

Dr. Mohammad Tawhid Kawser

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Career Objective To teach and care for students in a motivational way and to keep abreast of new technologies.

Professional Experience **Islamic University of Technology (IUT)** **June 2000 to Present**
(Including Study Leave)

Professor
Electrical and Electronic Engineering Department
(Previously, Associate Professor/Assistant Professor/Lecturer)

Ahsanullah U. of Science & Technology **Mar 2000 – Jun 2000**
Lecturer, EEE Dept.

Book Authored **Lone Author of a Renowned Book on 4G Cellular Communication**

Mohammad T. Kawser, “LTE Air Interface Protocols”, *Artech House*, Boston, USA, ISBN 978-1-60807-201-9, 2011.

Sales from August 2011 through August 2012: 181 copies in USA/Canada and 148 copies in the rest of the world, for which the net sale value is **US\$ 27,724**.

Book Reviewed **Reviewed a Renowned Book on 4G/5G Cellular Communication**

Moe Rahnama, and Marcin Dryjanski, “From LTE to LTE-Advanced Pro and 5G”, *Artech House*, USA, ISBN: 9781630814533, 2017.

Educational Background

- **Doctor of Philosophy**, Electrical and Electronic Engineering, 2016
Islamic University of Technology (IUT), Bangladesh
GPA: 4.00
- **Master of Science**, Electrical Engineering, 2005
Virginia Polytechnic Institute and State University (Virginia Tech), USA
[Virginia Tech **ranks 14th** in Electrical Engineering in USA]
GPA: 3.91
- **Bachelor of Science**, Electrical and Electronic Engineering, 1999
Bangladesh University of Engineering and Technology (BUET), Bangladesh
U.S. Equivalent GPA: 3.89

- Major Invited Role**
- **Session Chairs** of 2 Sessions at IEEE Conference, Washington, DC, USA.
 - **Session Chair** at IEEE Conference, Chengdu, China.
 - **Keynote Speaker**, Seminar at BUBT, Dhaka.
 - **Keynote Speaker**, Seminar at IIUC, Chittagong.
 - **Guest Lecturer**, Seminar at UIU, Dhaka.

Courses Taught at IUT

Theoretical Courses

- Wireless Communication (EEE 6403)
- Digital Communication (EEE 6407)
- Cellular Communication (EEE 4641)
- Wireless Communication (EEE 4541)
- Advanced Communication Techniques (EEE 4851)
- Microwave Engineering (EEE 4739)
- Radio Frequency Engineering (EEE 4613)
- Telecommunication Principles (EEE 4559)
- Electric and Magnetic Properties of Materials (EEE 6193)

Practical Courses

- Microwave Engineering Lab. (EEE 4740)
- Cellular Communication Lab. (EEE 4642)
- Wireless Communication Lab. (EEE 4542)
- Telecommunication Engineering Lab. (EEE 4806)
- Radio Frequency Engineering Lab. (EEE 4614)
- Telecommunication Principles Lab. (EEE 4560)

Other Major Duties at IUT

- Chairman, Self-Assessment Committee for EEE Dept.
- Chairman/Member of several committees for various purposes, like recruitment, tender, review of wages, etc.
- Coordinator for ESONANCE 2019, a festive event with participation from different universities.
- Coordinator for lab equipment purchase for EEE Dept.
- In-charge of Telecommunication Laboratory.
- Member of syllabus committee for Business and Technology Management (BTM).
- Member of committee for performance audit throughout the university.
- Worked as Member Secretary of Post Graduate Committee (PGC).
- Member of convocation committee and athletic committee.
- Developed many new hardware and software based experiments for practical courses.
- Conducted analysis for performance and fuel management of the generators at IUT.

