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.

Awards

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

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

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.

University Services

1. Volunteered for showcasing research to the undergraduate students. October 2023
2. Volunteered as a student leader 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

References

Dr. Walter O. Krawec
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Dr. Bing Wang
Professor, Computer Science and Engineering, University of Connecticut
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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
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