
RESEARCH INTERESTS Software Defined Networking, Security of Programmable Networks, Control Plane Attacks, Traffic Engineering, Internet of Things, Wireless, Sensor Networks, Interdomain Routing, Network Virtualization, Cloud Storage Security.

EDUCATION **Mawlana Bhashani Science and Technology University**, Tangail, Bangladesh

B.Sc. (Engg.), Information & Communication Technology, *Expected*: Jun 2018
Final Academic Year: Dec 2015, (Exam held Dec 2016)

- Thesis Topic: *A Study of Multimedia Contents Security in Cloud Computing and QoS Analysis in SDN Based on IP Mobility*
- Advisor: Nazrul Islam, MSc. (BIT, Sweden)

BAF Shaheen College, Dhaka, Bangladesh
Higher Secondary Certificate (HSC), Science, July 2011

Badda Alatunnessa High School, Dhaka, Bangladesh
Secondary School Certificate (SSC), Science, May 2009

RESEARCH EXPERIENCE **Undergraduate Research Assistant** May 2014 to Jun 2017

Department of ICT
Mawlana Bhashani Science and Technology University
Supervisor: Nazrul Islam, MSc.

- Design and execute small-scale testing to validate control algorithms derived to simulate controller behavior in Software Defined Network.
- Contribute to multi-disciplinary projects aimed at developing visualizations and simulations of ZigBee wireless network.
- Collaborate and coordinate with faculty, senior graduates, and fellow undergrad students across the department.

TEACHING AND MENTORING **SDN Trainer** Jan 2017 to Present

Einstein Future Internet Lab (EFI Lab)

- Collaborate and assist in Initiating SDN Lab inside the interested organizations
- Mentoring seminars to perform study on SDN and analyze the research findings.
- Support events and showcases contributing to EFI Lab working groups.
- Providing educational training for the participants and follow up on the participants.

PUBLICATIONS [1] A. I. Swapna, N. Islam, M. H. Rahman, and M. B. A. Miah, "A comparative analysis of qos in wired and wireless sdn based *Journal of Computer Science*, 2018, accepted.

[2] A. I. Swapna and N. Islam, "Security analysis of ieee 802.21 standard in software defined wireless networking," in *Computer and Information Technology (ICCIT), 2017 20th International Conference of*. IEEE, 2017, pp. 1–5.

[3] A. I. Swapna, M. R. H. Reza, and M. K. Aion, "Security analysis of software defined wireless network monitoring with sflow and flowvisor," in *Communication and Electronics Systems (ICCES), International Conference on*. IEEE, 2016, pp. 1–7.

[4] A. I. Swapna, Z. Rahman, M. H. Rahman, and M. Akramuzzaman, "Performance evaluation of fuzzy integrated firewall model for hybrid cloud based on packet utilization," in *Computer Communication and the Internet (ICCCI), 2016 IEEE International Conference on*. IEEE, 2016, pp. 253–256.

- [5] A. I. Swapna, M. R. Huda, and M. K. Aion, "Comparative security analysis of software defined wireless networking (sdwn)-bgp and netconf protocols," in *Computer and Information Technology (ICCIT), 2016 19th International Conference on*. IEEE, 2016, pp. 282–287.
- [6] N. Islam, C. C. Bawn, J. Hasan, A. I. Swapna, and M. S. Rahman, "Quality of service analysis of ethernet network based on packet size," *Journal of Computer and Communications*, vol. 4, no. 04, p. 63, 2016.
- [7] N. Islam, M. J. H. Biddut, A. I. Swapna, and M. M. Rahman, "An analytical study to minimize load of zigbee network based on statistical modeling," in *Electrical and Computer Engineering (WIECON-ECE), 2015 IEEE International WIE Conference on*. IEEE, 2015, pp. 139–142.
- [8] N. Islam, M. J. H. Biddut, A. I. Swapna, and S. Asaduzzaman, "Improved quality of service in zigbee network with statistical modeling," in *Advances in Electrical Engineering (ICAEE), 2015 International Conference on*. IEEE, 2015, pp. 174–177.
- [9] N. Islam, M. J. H. Biddut, A. I. Swapna, and M. H. R. Jany, "A study on priority based zigbee network performance analysis with tree routing method," *Journal of Computer and Communications*, vol. 3, no. 08, p. 1, 2015.
- [10] J. H. Biddut, N. Islam, M. H. R. Jany, and A. I. Swapna, "Performance analysis of large scale zigbee network design through geometric structure," in *Electrical Information and Communication Technology (EICT), 2015 2nd International Conference on*. IEEE, 2015, pp. 263–268.