- Language/Software Skills** C, Perl, MATLAB, Ansoft Designer, AWR Microwave Office, OPNET, Atoll, HFSS, FEKO, XCAL, XCAP, TEMS, NYUSIM, Vienna 5G/LTE, Cambium Networks.
- Book** **Mohammad T. Kawser**, “LTE Air Interface Protocols”, *Artech House*, Boston, USA, ISBN 978-1-60807-201-9, 2011.
- Journal Papers**
1. **Mohammad T. Kawser**, Kazi M. A. Hassan, Md. A. Haque, Sakif Ahmed, Mohammad R. Akram, “Quick Handover in 5G for High Speed Railways and Highways Using Forward Handover and PN Sequence Detection”, *International Journal of Electronics and Telecommunications*, vol. 69, no. 1, pp. 147-153, February 2023. DOI: 10.24425/ijet.2023.144344.
 2. **Mohammad T. Kawser**, Mohammad R. Islam, Z. Islam, Mohammad A. Islam, Mohammad Hassan, Zobayer Ahmed, and Rafid Hasan, "Improvement in DRX Power Saving for Nonreal-Time Traffic in LTE," *ETRI Journal*, vol. 38, no. 4, pp. 622-633, August 2016. DOI:10.4218/etrij.16.0115.0883
 3. **Mohammad T. Kawser**, Mohammad R. Islam, Muhammad R. Rahim, Mohammad T. Chowdhury, and Muhammad A. Masud, “Versatile Controllability over Cell Switching for Speedy Users in LTE HetNets”, *Radioengineering Journal*, vol. 26, no. 1, pp. 179-190, April 2017. DOI: 10.13164/re.2017.0179
 4. **Mohammad T. Kawser**, Mohammad R. Islam, Kazi I. Ahmed, Mir R. Karim, and Jaeed B. Saif, “Efficient Resource Allocation and Sectorization for Fractional Frequency Reuse (FFR) in LTE Femtocell Systems”, *Radioengineering Journal*, vol. 24, no. 4, pp. 940-947, December 2015. DOI:10.13164/re.2015.0940
 5. A. I. Zaghoul, C. B. Ravipati and **Mohammad T. Kawser**, “Modeling and Analysis of a Dual-Band Dual-Polarization Radiator Using FEKO”, *Applied Computational Electromagnetics Society Journal*, ISSN 1054-4887, vol. 22, no. 1, pp. 125-133, March 2007.
 6. **Mohammad T. Kawser** and Nafiz Imtiaz Bin Hamid, "Mitigation of Interference in Uplink Spectrum by Shifting Handover Boundary in LTE Heterogeneous Networks", *International Journal of Future Generation Communication and Networking*, vol. 12, no. 3, pp. 1-10, 2019. DOI:10.33832/ijfgcn.2019.12.3.01
 7. **Mohammad T. Kawser**, Md. Nazrul Islam Siddique, Zunaed Kibria and Abdullah Al Noman, "Estimation of the Feasibility of Underlay Inband Device-to-Device Communication based on Radio Conditions in LTE", *International Journal of Future Generation Communication and Networking*, vol. 12, no. 2, pp. 11-22, 2019. DOI: 10.33832/ijfgcn.2019.12.2.02
 8. **Mohammad T. Kawser**, Mukto Ahmed, Mohammad Abid Hasan, Rafsan Mahin, Saiful Islam, “Performance Evaluation of LTE-V Sidelink in Fading Channel of Various Doppler Spread”, *International Journal of Computer Science and Network Security*,

- vol. 19, no. 4, pp. 156-162, April 2019.
9. **Mohammad T. Kawser**, Md. Saymon Fahad, Sakib Ahmed, S. Safwan Sajjad, and Hasib A. Rafi, "The Perspective of Vehicle-to-Everything (V2X) Communication towards 5G", *International Journal of Computer Science and Network Security*, vol. 19, no. 4, pp. 146-155, April 2019.
 10. **Mohammad T. Kawser**, Md. Nafee A. Islam, Shahed Arman and Rokibul H. Bhuiyan, "Adaptive Control of CRE with Proportional Fair Resource Scheduling in LTE HetNets", *International Journal of Computing and Network Technology*, vol. 6, issue 2, pp. 57-62, May 2018.
 11. Syed R. Abied, Abdullah B. Shams, and **Mohammad T. Kawser**, "Comparison of the LTE Performance Parameters in Different Environments under Close Loop Spatial Multiplexing (CLSM) Mode in Downlink LTE-A", *Journal of Computer and Communications*, vol. 5, no. 9, pp. 117-128, July 2017. DOI: 10.4236/jcc.2017.59008
 12. **Mohammad T. Kawser**, Md. Rafiul Abdussami, Mahmudul Hasan and Mustakimus S. Tacik, "Online Live Street Watch Application Supported by LTE-A", *International Journal of Computer Applications*, vol. 150, no. 10, pp. 24-28, September 2016. DOI:10.5120/ijca2016911638
 13. **Mohammad T. Kawser**, Nafiz Imtiaz Bin Hamid, Md. Nayeemul Hasan, M. Shah Alam, and M. Musfiqur Rahman, "Downlink SNR to CQI Mapping for Different Multiple Antenna Techniques in LTE", *International Journal of Information and Electronics Engineering*, vol. 2, no. 5, pp. 756-760, ISSN: 2010-3719, 2012.
 14. **Mohammad T. Kawser**, Hasib M. A. B. Farid, Abduhu R. Hasin, Adil M. J. Sadik, and Ibrahim K. Razu, "Performance Comparison between Round Robin and Proportional Fair Scheduling Methods for LTE", *International Journal of Information and Electronics Engineering*, vol. 2, no. 5, pp. 678-681, ISSN: 2010-3719, 2012.
 15. **Mohammad T. Kawser**, Nafiz Imtiaz Bin Hamid, Md. Nayeemul Hasan, M. Shah Alam, and M. Musfiqur Rahman, "Limiting HARQ Retransmissions in Downlink for Poor Radio Link in LTE", *International Journal of Information and Electronics Engineering*, vol. 2, no. 5, pp. 707-709, ISSN: 2010-3719, 2012.
 16. Nafiz Imtiaz Bin Hamid, **Mohammad T. Kawser** and Md. Asharful Hoque, "Coverage and Capacity Analysis of LTE Radio Network Planning Considering Dhaka City", *International Journal of Computer Applications*, vol. 46, no. 15, pp. 49-56, May 2012. DOI:10.5120/6989-9604
 17. **Mohammad T. Kawser**, Mohammed R. Al-Amin, Khondoker Z. Islam and Sifat-E-Mohammad, "Radio Access Network Requirement for New Deployment of WiMAX in Dhaka", *International Journal of Computer & Communication Technology*, vol. 3, issue 6, 7, 8, pp. 42-46, ISSN: 0975-7449, 2012.

