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EDUCATION

Ph.D. in Bio and Brain Engineering, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea, 2008

M. Sc. (Thesis Group), Applied Physics and Electronics, University of Rajshahi, Bangladesh, 1995, First Class (2nd position out of 45 student)

B. Sc. (Hon's), Applied Physics and Electronics, University of Rajshahi, Bangladesh, 1994, First Class, (2nd position out of 50 students)

CURRENTLY TEACHING COURSES

Neural Network Theory and Applications, Artificial Intelligence and Deep Learning, Mathematic for Engineering, Statistics for Communication Engineering, Calculus and Differential Equations, Signal and Systems, Data Mining and Bioinformatics.

SUPERVISING

Doctor of Philosophy (PhD) Research

1. Joyasree Sen, Associate Professor, Department of Computer Science and Engineering, Islamic University, Kushtia, Bangladesh.
   Tile: *Risk factor Prediction of Tertiary Level Student's Mental Health Distortion using Machine Learning Approaches*
2. Md. Manjurul Hasan Khan, Lecturer, Uttara University, Bangladesh.
   Title: *To Design a Local Sky Wave communication System and its prediction (Awarded)*

TEACHING COURSES

Artificial Intelligence, Neural Networks, Discrete Mathematics and Numerical Analysis, Data structure and Algorithm, Digital Electronics, Electronic Devices & Circuits, Electricity and Electromagnetism, Database Systems, System Analysis and Software Engineering, Data Communication and Networking.

Research Interested

Application of Artificial Neural Networks, Brain Engineering, Computing in Biological data, Bio-Informatics, Text mining, Information Extraction etc

Experiences

From September 07, 2012 to till date

Professor, Department of Information and Communication Engineering, IU, Kushtia, Bangladesh

From April 16, 2009 to September 06, 2012

Associate Professor, Department of Information and Communication Engineering, IU, Kushtia, Bangladesh

From October 09, 2002 to April 15, 2009

Assistant Professor, Department of Information and Communication Engineering, IU, Kushtia, Bangladesh

From October 09, 1999 to October 08, 2002

Lecturer, Department of Information and Communication Engineering, IU, Kushtia, Bangladesh

From September 2006 to April, 2007

Teacher Assistance, Department of Bio and Brain Engineering, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea of different courses such as Bio-Electronic Lab and Bioinformatics Course

Research/Project Experiences

From 2011 to 2014

Higher Education Quality Enhancement Project (**HEQEP**), Academic Innovation Fund (AIF) Sub-project Manager (**SPM**), Title: Establishment of Information Technology Research & Resource Center in IU-Kushtia, Supported by UGC Bangladesh and World-Bank (IDA).

From 2006 to 2007

Wireless Pill-cam Endoscope image processing project as a member of Computational Neuro-System Lab (CNSL) and Brain Science Research Centre (BSRC), KAIST

From 2005 to 2008

Artificial Brain (Artificial office assistant) project (Text/Document categorization) BSRC, KAIST

From 2004 to 2007

NIP (non-ink pen) development project, CNSL, KAIST

Administrative Activities

Proctor as well as Student Advisor (2020 to 2021): Islamic University, Kushtia-7003, Bangladesh
Student Advisor (2019 to 2021): Islamic University, Kushtia-7003, Bangladesh
Director (2017-2019): Islamic University Computer Center.
Press Administrator, Islamic University Press (2014-2016)
Head of the Department (May 2010 to 2013): Dept. of Information and Communication Engineering, IU, Kushtia-7003, Bangladesh

Faculty Member (2001-2002 and 2008 to till): Faculty of Applied Science and technology, Islamic University, Kushtia-7003, Bangladesh.

Convener (2009): National Workshop on Networking & ISP setup with LINUX, Islamic University, Kushtia-7003, Bangladesh.

KEYNOTE/PLENARY TALKS AT INTERNATIONAL CONFERENCES /SYMPOSIUM /WORKSHOP

National Workshop on Networking & ISP setup using LINUX 2009, Kushtia-Bangladesh

Road to Digital Bangladesh Seminar and Database Workshop, 2010, Kabi Nazrul Islam University, Trishal, Bangladesh.

