

# ABDULLAH MOHAMMAD TANVIRUL HOQUE

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## CAREER OBJECTIVE

I have completed my B.Sc. Engg. in Electrical and Electronic Engineering from BSMRSTU and participated in a range of extracurricular and voluntary activities for both personal and professional growth. I am heavily enthusiastic about building a research-oriented career. Hence, keen interested to pursue higher studies at top-ranked research institutes abroad.

## EDUCATIONAL QUALIFICATION

Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh

July 2022

B.Sc. Engg. in Electrical & Electronic Engineering (EEE)

CGPA: 3.64 out of 4.00

Thesis: U-grooved Selectively Coated and Highly Sensitive PCF-SPR Sensor for Broad Range Analyte RI Detection.

[IEEE Access. DOI:10.1109/ACCESS.2023.3261565]

Website: <https://www.bsmrstu.edu.bd/s/>

## TECHNICAL SKILLS

<b>Simulation Software</b>	MATLAB/Simulink, COMSOL Multiphysics, Lumerical, Delta PLC, Proteus Professional 8, Orcad PSpice, Microwind, and Electrical AutoCad.
<b>Programming Skills</b>	MATLAB, C, Python, HTML, ASSEMBLY-8086, Siemens PLC Programming, and Arduino.
<b>Application Software</b>	Microsoft Office, Visio, Latex, Anaconda (Jupyter Notebook) and Adobe Photoshop.
<b>Test and Measurement</b>	Spectrum Analyzer, Signal Generators, Wattmeter, and Oscilloscopes.

## WORK EXPERIENCES

### *Research Assistant, Nanophotonics & Bio-sensor, Bangladesh Chapter, Under The Joint Supervision of*

- Dr. Rifat Ahmmed Aoni  
Postdoctoral Scholar, Ellison Institute for Transformative Medicine, USA  
Remotely working from Bangladesh
- Dr. Rajib Ahmed  
Postdoctoral Scholar, Stanford University, Palo Alto, California 94304, USA  
Remotely worked from Bangladesh
- Dr. Khurram Karim Qureshi  
Professor, Founder & Director of the Optical Communications and Sensors Laboratory (OCSL), King Fahd University of Petroleum and Minerals, Dhahran, SA  
Remotely working from Bangladesh

### *Volunteering Experiences*

- Secretary, IEEE BSMRSTU Student Branch
- President, Ohm Research Club, BSMRSTU
- Vice President, Ohm Research Club, BSMRSTU
- Research Advisor, Ohm Research Club, BSMRSTU
- Class Representative at Dept. of EEE (4th Year 7<sup>th</sup> Semester), BSMRSTU

## RESEARCH INTERESTS

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- Bio-photonics; Terahertz; Microfluidics and Machine Learning

## PUBLICATIONS

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### *Journals & Conferences*

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Google Scholar || ResearchGate || IEEE || ORCID || Scopus

- **Hoque, A. M. T.**, Al-tabatabaie, K. F., Ali, M. E., Arshad, A., Mitu, S.S.I., & Qureshi, K.K. U-grooved Selectively Coated and Highly Sensitive PCFSPR Sensor for Broad Range RI of Analytes, **IEEE Access**. DOI: **10.1109/ACCESS.2023.3261565**
- **Hoque, A. M. T.**, Islam, A., Haider, F., Aoni, R. A., & Ahmed (2022), R. Dual polarized surface plasmon resonance refractive index sensor by decentering propagation-controlled core. **Optics Continuum**. DOI: **10.1364/OPTCON.460520**
- Islam, M.N., **Hoque, A. M. T.**, N., Habib, A. (2022), R. Design and Implementation of Bandwidth Based Time Varying Online Exam, in **2021 3rd International Conference on Electrical & Electronic Engineering (ICEEE)**, IEEE, DOI: **10.1109/ICEEE54059.2021.9718990**
- **Hoque, A. M. T.**, Kusay, A.F., Khurram, K.Q., Hasan, A. U-grooved Multi-channel Highly Sensitive SPR-PCF Biosensor for Intense RI Range, [**Under Review in Optics Express**].
- **Hoque, A. M. T.**, Islam, A., Haider, F., Aoni, R. A., & Ahmed, Point-of-Care Testing of Hyponatremia and Hypernatremia Level Using SPR Supported PCF Sensor, [**Under Review in Biomedical Optics Express**].
- Hasan, A., Islam, A., **Hoque, A. M. T.**, & Howlader A. H., Isogonally asymmetric Hi-Bi optofluidic sensor for sensitivity intensified detection of Pseudomonas aeruginosa, [**Under Review in RSC Advances**].
- **Hoque, A. M. T.**, Kusay, A.F., Khurram, K.Q., Hasan, A. Titanium Coated Extremely Sensitive SPR Biosensor for Cancer Cell Detection, [**Under Review in Optical Materials Express**]