18. **Mohammad T. Kawser**, M. K. Syfullah, Nawshad U. A. Chowdhury and Md. T. Hoq, "Performance Comparison among MIMO Techniques at Different Interference Levels for LTE", *Communications in Computer and Information Science*, Springer Berlin Heidelberg, vol. 265, pp. 103-110. ISBN: 978-3-642-27191-5, 2012. DOI: 10.1007/978-3-642-27192-2_14

Conference Papers

1. T. K. Tandra, F. Tajrian, A. Hossain, **Mohammad T. Kawser**, M. R. Akram and A. B. Shams, "Joint Transmission Coordinated Multipoint on Mobile Users in 5G Heterogeneous Network", *Conference on Information Technology and Data Science (CITDS)*, pp. 273-278, Debrecen, Hungary, May 16-18, 2022. DOI: 10.1109/CITDS54976.2022.9914149.
2. M. S. Rahman, M. M. Haque, Z. K. Eisham, **Mohammad T. Kawser**, M. R. Akram and S. Z. Rahman, "An Adaptive Grey Wolf Optimization Algorithm for Secrecy Rate Optimization in Interference Limited Wireless Networks", *International Conference on Telecommunications and Photonics (ICTP)*, pp. 1-5, BUET, Dhaka, Bangladesh, December 22-24, 2021. DOI: 10.1109/ICTP53732.2021.9744155.
3. Moontasir Rafique, Abdullah Alavi, Aadnan Farhad, **Mohammad T. Kawser**, "Suitability of FPS and DPS in NOMA for Real-Time and Non-Real Time Applications", *International Conference on Electrical Engineering, Computer Science and Informatics (EECSI)*, Semarang, Indonesia, October 20-21, 2021.
4. **Mohammad T. Kawser**, M. M. Haque, M. S. Rahman and Z. K. Eisham, "Estimation of Outdoor to Indoor Loss Variation Pattern within 5G Spectrum and Loss Model Comparison", *International Conference on Electrical, Communication, and Computer Engineering (ICECCE)*, pp. 1-6, Kuala Lumpur, Malaysia, June 12-13, 2021. DOI: 10.1109/ICECCE52056.2021.9514193
5. **Mohammad T. Kawser**, M. R. Rafi, F. M. Faijus Salehin Rifat, M. F. Rahman, N. Zaki and S. Z. Rahman, "Prior Generation of Transport Blocks to Expedite HARQ Retransmissions and Uplink Transmissions Improving Latency in LTE", *IEEE 5th International Conference on Computer and Communications*, pp. 1182-1185, Chengdu, China, December 6-9, 2019. DOI: 10.1109/ICCC47050.2019.9064170
6. Raoudane Bouziyan and **Mohammad T. Kawser**, "Investigation of a Novel Dual Band Microstrip/Waveguide Hybrid Antenna Element", *World Academy of Science, Engineering and Technology*, vol. 1, no. 1, EISSN: 2010-3778, *International Conference on Mobile Computing*, London, United Kingdom, January 19-20, 2015.
7. **Mohammad T. Kawser**, Nafiz Imtiaz Bin Hamid and Mohammad Nur-A-Alam, "Multiple Neighbor Lists in the Same Cell for LTE", *International Conference on Computer Engineering and*

Technology (ICCET), Kuala Lumpur, Malaysia, June 17–19, 2011. DOI: 10.1115/1.859735