PUBLICATIONS

Thesis

1. Paresh Chandra Barman: Text Mining: Effective Feature Extraction and Classification using NMF algorithm, Ph.D. Thesis, Supervisor Prof. Dr. Soo-Young Lee, Computational NeuroSystem Lab. (CNSL), Dept. of Bio and Brain Engineering, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea, May 2008.
2. Paresh Chandra Barman: Recognition of Bengali Scripts and Numerals using Neuro Computing, M.Sc. Thesis, Supervisor Prof. Dr. Ramesh Chandra Debnath, Computer and Digital Lab., Dept. of Applied Physics and Electronics, University of Rajshahi, Bangladesh, November 1998.

Journal Papers

[1] Joysree Sen, and Paresh Chandra Barman *A Hybrid Machine Learning Approach for Heart Disease Prediction: Integrating Random Forest and Multi-Layer Perceptron for Enhanced Diagnostic Accuracy* International Journal of Engineering and Robot Technology (IJERT) Vol-1, 2025

[2] Joyassree Sen, Bipul Roy and Paresh Chandra Barman, Stress Level Vulnerability Test of University Student's using Machine Learning Approaches, International Journal of Engineering Research & Technology (IJERT), Vol. 14, Issue 05, May-2025.

[3] Joysree Sen, Bipul Roy and Paresh Chandra Barman, *Feature Selection approaches for Non-negative data by modified MI, NMF algorithm*, Journal of Science, Islamic University, Vol-1, No. 2, 2020; pp. 45- 54

[4] Joysree Sen, Paresh Chandra Barman, *Identifying the Significant Genes of Leukemia Data Using NMF*, Journal of Science Islamic University, Vol-1, No.1, ISSN 1994-0368, 2019, pp. 69-80.

[5] M Manjurul H. Khan and **P. C. Barman**, *Analysis of Attacks in Cognitive Radio Networks* American Journal of Engineering Research (AJER) e-ISSN: 2320-0847 p-ISSN 2320-0936, Vol. 5, Iuuue-2 pp. 241-247, 2016

[6] M Manjurul H. Khan and **P. C. Barman***, Analysis of Spectrum Sensing Techniques in Cognitive Radio*, American Journal of Engineering Research (AJER) e-ISSN: 2320-0847 p-ISSN 2320-0936, Vol. 4, Iuuue-8 pp. 237-243, 2015

[7] P. C. Barman and M Manjurul H. Khan, *The Roll of Cognitive Radio Technology in 4G Communications*, World Vision, ISSN: 2078-8460, Vol-8, No. 1, Nov 2014

[8] P. C. Barman and M Manjurul H. Khan, *Investigation of Cognitive Radio System Using MATLAB*, World Vision, ISSN: 2078-8460, Vol-8, No. 1, Nov 2014

[9] **P. C. Barman**, M. D. Hossain, A. K. Mandal, B. C. Singh, M. S. Miah, *NMF and PCA Techniques for Feature Extraction and Classification,* Journal of Science and Technology, Vol. 9, ISSN 1994-0368, June 2012

[10] **Paresh Chandra Barman**, Tarek Hasan-Al-Mahmud, Bikash Chandra Singh and Md. Sipon Miah, *Classification and Identification of Meaningful Gene Using Non-Negative Matrix Factorization,* Journal of Applied Science and Technology, Vol. 8, 2011

[11] **Paresh Chandra Barman**, Bikash Chandra Singh, Md. Sipon Miah,and Md. Jashim Uddin, *NMF (Non-Negative Matrix Factorization) based Query extraction,* Journal of Applied Science and Technology Vol. 8, 2011

[12] **Paresh Chandra Barman**, Bikash Chandra Singh and Md. Sipon Miah, *Feature Extraction and Clustering in Text Mining using NMF basis Probability*, ULAB Journal of Science & Engineering, ISSN-2079-4389, Vol. 2, pp. 50-55, Nov. 2011

