engineering and Technology Karachi, Sindh-Pakistan.  
2002-2006

## Area of Specialization

### TECHNICAL AND COMPUTER SKILLS:

- **PLC Software and Control**
  - Allen Bradley SLC-500 and PLC-500, Siemens Schematic S-7, Small Logo PLC, Fatek Fbs-Series PLC. Short course in Microcontroller (PIC & ATMEL Series).
- **Computer Hardware and Software Skills**
  - Hardware Assembly & Troubleshooting, Well conversant with all version of Microsoft Windows and Office, MATLAB®, LATEX, Proteus Professional, C++ & Assembly Programming.

## Work Experience

- **Rejoined as a “Lecturer”.**  
Usman Institute of Engineering & Technology Karachi.  
(September 2016-To Date)
- **R&D Research Engineer (during Ph.D. research)**  
Nanjing Strong Flight Company Ltd (S&mc) Nanjing, Jiangsu-China.  
(September 2013-May 2016)
- **Lecturer**  
Usman Institute of Engineering & Technology Karachi.  
(August 2010-July 2012)
- **Lab Engineer**  
NFC Institute of Engineering & Technological Training Multan.  
(October 2007-April 2009)
- **R&D Engineer”.**  
Smart Automated Solution Karachi.  
(July 2006-December 2006)
- **National Internee**  
National Internship Program.  
(April 2007–October 2007)
- **Internee**  
Engro Chemicals (PVT) Ltd Daharki, Dist: GHOTKI. Pakistan.  
(June 2005 - July 2005)

## Honors and Awards

- **Gold Medal-May 2011**
  - Gold Medalist in Master’s Degree (M.E. Industrial control and Automation).
- **Most Innovative Design Award- August 2013**
  - The International Aerial Robotics Competition is the longest running collegiate aerial robotics challenge in the world. The competition continues to tackle challenges that are currently impossible for any flying robots owned by government or industry. More information can be seen on the following website:  
<http://www.aerialroboticscompetition.org>  
<http://www.auvsifoundation.org/competition/iarc>.

## Research Interests

- Model free Adaptive control, Model based Adaptive control, Virtual reference feedback tuning control, Image Processing, Industrial automation & control systems.

## Courses Taught

- Theory Courses Conducted are
  - Electronic Devices and Circuits, Digital Logic Design, Basic Electronics & Network Analysis. Amplifiers and Oscillators, Circuit Analysis, Basic Electronics and Linear Control system.
- Lab Courses Conducted are
  - Digital Electronics, Industrial Automation/Electronics, Engineering Workshop Practice, Network Analysis, Basic Electronics, Amplifiers and Oscillators and Circuit Analysis.

## Publications & Conferences

1. W. Jian-Hong and **R. Javed Masood**, "Interior point algorithm for Multi-UAVs formation autonomous reconfiguration," *Journal of Control Science and Engineering*, vol. 2016, pp. 1–9, 2016.
2. B. Khan, F. Han, Z. Wang, and **R. J. Masood**, "Bio-inspired approach to invariant recognition and classification of fabric weave patterns and yarn color," *Assembly Automation*, vol. 36, no. 2, pp. 152–158, Apr. 2016.
3. **R. J. Masood**, W. D. Bo, Z. A. Ali, S. Masroor, and M. S. Loya, "Implementation and testing of autonomous Quad-Rotor aerial vehicle by using Ardu-Pilot," *International Journal of Information and Electronics Engineering*, vol. 6, no. 2, pp. 123–129, 2016.
4. Z. A. Ali, D. B. Wang, **R. J. Masood**, and A. Akbar, "Modeling & controlling the dynamics of Tri-rotor UAV using robust RST controller with MRAC Adaptive algorithm," *International Journal of Control and Automation*, vol. 9, no. 3, pp. 61–76, Mar. 2016.
5. Manzoor, M.F., Wu, Q. and **R. J. Masood**, 2015, June. Coordination Control of Wheeled Mobile Robot Using MPC. In *Computational Intelligence, Communication Systems and Networks (CICSyN), 2015 7<sup>th</sup> International Conference on* (pp. 241-246). IEEE.
6. Shouzhao, S., Chenwu, S., Haibin, D., Farooq, F. and **R. J. Masood**, 2014, July. Strong adaptive attitude tracking controller design with dual-model structure for unmanned helicopter. In *Control Conference (CCC), 2014 33rd Chinese* (pp. 162-167). IEEE.