Hasan Iqbal

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Education

PhD, Computer Science and Engineering　　　　　　　　　　　　　　　　2018 - 2024
University of Connecticut (UConn), Storrs, CT
Dissertation: High-dimensional Quantum Key Distribution: New Protocolos and Analysis.
Committee: Dr. Walter O. Krawec (chair), Dr. Bing Wang, Dr. Alexander Russell

MS, Computer Science　　　　　　　　　　　　　　　　　　　　　　　　2015 - 2017
University of Illinois at Chicago (UIC), Chicago, IL

BS, Information Technology　　　　　　　　　　　　　　　　　　　　　　2009 - 2013
IIT, University of Dhaka, Dhaka, Bangladesh

Professional Experience

University of Wyoming, Assistant professor of EECS　　　　　　　　　2024 - Present
University of Connecticut, Research and teaching assistant　　　　　　2018 - 2024
University of Illinois at Chicago, Teaching assistant　　　　　　　　　2015 - 2017

Publications

1. New Security Proof of a Restricted High-Dimensional QKD Protocol. H. Iqbal and W.O. Krawec. IEEE ISIT 2024.

2. Analysis of a High-Dimensional Extended B92 Protocol. H. Iqbal and W.O. Krawec. Quantum Information Processing 20 (10) 344, 2021.

3. High-Dimensional Semi-Quantum Cryptography. H. Iqbal and W.O. Krawec. IEEE Transactions on Quantum Engineering, vol. 1, pp. 1-17, 2020.

4. Semi-quantum Cryptography. H. Iqbal and W.O. Krawec. Quantum Information Processing 19 (3) 97, 2020.

5. From Classical to Semi-Quantum Secure Communication. A. Gagliano, W.O. Krawec, and H. Iqbal. IEEE ISIT 2019.

Teaching

University of Wyoming

1. COSC 4200 - Computability and Complexity　　　　　　　　　　　　　Fall 2024
2. EE 5885 - Introduction to Quantum Cryptography　　　　　　　　　　Spring 2025

Professional Services

Served as a reviewer for the following journals:

1. Quantum Information Processing.
2. EPJ Quantum Technology.
3. IEEE Internet of Things.
4. IEEE/ACM Transactions on Networking.
5. IEEE Robotics and Automation Magazine

University Services

1. Volunteered for showcasing research to the undergraduate students.	October 2023
2. Volunteered in welcoming new engineering graduate students.	August 2022
3. Served as an Orientation Representative for international students.	Dec '19, Aug '19
4. Volunteered for the School of Engineering research showcase.	March 2019

Presentations and Posters

1. New Security Proof of HD-3-State-BB84 Protocol, Quantum Optics Seminar, NIST (Online). October 2023
2. New Security Proof of HD-3-State-BB84 Protocol, QCrypt poster, UMaryland. August 2023
3. HD-B92 Protocol, SOE poster competition, UConn. April 2021
4. HD-Semi-quantum Key Distribution, CSE Security Seminar, UConn. November 2020
5. Fully Device-independent QKD, Quantum Network Seminar, UMass/CQN. July 2020
6. HD-Semi-quantum Key Distribution, SOE poster competition, UConn. March 2020

Awards

1. Conference participation award, Graduate School, UConn	July 2023
2. Summer dissertation fellowship, Graduate School, UConn	April 2023
3. Synchrony Financial fellowship, CSE, UConn	2021 - 2022, 2023
4. Pre-doctoral fellowship award, CSE, UConn	May 2024/23/22/21/20

References

Dr. Walter O. Krawec
Associate Professor, Computer Science and Engineering, University of Connecticut
walter.krawec@uconn.edu, (860) 486-5523

Dr. Bing Wang
Professor, Computer Science and Engineering, University of Connecticut
bing@uconn.edu, (860) 486-0582

Dr. Alexander Russell
Professor, Computer Science and Engineering, University of Connecticut
acr@uconn.edu, (860) 486-4290

Dr. Sanguthevar Rajasekaran
Professor, Computer Science and Engineering, University of Connecticut
sanguthevar.rajasekaran@uconn.edu, (860) 486-2428