[13] Bikash Chandra Singh, **Paresh Chandra Barman**, Tapan Kumar Godder, Md. Sipon Miah, H. M. Abdul Awal, *Exprimental Analysis of Handover UDP and TCP in the Integration of IEEE 802.16 and IEEE 802.11*, ULAB Journal of Science & Engineering, ISSN-2079-4389, Vol. 2, pp-09-13, Nov. 2011

[14] P**aresh Chandra Barman**, Md. Sipon Miah, Bikash Chandra Singh and Mst. Titasa Khatun, *MRI Image Segmentation using Level Set Method and Implement and Medical Diagnosis System*, Computer Science & Engineering: An International Journal (CSEIJ), Vol.1, No.5, DOI : 10.5121/cseij.2011.1501, December 2011

[15] Md. Sipon Miah, M Mahbubur Rahman, **Paresh Chandra Barman**, Bikash Chandra Singh, Ashraful Islam, *Evaluation and Performance Analysis of Propagation Models for WiMAX,* International Journal of Computer Networks and Wireless Communications (IJCNWC), ISSN-2250-3501, Vol. 1, No. 1, Dec 2011, pp-51-60

[16] Tapan Kumar Godder, Md. Sipon Miah, **Paresh Chandra Barman**, Bikash Chandra Singh, and Md. Azizur Rahman, *Performance Analysis and Comparison between the Fixed & Mobile WiMAX Physical Layer*, IJCIT, ISSN 2078-5828 (PRINT), ISSN 2218-5224 (ONLINE), VOLUME 02, ISSUE 01, 2011

[17] **Paresh Chandra Barman**, and S. Y. Lee, *Mutual Information Based Feature Selection and Adaptation Neural Network*, Journal of Applied Science and Technology, Vol. 7, No. 2, pp. 65-69, December 2010

[18] **Paresh Chandra Barman**, Chandra Shekhar Dhir, Soo-Young Lee, *Human Emotion Recognition using PCA, ICA and NMF*, ULAB Journal of Science & Engineering, ISSN-2079-4389, Vol. 1, pp. 26-31, Nov. 2010

[19] Pranabendu Mitra**, Paresh Chandra Barman**, Kyu Seob Chang, *Coumarin Extraction from Cuscuta reflexa using Supercritical Fluid Carbon Dioxide and Development of an*

Artificial Neural Network Model to Predict the Coumarin Yield , Food and Bioprocess Technology, DOI 10.1007/s11947-008-0179-2, 2009.

[20] Soo-Young Lee, C. H. Dhir, **Paresh Chandra Barman** and Sungkyun Lee, *Unsupervised Feature Extraction and Supervised Selection based on Information Gain*, Advanced in Cognitive Neuro-dynamics, Springer, pp. 655-659, 2008

[21] **Paresh Chandra Barman**, and Soo-Young Lee, *Nonnegative Matrix Factorization (NMF) based Supervised Feature Selection and Adaptation*, LNCS, Vol 5326, pp. 120-127, Springer 2008.

[22] **Paresh Chandra Barman** and M Mahbubur Rahman, *Non-negative Matrix Factorization (NMF) Filter with the Solution of Uniqueness and Permutation*, Journal of Applied Science and Technology (JAST), Vol. 5, No. 2, pp. 81-87, June 2008

[23] Tapan Kumar Godder, Md. Rajibul Islam, **Paresh Chandra Barman**, and Md. A. R. Mahmood*, Study on Internet Connectivity for Mobile ad Hoc Networks*, Journal of Applied Science and Technology (JAST), Vol. 5, No 2, pp. 33-39, June 2008.

[24] **P. C. Barman** and Soo-Young Lee, *Document Classification with Unsupervised Nonnegative Matrix Factorization (NMF) and Supervised Single Layer Perceptron (SLP) Learning*, IEEE, ICIA, pp 182-186, 2007.

[25] **P. C. Barman**, Nadeem Iqbal and Soo-Young Lee, *Non-negative Matrix Factorization Based Text Mining: Feature Extraction and Classification*, LNCS, Neural Information Processing, Vol 4233 Springer 2006.

