

Hasan Iqbal

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Education

PhD , Computer Science and Engineering University of Connecticut (UConn) , Storrs, CT Dissertation: High-dimensional Quantum Key Distribution: New Protocols and Analysis. Committee: Dr. Walter O. Krawec (chair), Dr. Bing Wang, Dr. Alexander Russell	2018 - 2024
MS , Computer Science University of Illinois at Chicago (UIC) , Chicago, IL	2015 - 2017
BS , Information Technology IIT, University of Dhaka , Dhaka, Bangladesh	2009 - 2013

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

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| 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

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| 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

Associate Professor, Computer Science and Engineering, University of Connecticut
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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