

Dr. Ayyaz Hussain

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RESEARCH INTERESTS

- Pattern Recognition, Machine Intelligence and Data Mining
- Image Processing
- Computational Intelligence

EDUCATION

Years	Degree	Name of Institution
2013-2014	Post Doctorate	Gwangju Institute of Science & Technology, South Korea
2007-2009	PhD Computer Science	National University of Computer and Emerging Sciences (NUCES) Islamabad, Pakistan. 2 nd PhD
2005-2006	MS Computer Science	National University of Computer and Emerging Sciences Islamabad, Pakistan

WORK EXPERIENCE

- **Associate Professor/Chairman**, Department of Computer Science & Software Engineering International Islamic University Islamabad, Pakistan, **August 2017 to Date**.
- **Assistant Professor**, Department of Computer Science & Software Engineering, International Islamic University Islamabad, Pakistan, **August 2010 to August 2017**.
- **Post-Doctoral Research Fellow**, Signal & Image Processing Lab, Department of Mechatronics, Gwangju Institute of Science & Technology South Korea, **Feb 2013 to Feb 2014**.
- **Associate Professor**, ARID Agriculture University Rawalpindi, Pakistan, **Feb 2010 to August 2010**.
- **Manager, Project Management Organization**, National Engineering and Scientific Commission Islamabad, **Oct 2000 to Feb 2010**.
- **Lecturer/Software Developer**, ERP Soft Blue Area Islamabad, Pakistan, **Jan 1999 to October 2000**.

PUBLICATIONS (year wise, from latest)

Year 2018

- 1 **Dr. Ayyaz Hussain**, Illumination invariant facial expression recognition using selected merged binary patterns for real world images. *OPTIK International Journal for light and electron optics*. 158(1): 1016-1025 (2018).
- 2 M.S.I.Malik, **Dr. Ayyaz Hussain**, An analysis of review content and reviewer variables that contribute to review helpfulness. *Inf. Process. Manage.* 54(1): 88-104 (2018).
- 3 S. A. Khan, **Dr. Ayyaz Hussain**, M. Usman, Reliable facial expression recognition for multi-scale images using weber local binary image based cosine transform features. *Multimedia Tools Appl.* 77(1): 1133-1165 (2018).
- 4 **Dr. Ayyaz Hussain**, Fuzzy C-mean and region growing based classification of tumor from mammograms using hybrid texture features. *Journal of Computational Sciences*. 29(1): pp:34-45 (2018).
- 5 **Dr. Ayyaz Hussain**, Optimal Secure Information using Digital Watermarking and Fuzzy Rule base. *Multimedia Tools and Applications*. (2018)

Year 2017

- 6 M. M. Tahir, A. Q. Khan, N. Iqbal, **Dr. Ayyaz Hussain**, S. Badshah, Enhancing Fault Classification Accuracy of Ball Bearing Using Central Tendency Based Time Domain Features. *IEEE Access* 5: 72-83 (2017).
- 7 M.S.I. Malik, **Dr. Ayyaz Hussain**, Helpfulness of product reviews as a function of discrete positive and negative emotions. *Computers in Human Behavior* 73: 290-302 (2017).
- 8 **Dr. Ayyaz Hussain**, M. Habib, A new cluster based adaptive fuzzy switching median filter for impulse noise removal. *Multimedia Tools Appl.* 76(21): 22001-22018 (2017).

Year 2016

- 9 M. Sharif, **Dr. Ayyaz Hussain**, M. A. Jaffar, T.S. Choi, Fuzzy-based hybrid filter for Rician noise removal. *Signal, Image and Video Processing* 10(2): 215-224 (2016).

