

# Dr. Md. Imran Hossain

*Associate Professor*

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## Objective

I would like to show my immense aspiration to become a good teacher as well as a prolific researcher and to prove myself as a sincere and energetic person through extensive hard working and integrity in a reputed University. I am eager to develop a professional career by securing research position with a reputable and progressive organization that supports a learning environment enabling me to refine the skills I have acquired through formal learning, research and practical experiences.

## Educational Background

<p><b>Doctor of Engineering</b> [September 2018 to July 2022]</p>	<p>Information and Communication Engineering (ICE), Institute of Statistical Signal Processing, National Engineering Laboratory of Speech and Language Information Processing, University of Science and Technology of China(USTC)</p> <p><b>Research Field:</b> Signal and Information Processing</p> <p><b>Dissertation:</b> Dual Transform Based Supervised Single Channel Speech Separation</p> <p><b>Medium of Instruction:</b> English</p> <p><b>Scholarship Awarded:</b> Chinese Government Scholarship (CSC) 2018</p> <p><b>Supervisor:</b> Zhongfu Ye Professor Department of Electronic Engineering and Information Science Director Institute of Statistical Signal Processing, School of Information Science and Technology, University of Science and Technology of China, Hefei-230027, Anhui, China</p> <p><b>Email:</b> <a href="mailto:yezf@ustc.edu.cn">yezf@ustc.edu.cn</a></p>
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M.Sc. 2010 Thesis Group (Held in 2011)	<b>Master of Science</b> from the Department of Information and Communication Engineering (ICE), Islamic University, Kushtia-7003, Bangladesh <b>Medium of Instruction:</b> English <b>M.Sc. Thesis:</b> Performance Analysis of Energy Efficient Clustering in Wireless Sensor Networks <b>Result:</b> GPA 3.66 out of 4.00 <b>Merit Position:</b> First out of 45 students
B.Sc. 2009 Thesis Group (Held in 2010)	<b>Bachelor of Science (Hon's)</b> from the Department of Information and Communication Engineering (ICE), Islamic University, Kushtia-7003, Bangladesh <b>Medium of Instruction:</b> English <b>B.Sc. Thesis:</b> Automatic Road Sign Recognizer for an Intelligent Transport System <b>Result:</b> First Class (Marks-65.36%) <b>Merit Position:</b> First out of 45 students
H.S.C 2005	<b>Higher Secondary School Certificate</b> from Govt. Satkhira College, Satkhira. <b>Group:</b> Science <b>Board:</b> Jessore
S.S.C 2003	<b>Secondary School Certificate</b> from Kadakati Arar Secondary School. <b>Group:</b> Science <b>Board:</b> Jessore

## Research Interest

Speech Signal Processing, Image Processing, Deep Learning, Biomedical Signal and Image Processing.

## Language Proficiency

**Bangla-** Mother Tongue

**English-** Fluent both in speaking and writing

**Chinese-** HSK 3 score: - 253 out of 300 (Listening: 90, Reading: 87 and Writing: 76)

## Professional Experiences

08-02-2023  
to  
Till now      **Associate Professor** in Information and Communication Engineering (ICE) department at Pabna University of Science and Technology (PUST), Rajapur-6600, Pabna, Bangladesh.

12-11-2014  
to      **Assistant Professor** in Information and Communication Engineering (ICE) department at Pabna University of Science and Technology (PUST),

07-02-2023	Rajapur-6600, Pabna, Bangladesh.
12-11-2012 to 11-11-2014	<b>Lecturer</b> in Information and Communication Engineering (ICE) department at Pabna University of Science and Technology (PUST), Rajapur-6600, Pabna, Bangladesh.
02-02-2012 to 01-10-12	<b>Lecturer</b> in Computer Science and Engineering department (CSE) at University of Information Technology & Sciences (UITS), Baridhara, Dhaka-1212, Bangladesh.

## **Administrative and Other Experiences**

01-11-2021 to Till now	<b>Additional Director</b> , Information and Communication Technology Cell (ICT Cell) at Pabna University of Science and Technology (PUST), Rajapur-6600, Pabna, Bangladesh.
01-09-2018 to 01-07-2022	<b>Doctoral Fellow</b> , Institute of Statistical Signal Processing, School of Information Science and Technology, University of Science and Technology of China (USTC), Hefei-230027, Anhui, China.
15-10-2015 to 03-09-2018	<b>Additional Director</b> , Institutional Quality Assurance Cell (IQAC) at Pabna University of Science and Technology (PUST), Rajapur-6600, Pabna, Bangladesh.
2016-2018	<b>Executive Member</b> , Teacher-Officer Club at Pabna University of Science and Technology (PUST), Pabna-6600, Bangladesh.
2008-2010	<b>Secretary</b> of “Student Association of Information and Communication Engineering (SAICE)”, Islamic University, Kushtia-7003, Bangladesh.

