



**Name** : Dr Ahsan Rahman  
**Department** : Engineering  
**Job Title** : Associate Professor and Head of Department  
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Ahsan Rahman, a Professional Engineer (PE) with a PhD in Engineering, blends academic rigor with practical expertise to tackle complex R&D challenges effectively.

As an Associate Professor and department head, Ahsan has shaped the next generation of engineers, leading curriculum development and accreditation processes. His research interests span Machine Learning, AI, Control Systems, and Mechatronics, with numerous publications and conference presentations highlighting his expertise.

Ahsan's significant contributions to academia include roles at the University of Prince Mugrin, University of Malta, Qassim University, SZABIST Dubai, and FAST Pakistan, alongside industry collaborations with CDA Pakistan, LG Chemicals Korea, SABIC KSA, and the University of Malta. His involvement with regulatory bodies such as NCAAA, ABET, KHDA, PEC, and HEC demonstrates his commitment to maintaining industry standards. Ahsan's career exemplifies the synergy between academia and industry, driving innovation at the intersection of theory and practice.

**Qualification :**

- . PhD Jeju National University, Korea, 2011
- . MS Air University, Pakistan, 2007
- . BE Quaid-e-Awam University of Engineering, Sciences & Technology, Pakistan, 2004

**Research Interest :**

- . Avionics Control System Design
- . Electro-Hydrodynamics Fuzzy Logic system
- . FEM- System Modeling and Analysis (Bio/ Electromechanical/ Physics)
- . Intelligent/AI/ML systems
- . Signal Processing Applications
- . Low-Temperature Nanotechnology Particles Deposition Mechanism

- . Mechatronics Systems
- . Programming and hardware control
- . Printed Electronics, Printed Energy Harvesting Devices,  
Printed Solar Cell System Design
- . Space Engineering

## **PUBLICATIONS :**

### **PATENTS**

1. Ahsan Rahman, K.H. Choi, “Ink circulation apparatus and method for a multi-array print head”, KR-Patent, No. 1010815720000.
2. Ahsan Rahman, K.H. Choi, “ESD apparatus having sloping dielectric nozzle and method for ink circulation”, KR-Patent, No. 1011807290000.

## **PUBLICATIONS**

### **Journal Publications**

1. Ahsan Rahman, Brian Zammit and Jason Gauci, “A Fuzzy-based Site Selection Framework for Emergency Landings of Commercial Aircraft”, submitted at AIAA Aviation and Aeronautics Forum and Exposition
2. Adnan Ali and Ahsan Rahman, “FEM Study on Impact of Osteoporosis Humerus”, International Journal of Multidisciplinary Sciences and Engineering, Vol. 11, No. 5, October 2020
3. Waseem Iqbal and Ahsan Rahman, “FEM Study on Effects of Laptop Heat on Human Body”, International Journal of Multidisciplinary Sciences and Engineering, Vol. 11, No. 5, October 2020
4. Hassan Mushtaq and Ahsan Rahman, “ANN Based 1-bit Full Adder-Subtractor Circuit using Analog Inputs”, International Journal of Computer Application, Issue 10, Volume 4, August 2020
5. Ahsan Rahman and Fahad Abdulrahman Al-Mufadi, “Development and Optimization of Electro-Chemical Spray System for Agriculture Fields”, International Journal of Engineering & Technology (IJET-IJENS), Feb 2019
6. Saleem Khan, Yang Hoi Doh, Arshad Khan, Ahsan Rahman, K.H. Choi and Dong Soo Kim, “Direct Patterning and Electrospray Deposition through EHD for fabrication of Printed Thin Film Transistors”, Current Applied Physics. DOI: 10.1016/j.cap.2010.11.044
7. K.H. Choi, Adnan Ali, Ahsan Rahman, Nauman Malik Mohammad, D.S. Kim, “Electrode Configuration Effects on Electrification and Voltage Variation in Electrostatic Inkjet Printing Head”, J. Micromech Microeng 2010.

8. Ahsan Rahman, Adnan Ali, Khalid Rahman, Hyung Chan Kim, Yang Hoi Doh, D.S.Kim, K. H. Choi, "Influence of Electrode Position and Electrostatic Forces on the Generation of Meniscus in Dielectric Ink", J.Jap. Appl. Phys 49 (2010).
9. Adnan Ali, Ahsan Rahman, Khalid Rahman, Nauman Malik Muhammad, Arshad Khan, J.B. Ko, Saleem Khan, B.S. Yang, H.C.Kim, Y.H. Doh, D.S. Kim, K.H. Choi, "Printed Patterns Adhesion dependency on Contact Angle of Ink on Substrate", IJET-IJENS, Vol. 10 No. 01, 2010, pp 95~100.
10. Ahsan Rahman, J.B. Ko, Adnan Ali, Saleem Khan, Khalid Rahman, B.S. Yang, H.C.Kim, Y.H. Doh, D.S. Kim, K.H. Choi, "Drop on Demand Non-Contact Hydrophilic Electrostatic Deposition Head", IJET-IJENS, Vol. 10 No. 01, 2010, pp 61~69.
11. Kyung H Choi, Ahsan Rahman, J B Kho, Asif Rehmani, Adnan Ali, Y H Doh, D.S. Kim, "Development and Ejection Behavior of Different Material Based Electrostatic Inkjet Heads", Int. J. Adv. Manuf. Technol., Volume 48, Issue 1 (2010), Page 165.
12. Ahsan Rahman, J.B. Ko, Khalid Rehman, M. Asif Ali Rehmani, H.C. Kim, B.S. Yang, Adnan Ali, S.J. Kim, Y.H. Doh, K.H. Choi, "Anticipation and Avoidance of Electro-Spray in the Printed Conductive Lines Using Electrostatic Inkjet Head with Conductive Ink", Inst. Adv. Tech. jour., Vol. 19, pp65~72, 2008.

#### Conference Papers

1. Ahsan Rahman. "Printing Techniques for deposition of Nano-Particles for printed Electronics", International Scientific Spring 2011, March 01-04, 2011, NCP, QAU, Islamabad, Pakistan.
2. Ahsan Rahman, Adnan Ali, Khalid Rahman, Yang-Hoi Doh, Dong-Soo Kim and Kyung-Hyun Choi, "Meniscus Control and Optimization of Electrodes in Electro-Statically Driven Integrated Inkjet Head ", Mechatronics 2010, June 28 – 30, Swiss Federal Institute of Technology ETH, Zurich, Switzerland, pp 57-64.
3. K.H. Choi, Ahsan Rahman, Saleem khan, H.C. Kim, J.B. Ko, Yang-Hoi Doh and Dong-Soo Kim, "Analysis of meniscus less Electrohydrodynamics-patterning of metallic ink through standard tapered tip needle", Proceeding of Korean Society of Precision Engineering, May 27, 2010, pp 591.
4. Saleem Khan, Ahsan Rahman, Adnan Ali, Arshad Khan, H.C. Kim, J.B. Ko, Y.H Doh, D. S. Kim, K.H Choi, "Comparison and analysis of patterning based on different ground con"

#### Other Accreditation:

- . Professional Engineer, Pakistan Engineering Council (PEC), since 2004