

# DR MD SAMSUZZAMAN

Professor

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Faculty of Computer Science and Engineering  
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## EDUCATION

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### ■ PhD in Electrical and Electronic Engineering

The National University of Malaysia (UKM), Malaysia

**Thesis title:** Development of Circularly Polarized Patch Antenna for Small Satellite.

**Supervisor:** Mohammad Tariqul Islam, PhD, Professor, Department of Electrical, Electronic and Systems Engineering, The National University of Malaysia (UKM).R

### ■ M.Sc. In Computer Science and Engineering

Dept. of Computer Science and Engineering,

**Thesis title:** “Relay Node Selection Technique in Homogeneous Cluster Based Wireless Sensor Network”, Islamic University, Kushtia, Bangladesh, August 2007, (first class 2nd).

### ■ Bachelor of Science (Honors), B.Sc., Dept. of Computer Science and Engineering,

**Islamic University, Kushtia, Bangladesh, August 2005, (first class 1<sup>st</sup>).**

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## PROFESSIONAL EXPERIENCE

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- Associate Professor, Department of Computer and Communication and Engineering, Patuakhali Science and Technology University (PSTU), Patuakhali, Bangladesh from March 2020 to Present
- Post-Doctoral research fellow, Dept. of Electrical, Electronic and Systems Engineering, Faculty of Engineering and Built Environment, University Kebangsaan Malaysia from March 2018 to February 2020.
- Associate Professor, Department of Computer and Communication and Engineering, Patuakhali Science and Technology University (PSTU), Patuakhali, Bangladesh from August 2015 – February 2018
- PhD Research Student, Dept. of Electrical, Electronic and Systems Engineering, Faculty of Engineering and Built Environment, University Kebangsaan Malaysia From February 2012 – August 2015
- Visiting Researcher, Laboratory of Spacecraft Environment Interaction Engineering, Department of Integrated System Engineering, Kyushu Institute of Technology, 1-1 Sensui Tobata-ku Kitakyushu 804-8550 Japan August 2014
- Assistant Professor, Department of Computer and Communication and Engineering, Patuakhali Science and Technology University (PSTU), Patuakhali, Bangladesh March 2011 – February 2012
- Lecturer, Department of Computer and Communication and Engineering, Patuakhali Science and Technology University (PSTU), Patuakhali, Bangladesh. February, 2008 – February, 2011

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## RESEARCH INTERESTS

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■ Microwave Imaging ■ Antennas & Wave Propagation ■ Tissue Mimicking Phantom ■ Image Reconstruction Algorithms ■ Small Satellite Antennas

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## PATENT

- Small Satellite Circularly Polarized Patch Antenna  
Application No: PI 2015700783, Grant No. : MY-162698-A, Date of Grant and Publication: 05 July 2017
- UHF Band Compact Patch Antenna for Nano Satellite (Filing date June 2016)

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## PUBLICATIONS

1. **Md Samsuzzaman**, N.M., Md Tarikul Islam, Mohammad Tariqul Islam. Wideband 8×8 patch antenna array for 5g wireless communications. Optoelectronics and Advanced Materials – Rapid Communications 2020, 14, 163-171.
2. Islam, M.S.; **Samsuzzaman, M.**; Beng, G.K.; Misran, N.; Amin, N.; Islam, M.T. A gap coupled hexagonal split ring resonator based metamaterial for s-band and x-band microwave applications. IEEE Access 2020, 8, 68239-68253.
3. Hossain, A.; Islam, M.T.; Islam, M.; Chowdhury, M.E.; Rmili, H.; **Samsuzzaman, M.** A planar ultrawideband patch antenna array for microwave breast tumor detection. Materials 2020, 13, 4918.
4. Hossain, A.; Islam, M.T.; Chowdhury, M.E.; **Samsuzzaman, M.** A grounded coplanar waveguide-based slotted inverted delta-shaped wideband antenna for microwave head imaging. IEEE Access 2020, 8, 185698-185724.
5. Hossain, A.; Islam, M.T.; Almutairi, A.F.; Singh, M.S.J.; Mat, K.; **Samsuzzaman, M.** An octagonal ring-shaped parasitic resonator based compact ultrawideband antenna for microwave imaging applications. Sensors 2020, 20, 1354.
6. Azahari Salleh, C.C.Y., Touhidul Alam, Mandeep Singh Jit Singh, **Md. Samsuzzaman**, Mohammad Tariqul Islam. Development of microwave brain stroke imaging system using multiple antipodal vivaldi antennas based on raspberry pi technology. Jurnal Kejuruteraan 2020, 32, 39-49.

