



ASADUZZAMAN, PhD

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Curriculum Vitae

May, 2019

EDUCATION

UNIVERSITY OF ULSAN,
ULSAN, SOUTH KOREA 2006-2010

M. Sc. and Ph.D. in Electrical & Computer Engineering
Dissertation Title: Coded Diversity in Cooperative Wireless Networks

CHITTAGONG UNIVERSITY OF ENGINEERING AND TECHNOLOGY,
CHITTAGONG, BANGLADESH 1996-2000

B.Sc. in Electrical & Electronic Engineering
Overall GPA: 3.53/4.0 (Merit position 2nd among 60 students)

EXPERIENCE

INSTITUTE

Department of Computer Science and Engineering (CSE),
Chittagong University of Engineering and Technology (CUET),
Chittagong-4349, Bangladesh

POSITION

Professor	Current position since September 2015
Associate Professor	December 2013–September 2015
Assistant Professor	May 2005–December 2013
Lecturer	July 2001–May 2005

KEY RESPONSIBILITIES

- Teaching Undergraduate and Graduate Courses
- Supervising Undergraduate and Graduate Student's Project/Thesis
- Performing Research Independently and in Group
- Managing Various Research and Development Projects
- Providing Testing & Consultancy Services
- Performing Various Administrative Duties at CUET

COURSES TAUGHT

Undergraduate Courses

- Digital System Design (CSE-421)
- Computer Peripherals and Interfacing (CSE-437)

- Communication Engineering (CSE-487)
- Microprocessor & Assembly Language Programming (CSE-333)
- Data Communication (CSE-313)
- Digital Electronics & Pulse Techniques (CSE-223)
- Digital Logic Design (CSE-221)
- Computer Basics and Programming (CSE-141), etc

Graduate Courses

- Wireless Sensor Networking (CSE-6713)
- Wireless Communication (CSE-67-12)
- Advanced Communication and Networking (CSE-6702)

GRADUATE STUDENT SUPERVISION

- Md. Fazlul Kader, completed M. Sc. Engg. in January 2014
Thesis Title: Hybrid Spectrum Sharing with Cooperative Secondary User Selection in Cognitive Radio Networks
- Mahfuzulhoq Chowdhury, completed M. Sc. Engg. in September 2014
Thesis Title: An Opportunistic Medium Access Control Protocol for Cognitive Radio Networks
- Mohammad Obaidur Rahman, completed M. Engg. in April 2017
Thesis Title: Optimal Power Allocation for Multichannel Cognitive Radio Systems by Using Stackelburg Game
- Abhijit Chwodhury, completed M. Engg. in May 2017
Thesis Title: Selection of Optimal Number of Relays for Distributed Wireless Networks based on Game Theory

ADDITIONAL DUTIES AT CUET

- Head of the Department, Department of Computer Science and Engineering (CSE), CUET, Duration: Current position since April 23, 2019
- Additional Director of Institutional Quality Assurance Cell (IQAC), CUET. Duration: Current position since May 07, 2015
- Director of Institute of Information and Communication Technology (IICT), CUET. Duration: April 03, 2017 to April 09, 2019
- Associate Director (Academic) of Institute of Information and Communication Technology (IICT), CUET. Duration: April 02, 2017 to August 27, 2012
- Sub-project Manager of a Sub-project titled "Self Assessment of B. Sc. Engineering Program in CSE at CUET" under The Higher Education Quality Enhancement Project (HEQEP) of UGC. Duration: 01 April 01, 2012 to March 31, 2014

- Chairman, Centre for Information and Communication Technology (presently IICT), CUET. Duration: April 30, 2012 to August 26, 2012
- Assistant Provost, Shahid Mohammed Shah Hall, CUET. Duration: July, 2011 to June-2012

RESEARCH INTEREST

Wireless Communication Systems and Networking with emphasis on the followings

- Cooperative Communication
- Wireless Networking
- MIMO systems
- Cognitive radio networks
- Content Centric Networking
- Wireless sensor networks,
- Nonlinear Optimization
- Game Theory, etc