Year 2015

- 10 M. Habib, **Dr. Ayyaz Hussain**, T.S. Choi, Adaptive threshold based fuzzy directional filter design using background information. *Appl. Soft Comput.* 29: 471-478 (2015).
- 11 S. Akram, M. Y. Javed, **Dr. Ayyaz Hussain**, F. Riaz, M. U. Akram, Intensity-based statistical features for classification of lungs CT scan nodules using artificial intelligence techniques. *J. Exp. Theor. Artif. Intell.* 27(6): 737-751 (2015).
- 12 M. Sharif, **Dr. Ayyaz Hussain**, M. A. Jaffar, T.S. Choi, Fuzzy similarity based non local means filter for Rician noise removal. *Multimedia Tools Appl.* 74(15): 5533-5556 (2015).

Year 2014

- 13 S. M. Bhatti, **Dr. Ayyaz Hussain**, M. A. Jaffar, T. S. Choi, Color differences based fuzzy filter for extremely corrupted color images. *Appl. Soft Comput.* 21: 107-118 (2014).
- 14 S. A. Khan, **Dr. Ayyaz Hussain**, M. Usman, M. Nazir, N. R. Ansari, A. M. Mirza, Robust face recognition using computationally efficient features. *Journal of Intelligent and Fuzzy Systems* 27(6): 3131-3143 (2014).

Year 2013

- 15 S. M. Bhatti, **Dr. Ayyaz Hussain**, M. A. Jaffar, A. M. Mirza, T. S. Choi, Machine learning and directional switching median-based filter for highly corrupted images. *Knowl. Inf. Syst.* 36(3): 557-577 (2013).

- 16 S. M. Bhatti, **Dr. Ayyaz Hussain**, M. A. Jaffar, T. S. Choi, Intelligent noise detection and filtering using neuro-fuzzy system. Multimedia Tools Appl. 63(1): 93-105 (2013).

Year 2012

- 17 N. Naveed, **Dr. Ayyaz Hussain**, M. A. Jaffar, T. S. Choi, Quantum and impulse noise filtering from breast mammogram images. Computer Methods and Programs in Biomedicine 108(3): 1062-1069 (2012).
- 18 **Dr. Ayyaz Hussain**, S. M. Bhatti, M. A. Jaffar, Fuzzy based Impulse Noise Reduction Method. Multimedia Tools Appl. 60(3): 551-571 (2012).

PROJECTS

Principal Investigator

- Funding agency, title, year

THESIS SUPERVISED

- **MS/PhD THESES**

Degree Program	No of Students Supervised	No. of Students under Supervision
MS(CS)	20	05
PhD(CS)	04	05
PhD(EE)	01	NIL

ACADEMIC ACTIVITIES

Departmental

- Head, Department of Computer Science & Software Engineering, International Islamic University Islamabad, Pakistan since September 2017.
- Head Computer Vision Group at Department of Computer Science & Software Engineering, International Islamic University Islamabad, Pakistan. (Aug 2010 to-Date)
- Head Graduate Research Committee at Department of Computer Science & Software Engineering, International Islamic University Islamabad, Pakistan. (Aug 2010 to-December 2011).
- Head Accreditation Committee at Department of Computer Science & Software Engineering, International Islamic University Islamabad, Pakistan. (2011-2012).
- Head Admission Committee at Department of Computer Science & Software Engineering, International Islamic University Islamabad, Pakistan. (Fall 2011).

PROFESSIONAL ACTIVITIES (JOURNAL REVIEWER)

- Pattern Recognition
- Knowledge and Information System
- Multimedia Tools and Applications
- Digital Signal Processing
- Signal Processing
- Computer Programs and Methods in Biomedicine

Conference

- Image Restoration using Fuzzy Logic, Department of Mechatronics, Gwangju Institute of Science & Technology (GIST), South Korea, March 14, 2013.
- Role of Soft Computing in Image Processing, Department of Mechatronics, Gwangju Institute of Science & Technology (GIST), South Korea, November 14, 2013.
- Image Restoration using Soft Computing, Department of Computer Science, Fatima Jinnah Women University, Rawalpindi, Pakistan, May 2, 2014.