AWARDS	Best Paper Award <ul style="list-style-type: none"> • In AI, Computer, Antenna, Wireless, Biomedical and Signal Processing proceeding of 2015 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering, Dhaka, BD 	Dec 2015
GRANTS	Research Support Fund – University Grant Commission (UGC), BD <ul style="list-style-type: none"> • Undergraduate Research Fund • The Undergraduate ICT Research Fund program is intended to give the most accomplished final-year thesis group and respective supervisor teaming up towards an opportunity to innovate in the ICT research and application fields. 	Jun 2016
WORKSHOP PRESENTATIONS	Conference Workshops <ul style="list-style-type: none"> • Workshop on SDN/NFV (ICCIT 2017), Dhaka, BD • Workshop Tutorial on Security by Software Defined Networking (SDN) (ICCIT 2016), Dhaka, BD Mawlana Bhashani Science and Technology University <ul style="list-style-type: none"> • Introducing Mozilla along w/ Rust • Software Defined Networking for Telecommunication 	Dec 2017 Dec 2016 Aug 2017 Apr 2015
POSTER PRESENTATION	Grace Hopper Celebration of Women in Computing Prevent Cybercrime against Women through Cloud Security Preventive Measures	Oct 2015
PEER REVIEWS	Elsevier - Journal of Computer Standards and Interface KSII Transactions on Internet Information System TPC member of 12th IEEE International Conference on Computer Engineering and Systems (ICCES)	Aug 2017

PROFESSIONAL EXPERIENCE	<p>Tech Writer Apr-Dec 2017 Prepare and Analyse Business Software Technology Articles Marketing Department, Brain Station 23</p> <p>Technology Intern Jan-Apr 2017 Simplification and Automation Project Supervisor: AKM Shamsul Arefin, GM, Technology Division, Grameenphone Ltd. (A Telenor Child)</p>
VOLUNTEER SERVICE	<p>Representative & Regional Coordinator, Mozilla Corp. Jan 2015 – Present <ul style="list-style-type: none"> • Community mobilizer and Mozilla Developer Network contributor. • Represent Mozilla in country/region, promote the Mozilla Projects (Rust Lang, Connected Device) and mission. </p> <p>Student Member of IEEE MBSTU Student Brunch Jan 2017 – Present <ul style="list-style-type: none"> • Assisted in job search for the SPH Coordinator of Recruitment and Student Leadership • Reviewed applications, conducted interviews </p>
SKILLS	<ul style="list-style-type: none"> • Programming Languages and Mathematical Packages: Matlab, C, C++, Python, R, L^AT_EX, Git • Tools and Platforms: Mininet, RYU, OMNET++, Wireshark, NetFlow, VirtualBox • Other: SPSS, Linux (openSUSE, Ubuntu), Mac OS, Windows OS • Networking: OpenFlow (1.0-1.4), L2 switching • Hobbies: Reading, Cycling and travel new countries
LANGUAGE PROFICIENCY	<p>English: Fluent, Bengali: Native, German: Beginner</p>
ACADEMIC PROJECTS	<p>Online Crime Report Management Sophomore Year Online crime reporting system build to leverage the crime reports to the metropolitan police. Technology/Languages Used: PHP, HTML, CSS MySQL</p> <p>Internet Relay Chat Clint Using Image Detection Login (IRCCUIDL) Junior Year A project that ensures more secure login system for Internet Relay Chatting using IRC bots. Technology/Languages Used: Java EE, JSF, Hibernate, MySQL</p> <p>ZigBee for Smart Home Network Senior Year Usability and performance analysis of home automation devices using IEEE Standard 802.15.5, ZigBee for network communication.</p>
REFERENCES	<p>Nazrul Islam Phone: +880 172 125 9140 Assistant Professor and Proctor, Dept. of ICT E-mail: nazrul.islam@mbstu.ac.bd Mawlana Bhashani Science and Technology University</p> <p>Dr. Muhammad Shahin Uddin Phone: +880 175 985 2318 Professor, Dept. of ICT E-mail: shahin.uddin@mbstu.ac.bd Mawlana Bhashani Science and Technology University</p> <p>Dr. Sajjad Waheed Phone: +880 921 62515 Associate Professor, Dept. of ICT E-mail: sajad302@yahoo.com Mawlana Bhashani Science and Technology University</p>