## **Skills**

- Programming Language: C, C++, java, C#, Prolog etc.
- Wave development tools like Asp.net, PHP, HTML etc.
- Database management tools like Oracle, SQL, Mysql etc.
- Well acquainted with a number of PC based tools like MatLab, NS2 Simulator etc.
- Linux Server Configuration: Configure Telnet FTP NFS DNS Server, Mail Server etc.
- OS: Windows, Linux (Ubuntu, Fedora)
- MS office tools
- All frequently used Software and tools.

## **Academic Distinctions**

- Member of “Islamic University Computer Association (IUCA)”.
- **University Merit Scholarship** in every year.

➤ Awarded Chinese Government Scholarship (CSC) 2018 for Ph.D. Program.

## List of Publications

- 24 **Hossain, M. I.**, Ahmad, S., Hasan, S., Rahim, M. A., & Shin, J. (2024). Lung cancer detection and classification using LeNet-LSTM model on computed tomography images. *Multidisciplinary Science Journal*,  
Md Abdur Rahim, Abu Saleh Musa Miah, Hemel Sharker Akash, Jungpil Shin, **Md. Imran Hossain** and Md. Najmul Hossain, “An Advanced Deep Learning Based Three-Stream Hybrid Model for Dynamic Hand Gesture Recognition”, arXiv preprint arXiv:2408.08035, 15 Aug 2024. <https://doi.org/10.48550/arXiv.2408.08035>.
- 23 **Md. Imran Hossain**, Md. Mojahidul Islam, Tania Nahrin, Md. Rashed, Md. Atiqur Rahman, “Improving Speech Emotion Recognition and Classification Accuracy Using Hybrid CNN-LSTM-KNN Model”, *International Journal of Research Publication and Reviews*, Vol 5, no 8, pp 4164-4173 August 2024.
- 22 Md. Mojahidul Islam, Md. Robiul Hoque, Md. Atiqur Rahman, **Md. Imran Hossain**, “OBSTACLE SEGMENTATION AND WARNING SYSTEM FOR VISUALLY IMPAIRED PEOPLE”, *International Journal of Advance Research and Innovative Ideas InEducation* , ISSN(O)-2395-4396, Vol-10 Issue-3 2024.
- 21 Md. Shariful Islam, Md Abdur Rahim, Nitun Kumar Podder, Md. Najmul Hossain, and **Md Imran Hossain**, “Prediction of Irregular Bangladesh-EU Migration Trends Using Machine Learning Techniques”, 2024 3rd International Conference on Advancement in Electrical and Electronic Engineering (ICAEEE 2024), 25-27 April, 2024, Gazipur, Bangladesh, IEEE Xplore, DOI: 10.1109/ICAEEE62219.2024.10561697
- 20 Md. Bipul Hossen, Zhongfu Ye, Amr Abdussalam, **Md. Imran Hossain**, “GVA: guided visual attention approach for automatic image caption generation,” *Multimedia Systems* 30(1), January 2024, DOI: 10.1007/s00530-023-01249-w (**Springer, SCI, IF: 3.91**)
- 19 **Md Imran Hossain**, Md Abdur Rahim and Md Najmul Hossain, “Single-channel Speech Separation Based on Double-density Dual-tree CWT and SNMF,” *Annals of Emerging Technologies in Computing (AETiC)*, Vol. 8, No. 1, 2024, <http://aetic.theiaer.org/archive/v8/v8n1/p1.html>
- 18 Md. Najmul Hossain, Al Amin Islam, Md. Abdur Rahim, **Md. Imran Hossain**, and Arifour Rahman, “Design and Performance Analysis of Defected Ground Slotted Patch Antenna for Sub-6 GHz 5G Applications,” *Journal of Engineering Advancements*, Vol. 04(04) 2023, pp 130-140, <https://doi.org/10.38032/jea.2023.04.004>.
- 17 Ye ZhongFu, **M. I. Hossain**, 一种在双变换域上的单通道语音分离方法 (A single-channel speech separation method on a double transformation domain), China National University of Science and Technology of China, Intellectual Property Office, Patent no. ZL 2020 1 04922043.1, Certificate no. 5489111, 2022.
- 16 Khan, R.; Islam, M.S.; Kanwal, K.; Iqbal, M.; **Hossain, M.I.**; Ye, Z. A Deep Neural Framework for Image Caption Generation Using GRU-Based Attention Mechanism. arXiv 2022, arXiv:2203.01594. <https://doi.org/10.48550/arXiv.2203.01594>
- 15 **M. I. Hossain**, T. H. A. Mahmud, M. S. Islam, M. B. Hossen, R. Khan and Z. Ye, “Dual transform based joint learning single channel speech separation using generative joint dictionary learning,” *Multimedia tools and applications*, 2022. <https://doi.org/10.1007/s11042-022-12816-0>. (**Springer, SCI, IF: 3.6**)
- 14 R. khan, M. S. Islam, K. Kanwal, M. Iqbal, **M. I. Hossain** and Z. Ye, “Attention-Based Sequence-to-Sequence Framework for Auto Image Caption Generation,” *Journal of*
- 13