RESEARCH PUBLICATIONS

JOURNAL ARTICLES

- [1] Shahid Md. Asif Iqbal and Asaduzzaman, “Adaptive forwarding strategies to reduce redundant Interests and Data in named data networks,” *Journal of Network and Computer Applications*, Vol. 106, pp. 33–47, March 2018 (SCI)
- [2] Asaduzzaman and Hyung Yun Kong, “Cooperative Relaying to Improve the Spectrum Utilization of Multi-channel CR Networks,” *Journal of Wireless Personal Communication (Springer)*, Vol. 82, No. 4, pp. 523–531, September 2015 (SCI)
- [3] Mahfuzulhoq Chowdhury, Asaduzzaman, and Md. Fazlul Kader, “Cognitive Radio MAC Protocols: A Survey, Some Research Issues and Challenges,” *Smart Computing Review*, Vol. 5, No.1, pp. 19-29, January 2015 (SCOPUS)
- [4] Md Fazlul Kader, Asaduzzaman, and Md. Moshikul Hoque “Outage Capacity Analysis of a Cooperative Relaying Scheme in Interference Limited Cognitive Radio Networks”, *Journal of Wireless Personal Communication (Springer)*, vol. (2014)79, August, 2014. (SCI)
- [5] Mahfuzulhoq Chowdhury and Asaduzzaman, “An Opportunistic Two-Transceiver Based MAC Protocol for Cognitive Radio Networks,” *International Journal of Multimedia and Ubiquitous Engineering*, Vol. 9, NO. 12, pp. 49-60, Dec. 2014 (SCOPUS)
- [6] Mahfuzulhoq Chowdhury, Asaduzzaman, and Md. Fazlul Kader, “Performance Analysis of Local and Cooperative Spectrum Sensing in Cognitive Radio Networks,” *International Journal of Signal Processing, Image Processing and Pattern Recognition (IJSIP)*, Vol. 6, No. 6, pp. 397-410, June 2013 (SCOPUS)