8. M. R. Hasan, **Mohammad T. Kawser** and M. R. Islam, “An Automatic GSM Neighbor Cell List Update Procedure Enhancing SON in LTE”, *International Conference on Electrical and Computer Engineering (ICECE)*, Dhaka, Bangladesh, December 18-20, 2010. DOI: 10.1109/ICELCE.2010.5700647
9. **Mohammad T. Kawser**, N. I. Hamid, M. A. Naser and A. Mahmud, “An Optimized Method for Scheduling Process of Scanning for Handover in Mobile WiMAX”, *International Conference on Computer and Network Technology (ICCNT)*, Chennai, India, July 24–26, 2009.
10. A. I. Zaghoul, C. B. Ravipati and **Mohammad T. Kawser**, “Dual and Tri Band Hybrid Phased Array Systems”, *Military Antenna Systems Conference*, Washington, DC, USA, September 21, 2005.
11. C. B. Ravipati, A. I. Zaghoul and **Mohammad T. Kawser**, “Investigations on Microstrip/Waveguide Hybrid Antenna Element for Multiple Frequencies”, *USNC/URSI National Radio Science Meeting*, Washington, DC, USA, July 3–8, 2005.

**Session
Chair/Speaker at
Conference/Seminar**

- **Session Chair**, Arrays and Mutual Coupling Session, *IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting (IEEE Conference)*, Washington, DC, USA, July 3–8, 2005.
- **Session Chair**, Array Analysis Session, *IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting (IEEE Conference)*, Washington, DC, USA, July 3–8, 2005.
- **Session Chair**, Network Engineering and Network Resource Management Session, *IEEE International Conference on Computer and Communications*, Chengdu, China, December 6-9, 2019.
- **Keynote Speaker**, Seminar on "Recent Cellular Technologies: 3G, 4G and 5G", Bangladesh University of Business and Technology (BUBT), Dhaka, April 2019.
- **Keynote Speaker**, Seminar on "Evolution of Cellular Communication: 2G, 3G, 4G and Beyond", International Islamic University Chittagong (IIUC), Chittagong, November 2017.
- **Guest Lecturer**, Lecture on “LTE Deployment: The Pros and Cons”, Seminar organized by IEEE Communications Society (IEEE ComSoc), United International University (UIU), Dhaka, November, 2012.

**Coordinator/Speaker
at On-Campus Short
Course**

- **Course Coordinator**, Short Course on “The Ultimate Cellular Technology: LTE and WiMAX”, Islamic University of Technology, December 11–15, 2010.
- **Guest Lecturer**, Short Course on “Emerging Technologies for 5G Cellular Communication”, Islamic University of Technology, November 14–17, 2016.

- **Guest Lecturer**, Short Course on “Wireless and Mobile Communication for Sustainable Rural Developments”, Islamic University of Technology, November, 18–21, 2013.
 - **Guest Lecturer**, Short Course on “Recent Development in Wireless Communication”, Islamic University of Technology, December 10–14, 2011.
 - International Conference on Computer and Communications (ICCC), Chengdu, China, December 6-9, 2019.
 - International Conference on Communication and Broadband Networking (ICCBN), Kuala Lumpur, Malaysia, June 17–19, 2011.
 - International Conference on Computer and Network Technology (ICCNT 2009), Chennai, India, July 24–26, 2009. (*Awarded one of the best three papers*)
 - IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting (IEEE Conference), Washington, DC, USA, July 3–8, 2005.
- Overseas Conferences Attended**
- Member, Institute of Electrical and Electronics Engineers (IEEE) [41528625].
 - Member, Institute of Engineers, Bangladesh (IEB) [M/17659].
- Affiliations**
- Graduate Teaching Assistantship, Virginia Tech, USA, 2004–2005.
 - Award for one of the best three papers at International Conference on Computer and Network Technology, Chennai, India, July 24–26, 2009.
 - Dean’s Awards, BUET, Bangladesh (in all academic years after 1st year), 1996–1999.
 - University Merit Scholarships, BUET, Bangladesh (in all semesters after 3rd semester), 1996–1999.
 - Merit Scholarship, Higher Secondary Certificate, Dhaka Board, Bangladesh, 1992.
 - Merit Scholarship, Secondary School Certificate, Dhaka Board, Bangladesh, 1990.
 - Junior School Scholarship, Dhaka Board, Bangladesh, 1987.
 - Primary School Scholarship in Talent-pool, Dhaka Board, Bangladesh, 1984.
- Awards/Scholarships**
- References**
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|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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 Vice-Chancellor
 International University of
 Business Agriculture and
 Technology (IUBAT), Dhaka.
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