[26] **P. C. Barman**, *The Numerical Solution of the Transcendental Equations using Genetic Algorithms*, Journal of Applied Science and Technology (JAST), vol 03, No. 01, pp. 67-72, 2003

[27] **P. C. Barman**, R C Debnath, Rakib Ahmed, *Increasing the efficiency of Backpropagation Algorithm to train the Neural Network for Bangla scripts*, Journal of Applied Science & Technolgy (JAST), vol 03, no. 01, pp. 73-80, 2003

International Conference / Symposium Papers

[1] Md. Tareq Hasan, Joysree Sen and Paresh Chandra Barman, Digital Forensics Investigation in Mobile Cloud Service Traceability Automation, International Conference on Technologies for Computer, Electrical, Electronics & Communication 2023 (ICT-CEEL 2023)

[2] Asif Alif, Joysree Sen and Paresh Chandra Barman, A Secure Cloud Storage System with Erasure Code Based Data Protection, International Conference on Technologies for Computer, Electrical, Electronics & Communication 2023 (ICT-CEEL 2023)

[3] Md. Zahid Hossain Sajid, Joyasree Sen and Paresh Chandra Barman, *Cyber Security based on Honeypot system*, International Conference on Technologies for Computer, Electrical, Electronics & Communication 2023 (ICT-CEEL 2023)

[4] A. H. M. Sajedul Hoque, Sujit Kumar Mondal, Tassnim Manami Zaman, **Paresh Chandra Barman**, Implication of association rules employing FP-growth algorithm for knowledge discovery, International Conference on Computer and Information Technology - ICCIT , 2011

[5] **P. C. Barman** and Soo-Young Lee; Modified Mutual Information for Text Feature Selection and Classification, 9th China-India-Japan-Korea Joint Workshop on Neurobiology and Neuroinformatics NBNI-2007, Poster No. NI-06, July 5-7, Jeju City, Korea.

[6] **P. C. Barman** and Soo-Young Lee, *Tree Clustering of Text data by NMF Based Neural Network*, IEEE International Conference on Electrical and Computer Engineering 2006 (ICECE2006), pp 312-315, Bangladeesh.

[7] **P. C. Barman** and Soo-Young Lee, Combining of Single and Joint Words Frequency Matrix for Clustering the Text-document Using NMF Algorithm, International Symposium on Artificial Brain with Emotion and Learning, ISABEL2006, Poster No. P35, August 24-25, 2006, Yonsei University, Seoul, Korea.

[8] Nadeem Iqbal, **P. C. Barman**, Dongsup Kim and Soo Young Lee, Gene Expression Profile classification and Significant Gene discovery using Non-Negative Matrix Factorization, International Symposium on Artificial Brain with Emotion and Learning, ISABEL2006, Poster No P18, August 24-25, 2006,Yonsei University, Seoul, Korea.

[9] **P.C. Barman** and R. C. Debnath, *Comparative Study to Recognize the Bangla Scripts by Neural Network using Back-propagation algorithm with and without Momentum Factor*, 6th International Conference on Computing and Information Technology, ICCIT-2003, vol 2, pp. 711-716, Bangladesh.

[10] **P.C. Barman** and R. Ahmed, *Comparison of Genetic Algorithm and Bisection Methods in the Numerical Solution of Transcendental Equations*, 6th International Conference on Computing and Information Technology, ICCIT-2003, Vol 1, pp. 1-6, Bangladesh.

Technical Reports

[1] **Paresh Chandra Barman**, Gene Regulatory Network Model and implementation, Dept of Bio and Brain Engineering, KAIST, Republic of Korea, 2007

[2] **Paresh Chandra Barman**, Nadeem Iqbal, Hana Kim, Wireless Capsule (pill-cam) Endoscope image classification based on NMF and PCA feature, Report to Computational Neuro-System Lab, Dept. of Bio and Brain Engineering, KAIST. 2007

[3] **Paresh Chandra Barman**, Significant Gene Extraction and Clustering of Microarray Data Using NMF algorithm, Project report, Department of Bio and Brain Engineering, KAIST, 2006

[4] **Paresh Chandra Barman**, Text mining Using Non-negative Matrix Factorization, Project Report, Brain Science Research Center (BSRC) 2005, South Korea.

References

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