- [7] Md Fazlul Kader, Asaduzzaman, and Md. Moshiul Hoque “Hybrid Spectrum Sharing with Cooperative Secondary User Selection in Cognitive Radio Networks”, *KSII Transactions on Internet and Information Systems*, vol. 7, no. 9, September, 2013 (SCIE)
- [8] Mahfuzulhoq Chowdhury, Asaduzzaman, Md. Fazlul Kader, and Mohammad Obaidur Rahman “Design of an Efficient MAC Protocol for Opportunistic Cognitive Radio Networks”, *International Journal of Computer Science & Information Technology (IJCSIT)* Vol 4, No 5, October 2012 (SCOPUS)
- [9] Asaduzzaman and Hyung Yun Kong, “Ergodic and outage capacity of interference temperature-limited cognitive radio multi-input multi-output channel,” *IET communications*, Vol. 5, Iss. 5, pp. 652–659, 2011 (SCI)
- [10] Asaduzzaman and Hyung Yun Kong, “Multi-relay cooperative diversity protocol with improved spectral efficiency,” *Journal of Communications and Networking*, Vol. 13, Iss. 3, pp. 240–249, 2011 (SCI)
- [11] Asaduzzaman and Hyung Yun Kong, “Opportunistic Relaying based Spectrum Leasing for Cognitive Radio Networks,” *Journal of Communications and Networking*, Vol. 13, Iss. 1, pp. 50–55, 2011 (SCI)
- [12] Asaduzzaman and Hyung Yun Kong, “Code Combining Cooperative Diversity in Long-haul Transmission of Cluster based Wireless Sensor Networks,” *KSII Transactions on Internet and Information Systems*, Vol. 5, Iss. 7, pp. 1293–1310 (SCIE)
- [13] Hyung Yun Kong and Asaduzzaman, “On the outage behavior of interference temperature limited CR-MISO channel,” *Journal of Communications and Networking*, *Journal of Communications and Networking*, Vol. 13, Iss. 5, pp. 456–462, 2011 (SCI)
- [14] Asaduzzaman and Hyung Yun Kong, “Energy Efficient Cooperative LEACH Protocol for Wireless Sensor Networks,” *Journal of Communications and Networking*, vol. 12, No. 4, pp.358–365, Aug. 2010 (SCI)
- [15] Asaduzzaman and Hyung Yun Kong, “A Cooperative Transmission Scheme for Cluster Based Wireless Sensor Networks,” *Lecture note on Artificial Intelligence*, Volume 5755, pp. 728–737, 2010 (SCIE)
- [16] Hyung Yun Kong and Asaduzzaman, “Distributed Clustering Algorithm to Explore Cooperative Diversity in Wireless Sensor Networks”, *IEICE Transactions on Communications*, vol. E93-B, no. 5, pp. 1232–1239, May 2010 (SCI)
- [17] Asaduzzaman and Hyung Yun Kong, “Distributed Cooperative Routing Algorithm for Multi-hop Multi-relay Wireless Networks,” *IEICE Transactions on Communications*, Vol. E93-B, No.04, pp.1049–1052, Apr. 2010 (SCI)
- [18] Asaduzzaman and Hyung Yun Kong, “Performance analysis of code combining based cooperative protocol with amplified-and-forward (AF) relaying,” *IEICE Transactions on Communications*, vol. E93-B, no. 2, pp. 2275–2278, Feb. 2010 (SCI)
- [19] Asaduzzaman and Hyung Yun Kong, “Coded diversity for cooperative MISO based wireless sensor networks,” *IEEE Communications Letters*, vol. 13, No. 7, pp. 516–518, July 2009 (SCI)
- [20] Asaduzzaman and Hyung Yun Kong, “Code Combining Based Cooperative-LEACH Protocol for Wireless Sensor Networks,” *IEICE Transactions on Communications*, vol. E92-B, No. 6, pp. 2275–2278, June 2009 (SCI)

- [21] Asaduzzaman and Hyung Yun Kong, “Automatic Request for Cooperation (ARC) and Relay Selection for Wireless Networks,” *IEICE Transactions on Communications*, vol. E92-B, no. 3, pp. 964–972, March 2009 (SCI)
- [22] Asaduzzaman and Hyung Yun Kong, “Composite Signaling Coded Cooperation for Fast and Slow Fading,” *IEICE Transactions on Communications*, vol. E91-B, no. 9, pp. 3025–3029, Sept. 2008
- [23] Asaduzzaman and Hyung Yun Kong, “Code Combining in Cooperative Communication,” *IEICE Transactions on Communications*, vol. E91-B, no. 3, pp. 805–813, March 2008 (SCI)