### *Ongoing Projects*

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- Hoque, A. M. T., Kusay, A.F., Khurram, K.Q., Hasan, A. Developing a highly sensitive multi-channel PCFSPR biosensor to perform the on-site detection and measurement of CoV-2 particles.
- Hoque, A. M. T., Chowdhury, S. A., Hussain, M. A., & Ahmed, "Cancer Cells Detection, and Identification Based on Electrical Properties.
- Hoque, A. M. T., Bristi F., Hoque M. E., "Can Transformer Predict The Heart Failure?"
- Hoque, A. M. T., Islam, A., Haider, F., Aoni, R. A., & Ahmed, "A D-shaped Multi-channel Highly Sensitive SPR Supported PCF Bio-sensor For Female Hormone Testing".

## NETWORK AND MEMBERSHIP

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- Student Member, Institute of Electrical & Electronics Engineers (IEEE) *January 2021–Present*  
Membership no: 97513282

## HONORS AND AWARDS

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- Secondary School Scholarship (2014).
- Secured 3<sup>rd</sup> Position at Aship Merit Test (2012)

## LANGUAGE PROFICIENCY

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*Bengali (Native) | | English (Competent)*

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IELTS Overall Band Score: 6.5

*August 2023*

Listening: 6.5 Reading: 6.5 Writing: 6.0 Speaking: 6.0

## PROJECT WORKS

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- Islam, M.N., Hoque, A. M. T., N., Habib, A. (2021), R. Development of a Low-Cost Device for Speech Conversion for Mute Community, in 2019 International Journal of Innovative Science and Research Technology IJISRT, DOI:10.13140/RG.2.2.24627.14884
- IOT Based Smart Dustbin System Using GSM SIM-900A Module.

## WORKSHOPS

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- COMSOL simulation of SPRPCF sensor presented by Abrar Islam, PhD Fellow, dept. of ECE, Pennsylvania State University.
- 15-days long training course named "Industrial Automation, Based on Programmable Logic Controller" collaboratively organized by Ohm Research Club, BSMRSTU, and EEE Association, BSMRSTU.
- Training on transformer, substation design, electrical equipment softy and public procurement organized by Ohm Research Club of BSMRSTU.

## FAVORABLE PERSONALITY TRAITS

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Commitment to work, adaptability, a goal-oriented personality, problem-solving skills, comfort with teamwork, good coordination, and persuasion skills.

## REFERENCES

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Name	: Dr. A.T.M. Saiful Islam	Japatosh Mondal	Dr. Rifat Ahmmed Aoni
Designation	: Chairman, Associate Professor	Assistant Professor	Postdoctoral Scholar
Institution	: EEE, BSMRSTU, Bangladesh	EEE, BSMRSTU, Bangladesh	Ellison Institute for Transformative Medicine, USA
Phone	: (+880) 1303879047	(+880) 1714940031	+1213 691 6017
Email	: saiful@bsmrstu.edu.bd	jmondal.eee@bsmrstu.edu.bd	raoni@eitm.org
Relationship	: BSc Course Advisor	BSc Course Advisor	Research Project Supervisor