7. M. **Samsuzzaman**, M. T. Islam, M. T. Islam, A. A. Shovon, R. I. Faruque, and N. Misran, "A 16-modified antipodal Vivaldi antenna array for microwave-based breast tumor imaging applications," *Microwave Opt. Technol. Lett*, vol. 61, no. 9, pp. 2110-2118, 2019.
8. M. Z. Mahmud, M. T. Islam, A. F. Almutairi, M. **Samsuzzaman**, U. Acharjee, and M. T. Islam, "A Parasitic Resonator-Based Diamond-Shaped Microstrip Antenna for Microwave Imaging Applications," *Electronics*, vol. 8, no. 4, p. 434, 2019.
9. M. T. I. M. **SAMSUZZAMAN**, M. R. I. FARUQUE, MANDEEP JIT SINGH, M. T. ISLAM, "Microwave imaging based breast tumor detection using compact wide slotted UWB patch antenna," *Optoelectronics and Advanced Materials - Rapid Communications*, vol. 13, no. 7-8, pp. 448-457, 2019.
10. S. Kibria, M. **Samsuzzaman**, M. T. Islam, M. Z. Mahmud, N. Misran, and M. T. Islam, "Breast phantom imaging using iteratively corrected coherence factor delay and sum," *IEEE Access*, vol. 7, pp. 40822-40832, 2019.
11. M. T. Islam, M. **Samsuzzaman**, I. Yahya, A. Kogut, N. Misran, and M. T. Islam, "Metamaterial Inspired High Gain Antenna for Microwave Breast Imaging," in 2019 IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE), 2019: IEEE, pp. 1-4.
12. M. T. Islam, M. **Samsuzzaman**, S. Kibria, N. Misran, and M. T. Islam, "Metasurface Loaded High Gain Antenna based Microwave Imaging using Iteratively Corrected Delay Multiply and Sum Algorithm," *Scientific reports*, vol. 9, no. 1, pp. 1-14, 2019.
13. M. Islam, M. Mahmud, M. T. Islam, S. Kibria, and M. **Samsuzzaman**, "A Low Cost and Portable Microwave Imaging System for Breast Tumor Detection Using UWB Directional Antenna array," *Scientific reports*, vol. 9, no. 1, pp. 1-13, 2019.
14. Md Tarikul Islam, **Md Samsuzzaman**, Salehin Kibria And Mohammad Tariqul Islam, "*Experimental Breast Phantoms for Estimation of Breast Tumor Using Microwave Imaging Systems*," *IEEE Access* vol. 6, pp. 78587-78597, 2018. doi: 10.1109/ACCESS.2018.2885087, ISSN: 2169-3536 (Indexed in **ISI & SCOPUS**) (Impact Factor-**3.557**) **Q1**.
15. Mohammad Tariqul Islam, **M. Samsuzzaman**, Md. Tarikul Islam and, S. Kibria, , "*Experimental breast phantom imaging with metamaterial-inspired nine-antenna sensor array*," *Sensors* 2018, 18, 4427, 2018. DOI: 10.3390/s18124427 (Indexed in ISI & SCOPUS) EISSN: 1424-8220 (Impact Factor- **2.457**) **Q1**
16. Md. Samsuzzaman and Mohammad Tariqul Islam, "Circularly polarized broadband printed antenna for wireless applications", *Sensors*, 2018, vol. 18, no. 12 (2018): 4213, EISSN: 1424-8220 (Indexed in ISI & SCOPUS) (Impact Factor- **2.457**) **Q1**
17. **M. Samsuzzaman**, M. T. Islam, S. Kibria, and M. Cho, "*BIRDS-1 Cube.Sat Constellation using Compact UHF Patch Antenna*", *IEEE Access*, 2018. DOI: 10.1109/ACCESS.2018.2871209 ISSN: 2169-3536 (Indexed in **ISI & SCOPUS**) (Impact Factor-**3.557**) **Q1**.
18. **M. Samsuzzaman**, M. T. Islam, and M. S. J. Singh, "A Compact Printed Monopole Antenna with Wideband Circular Polarization," *IEEE Access*, 2018. DOI: 10.1109/ACCESS.2018.2871818, ISSN: 2169-3536 (Indexed in **ISI & SCOPUS**) (Impact Factor-**3.557**) **Q1**.
19. Mohammad Tariqul Islam, **M. Samsuzzaman**, Md. Tarikul Islam, S. Kibria, and M. J. S. Singh, "*A Homogeneous Breast Phantom Measurement System with an Improved Modified Microwave Imaging Antenna Sensor*," *Sensors*, vol. 18, no. 9, p. 2962, 2018. DOI: 10.3390/s18092962, EISSN: 1424-8220 (Indexed in ISI & SCOPUS) (Impact Factor- **2.457**) **Q1**

## RELEVANT COURSEWORK

**POSTGRADUATE:** Research Methodology

**UNDERGRADUATE:** Programming Fundamentals | System Analysis and Design | Object Oriented Programming | Advanced Programming | Data Structure and Algorithm | Mobile Programming| Data Communication and Networking | Artificial Intelligence| Open-Source Development

## AWARDS AND HONORS

1. **Research Fellowship**, The Malaysian Commonwealth Scholarship and Fellowship Plan (CSFP) scholar from **September 2012 to August 2015**.
2. **Graduate Research Assistant**, Department of Electrical, Electronic and Systems Eng. Faculty of Engineering and Built Environment, Universiti Kebangsaan Malaysia, February 2012 to August 2015.
3. AP/MTT/EMC Malaysia Excellent Awards 2019
4. AP/MTT/EMC, Malaysia Best Paper Awards 2018

## TECHNICAL SKILLS

- **Programming and Mark up Languages:** C, C++, Java, Javascript, PHP, HTML, CSS.
- **Operating Systems:** Windows
- **Simulation and Design Tools:** HFSS, IE3D MATLAB, CST, Origin Pro,
- **Citation Software:** Mendely, Endnote

## LABORATORY SKILLS

- Satimo Near Field Passive Measurement Lab (0.8-18GHz)
- Anechoic Chamber
- VNA (Agilent N5227A:10MHz-67GHz)
- Dielectric Measurement (KEYSIGHT 85070E dielectric probe kit)

## PROFESSIONAL AFFILIATIONS

1. Young Professional Member, The Institute of Electrical & Electronics Engineers (IEEE) – Membership No.: 93381784, 2018- Current

2. Student Member, The Institute of Electrical & Electronics Engineers (IEEE) – Membership No.: 93381784, 2015 - 2016