CONFERENCE ARTICLES

- [1] M. F. Faruque, Asaduzzaman and I. H. Sarker, “Performance Analysis of Machine Learning Techniques to Predict Diabetes Mellitus,” 2019 International Conference on Electrical, Computer and Communication Engineering (ECCE), Cox’sBazar, Bangladesh, 2019
- [2] S. M. Azizul Hakim and Asaduzzaman, “Handwritten Bangla Numeral and Basic Character Recognition Using Deep Convolutional Neural Network,” 2019 International Conference on Electrical, Computer and Communication Engineering (ECCE), Cox’sBazar, Bangladesh, 2019
- [3] R. Rayan, M. S. Hossain and Asaduzzaman, “Compression of Large-Scale Image Dataset using Principal Component Analysis and K-means Clustering,” 2019 International Conference on Electrical, Computer and Communication Engineering (ECCE), Cox’sBazar, Bangladesh, 2019
- [4] S. Sultana and Asaduzzaman, “A Minimum Spanning Tree Based Routing Protocol For Multi-hop And Multi-channel Cognitive Radio,” 2018 Joint 7th International Conference on Informatics, Electronics & Vision (ICIEV) and 2018 2nd International Conference on Imaging, Vision & Pattern Recognition (icIVPR), Kitakyushu, Japan, 2018, pp. 206-211
- [5] H. Ahmed and Asaduzzaman, “Channel Assignment Augmentation Algorithm to Mitigate Interference for Heterogeneous ”TV White Space” Users,” 2018 Joint 7th International Conference on Informatics, Electronics & Vision (ICIEV) and 2018 2nd International Conference on Imaging, Vision & Pattern Recognition (icIVPR), Kitakyushu, Japan, 2018, pp. 200-205.
- [6] Nazmun Naher , Asaduzzaman and Md. Mokammel Haque, “Authentication of Diffie-Hellman Protocol Against Man-in-the-Middle Attack Using Cryptographically Secure CRC”, in Proceedings of International Ethical Hacking Conference 2018 (eHaCON 2018), Kolkata, India
- [7] Asaduzzaman, “A distributed algorithm to select channel and relay in multichannel-multirelay CR-networks” in proc. of 2017 International Conference on Networking, Systems and Security (NSysS), Dhaka, Bangladesh, 2017
- [8] Nusrat Jahan Oishi, Arafin Mahamud and Asaduzzaman, “Enhancing Wi-Fi security using a hybrid algorithm of blowfish and RC6” 2016 International Conference on Networking Systems and Security (NSysS), Dhaka, Bangladesh, 2016
- [9] Masuma Akter Rumi, Asaduzzaman and D. M. Hasibul Hasan, “CPU power consumption reduction in android smartphone”, 2015 3rd International Conference on Green Energy and Technology (ICGET), Dhaka, Bangladesh, 2015
- [10] Md Fazlul Kader, Asaduzzaman, Soo Young Shin, “Outage Capacity Analysis of a Secondary Network in Interference Limited Cognitive Radio Spectrum Sharing System,” in proc. of 17 th International Conference on Computer and Information Technology (ICCIT), ICCIT’14, Bangladesh; December 2014