*Intelligent & Fuzzy Systems*, vol. 43, no. 1, pp. 159-170, 2022. (SCI, IF: 2)

12 **M. I. Hossain**, M. S. Islam, M. T. Khatun, R. Ullah, and A. Masood and Z. Ye, “Dual Transform Source Separation Using Sparse Non-Negative Matrix Factorization,” *Circuits, Systems, and Signal Processing*,” 40, 1868–1891, 2021. (Springer, SCI, IF: 2.3)

11 M. S. Islam, N. Naqvi, A. T. Abbasi, **M. I. Hossain**, R. Ullah, R. Khan, M. Sh. Islam and Z. Ye, “Robust Dual Domain Twofold Encrypted Image-in-Audio Watermarking Based on SVD,” *Circuits, Systems, and Signal Processing*, 2021. (Springer, SCI, IF: 2.3).

10 M. S. Islam, Y. Zhu, **M. I. Hossain**, R. Ullah, Z. Ye, “Supervised single channel dual domains speech enhancement using sparse non-negative matrix factorization,” *Digital Signal Processing*, 100, 2020 102697. (SCI, IF: 2.9)

9 R. Ullah, M. S. Islam, **M. I. Hossain**, F.E. Wahab, Z. Ye, “Single channel speech dereverberation and separation using RPCA and SNMF,” *Applied Acoustics*, 167, 107406, 2020. (SCI, IF: 3.4)

8 M. M. Ahmed, A. F. M. Z. Abadin, M. A. Hossain and **M. I. Hossain**, “Implementation of Back Propagation Neural Network with PCA for Face Recognition,” *Global Journal of Computer Science and Technology: G Interdisciplinary*, Vol. 19 Iss. 3, Version 1.0 Year 2019.

7 M. S. Raja, **M. I. Hossain**, M. K. H. Jewel, M. S. Ali, “PAPR Reduction of OFDM Signal Using Sequential Phase Sequence SLM Based Transceiver without Side Information”, *International Journal of Wireless and Microwave Technologies (IJWMT)*, Vol. 5, No. 1, March 2015. Available: <http://www.mecs-press.org/ijwmt>.

6 M. M. Ahmed, and **M. I. Hossain**, “Brain Tumour Segmentation using Level Set Method and Affected Area Calculation,” *Engineering International*, Vol.3, No. 2, 2015.

5 **M. I. Hossain**, M. K. Noman, M. M. Islam, M. Mursalin, “Specific face detection from large number of stored faces” *International Journal of Scientific and Engineering Research*, Vol. 4, Iss. 5, May 2013.

4 M. M. Islam, **M. I. Hossain** and M. K. Noman, “Bangla Character Recognition System is Developed by using Automatic Feature Extraction and XOR Operation,” *Global Journal of Computer Science and Technology Graphics & Vision*, Vol. 13 Iss. 2, Version 1.0, Year 2013.

3 **M. I. Hossain**, M. K. Noman, M. M. Islam and M. R. Islam, “Performance Analysis of CDMA System using Direct Sequence Spread Spectrum and Frequency Hopping Spread Spectrum Techniques”, *Global Journal of Computer Science and Technology: E Network, Web & Security*, Vol. 13 Iss. 6, Year 2013.

2 **M. I. Hossain**, M. M. Rahman, T. K. Godder, M. T. Khatun, “Improving Energy Efficient Clustering Method for Wireless Sensor Network”, *I.J. Information Technology and Computer Science (IJITCS)*, Vol. 5, No. 9, August 2013. Available: <http://www.mecs-press.org/ijitcs>.

1 **M. I. Hossain**, M. M. Rahman, and T. K. Godder, “An Automatic Road Sign Recognizer for an Intelligent Transport System”, *International Journal of Advanced Research in Computer Science*, Vol. 3, No. 5, Sept-Oct 2012.

## **Personal Information**

**Full Name** : Dr. Md. Imran Hossain  
**Father's Name** : Md. Abdur Rab  
**Mother's Name** : Most. Anisa Durbisha  
**Date of Birth** : 9th November, 1987  
**National ID No** : 9129853157  
**Nationality** : Bangladeshi (By birth)  
**Religion** : Islam (Sunni)  
**Marital status** : Married  
**Sex** : Male  
**Blood Group** : "B" Positive  
**Present Address** : Associate professor, Department of Information and Communication Engineering, Pabna University of Science and Technology, Pabna-6600, Bangladesh.  
**Permanent Address:** Village: Dhakula, Post: Ellarchar, PS: Satkhira, Dist: Satkhira, Bangladesh.

## **References**

### **Dr. Md. Mahbubur Rahman (M.Sc. Supervisor)**

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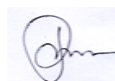
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I hereby declare that the information furnished above is true to the best of my knowledge.



***Signature: (Dr. Md. Imran Hossain)***