- [11] Mahfuzulhoq Chowdhury, Asaduzzaman, Md. Fazlul Kader, “An Efficient MAC protocol for Cognitive Radio Networks,” in Proc of International Conference on Engineering Research, Innovation and Education(ICERIE), Shahjalal University of Science & Technology,Bangladesh, pp. 322–327, Jan. 2013
- [12] Md Fazlul Kader, Asaduzzaman and M. Chowdhury, “Cooperative Secondary User Selection as a Relay for the Primary System in Underlay Cognitive Radio Networks” in Proc of IEEE 15th International Conference on Computer and Information Technology(ICCIT)2012, University of Chittagong, Bangladesh, pp. 275–278, December 2012
- [13] Asaduzzaman, Hyung Yun Kong and Kim Ryum, “Cooperative Relaying in Interference Limited Cognitive Radio Networks,” 2010 IEEE 6th International Conference on Wireless and Mobile Computing, Networking and Communications, held in Niagara Falls, Canada, 2010
- [14] Asaduzzaman, Hyung Yun Kong and Ha Nguyen Vu, “A Cooperative Transmission Scheme for Cluster Based Wireless Sensor Networks,” 16th Asia-Pacific Conference on Communications (APCC 2010) held in Auckland New Zealand, 2010
- [15] Vo Nguyen Bao, Hyung Yun Kong, Asaduzzaman, Tran Thanh Truc and Park Jihwan, “Optimal Switching Adaptive M-QAM for Opportunistic Amplify-and-Forward Networks,” 25th Queen’s Biennial Symposium on Communications (QBSC 2010) ,Kingston, Canada, 2010
- [16] V. N. Q. Bao, Hyung Yun Kong, Asaduzzaman, J.-H. Lee and J.-H. Park, “On The Capacity of Opportunistic Cooperative Networks under Adaptive Transmission,” in IEEE PIMRC 2009, Tokyo, Japan, 2009
- [17] Asaduzzaman, Hyung Yun Kong and Kim Ryum, “A Cooperative Transmission Scheme for Cluster Based Wireless Sensor Networks,” International Conference on Intelligent Computing (ICIC 2009), held in Ulsan, Korea, September 16–19, 2009
- [18] Asaduzzaman, Hyung-Yun Kong, Gun-Seok Kim and Nae-Soo Kim, “Physical Layer Wireless Network Security Through Channel Coding,” Proceedings of the KIPS 2009
- [19] Ho Van Khuong, Hyung Yun Kong, Yun Kyeong Hwang, Asaduzzaman, Gun Seok Kim, Dea Kyu Choi, “Design of A High Order Diversity Cooperative Transmission Scheme Over Rayleigh Fading Channels,” Proceedings of the Sixth IASTED International Conferences on communication, internet and information technology, held on Banff, Alberta, Canada July 2–4, 2008
- [20] Asaduzzaman and Hyung Yun Kong, “Adaptive Channel Coding for Flat Fading Channel,” in Proceedings of the KIPS 2008
- [21] Hyung Yun Kong, Ho Van Khuong, Asaduzzaman, S. J. Park, N. S. Kim, “Cooperative Communications in A Novel HCOC-QAM OFDM Spread Spectrum System with MMSE Equalizer for High Speed Data Transmission,” Proceedings of the Seventh IASTED International Conferences on Wireless and Optical Communications, held in Montreal, Quebec, Canada, May 30–June 1, 2007
- [22] Asaduzzaman and Hyung Yun Kong, “An efficient punctured code combining based cooperative transmission scheme for wireless networks,” Proceedings of the 11th International Conference on Mechatronics technology-2007, ICMT2007, held on November 5–9, Ulsan, Korea, 2007
- [23] Asaduzzaman and Hyung-Yun Kong, “Code-combining Cooperative Diversity Protocol,” Proceedings of the Summer Workshop On Computer Communications 2007, held on August 23–25, Jejo Island, Korea, 2008

TRAINING

- Professional Development Program on Quality Assurance in Higher Education, organized by AIT Extension, Asian Institute of Technology (AIT), Thailand. Duration: 18 – 29 November 2015
- Training on Basic Campus Network Design, Organized by BdREN of University Grants Commission, Held at IEB Dhaka Center, Duration: March 29 – April 02, 2015
- Quality Assurance and Accreditation Training, organized by the HELP University, Kuala Lumpur, Malaysia, Duration: September 03–14, 2012
- A training program on Self Assessment, Organized by University Grants Commission (UGC) of Bangladesh, Under HEQEP project, Duration: July 01–04, 2012

PROFESSIONAL AND OTHER ACTIVITIES

- Served as a Syndicate Member of Chittagong University of Engineering and Technology (CUET) since April 2017 to December 2018.
- Enlisted Peer Reviewer of Self-assessment Report of Quality Assurance Unit, UGC
- Reviewer of IEEE Transactions on Vehicular Technology
- Reviewer of IEEE Communication Letters
- Reviewer of Journal of Communications and Networking
- Reviewer of Wireless Personal Communications (Springer)
- Reviewer of KSII Transactions on Internet and Information Systems
- Reviewer of 2009 IEEE 69th Vehicular Technology Conference: VTC2009-Spring, April 2009
- Reviewer of 2009 Fifth International Conference on Intelligent Computing (ICIC 2009)
- Reviewer of 2010 Sixth International Conference on Intelligent Computing (ICIC 2010)
- Reviewer of 11th International Conference on Advanced Communication Technology (ICACT 2009)
- Secretary, Technical Committee, 1st NCICIT, Organized by Dept. of CSE, CUET (2013)
- Member Secretary, Technical Program Committee, 9th International Forum on Strategic Technology (IFOST) 2014
- Member of Institution of Engineers, Bangladesh (IEB)
- Member of Institute of Electrical and Electronic Engineers, (IEEE)