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| **CURRICULUM VITAE** |

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| **PERSONAL INFORMATION** | |
| Name: | Hussein Ibrahim Abulkasim |
| Nationality: | Egyptian |
| Job Title: | Assistant Professor |
| Marital Status: | Married |
| College: | Engineering and Information Technology |
| Department: | Information Technology |
| Date of Birth: | 30/11/1981 |
| Mobile Number: |  |
| E-mail: | [h.hussein@ustf.ac.ae](mailto:h.hussein@ustf.ac.ae) |

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| **EDUCATIONAL BACKGROUND** | | | | | | | | | | | | | | | | | | | | | |
| **1. Doctorate** | | | | | | | | | | | | | | | | | | | | | |
| University: South Valley University | | | | | | | | | | | | |  | | | | | | | | |
| Country: Egypt | | | | | | | | | | | | |  | | | | | | | | |
| Date of Obtaining degree: 2016 | | | | | | | | | | | | |  | | | | | | | | |
| Major: Computer Science | | | | | | | | | | | | |  | | | | | | | | |
| Minor: Cyber security | | | | | | | | | | | | |  | | | | | | | | |
| Title: Securing Cloud Computing using Quantum Cryptography | | | | | | | | | | | | |  | | | | | | | | |
| **2. Master** | | | | | | | | | | | | | | | | | | | | | |
| University: South Valley University | | | | | | | | | | | | |  | | | | | | | | |
| Country: Egypt | | | | | | | | | | | | |  | | | | | | | | |
| Date of Obtaining degree: 2012 | | | | | | | | | | | | |  | | | | | | | | |
| Major: Computer Science | | | | | | | | | | | | |  | | | | | | | | |
| Minor: Information Security | | | | | | | | | | | | |  | | | | | | | | |
| Title: Steganography based on Gene Expression Programming | | | | | | | | | | | | |  | | | | | | | | |
| **4. Bachelor** | | | | | | | | | | | | | | | | | | | | | |
| University: South Valley University | | | | | | | | | | | | |  | | | | | | | | |
| Country: Egypt | | | | | | | | | | | | |  | | | | | | | | |
| Date of Obtaining degree: 2004 | | | | | | | | | | | | |  | | | | | | | | |
| Major: Computer Science | | | | | | | | | | | | |  | | | | | | | | |
| **COMPUTER SKILLS** | | | | | | | | | | | | | | | | | | | | | | |
| MS Word | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | **󠅇 Advanced** | | | | | | | |
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| MS Excel | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | **󠅇 Advanced** | | | | | | | |
| MS Power Point | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | **󠅇 Advanced** | | | | | | | |
| MS Outlook | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | **󠅇 Advanced** | | | | | | | |
| Internet | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | **󠅇 Advanced** | | | | | | | |
| **LANGUAGE SKILLS** | | | | | | | | | | | | | | | | | |
| Arabic | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | **󠅇 Advanced** | | | | | | | |
| English | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | **󠅇 Advanced** | | | | | | | |
| Other, specify | | | | | 󠅇 Beginner | 󠅇 Intermediate | | | | 󠅇 Advanced | | | | | | | |
| **PROFESSIONAL EXPERIENCE** | | | | | | | | | | | | | | | | | | | | | |
| **From**  **(year)** | **To**  **(year)** | | | **Position** | | | | | **Employer** | | | | | | | | **Country** | | | | |
| 2022 | 2023 | | | Assistant Professor | | | | | New Valley University | | | | | | | | Egypt | | | | |
| 2019 | 2021 | | | Research Fellow | | | | | Toronto Metropolitan University | | | | | | | | Canada | | | | |
| 2017 | 2109 | | | Assistant Professor | | | | | New Valley University | | | | | | | | Egypt | | | | |
| 2104 | 2017 | | | Lecturer | | | | | Assiut University | | | | | | | | Egypt | | | | |
| 2012 | 2014 | | | Lecturer | | | | | University of Jazan | | | | | | | | Saudi Arabia | | | | |
| 2006 | 2012 | | | Web Developer | | | | | South Valley Unibersity | | | | | | | | Egypt | | | | |
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| **EDUCATIONAL EXPERIENCE** | | | | | | | | | | | | | | | |
| **Academic Year** | | | **Course Title** | | | | **Academic Year** | | | | | | | **Course Title** | | | | |
| **2012** | | | Introduction in programming | | | | | 2014 | | | | Introduction to computer science (LAB) | | | | | | | |
| 2012 | | | Data structure and algorithms | | | | | 2014 | | | | Mathematical applications using computing (LAB) | | | | | | | |
| **2013** | | | Genetic Algorithm | | | | | 2014 | | | | Web developing (LAB) | | | | | | | |
| 2013 | | | Databases | | | | | 2014 | | | | Database systems (LAB) | | | | | | | |
| 2012 | | | Web technology | | | | | 2014 | | | | Programming in JAVA (LAB) | | | | | | | |
| 2012 | | | Information systems | | | | | 2015 | | | | The programming language in Matlab (LabL | | | | | | | |
| 2012 | | | Introduction to information security | | | | | 2015 | | | | Object-oriented programming (LAB) | | | | | | | |
| 2013 | | | Networking | | | | | 2015 | | | | Introduction to information security (LAB) | | | | | | | |
| 2016 | | | Genetic algorithm | | | | | 2017 | | | | Cryptography I | | | | | | | |
| 2016 | | | Web Developing | | | | | 2017 | | | | Introduction to cybersecurity | | | | | | | |
| 2018 | | | Cryptography II | | | | | 2018 | | | | Ethical hacking | | | | | | | |
| 2022 | | | Programming languages | | | | | 2022 | | | | Quantum computation and communication | | | | | | | |
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| **PUBLICATIONS** | | | | | | | | | | | | | | | | | | | | |
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| **1. Journal Articles**   * Adil M., Ahmad M, Liu Y., **Abulkasim H.**, Farouk A., Song H. A systematic Survey: Security Threats to UAV-aided IoT Applications, Taxonomy, Current Challenges and Requirements with Future. *IEEE internet of things*. [doi.org/10.1109/TITS.2022.3220043](https://doi.org/10.1109/TITS.2022.3220043) * **H Abulkasim**, B Goncalves, A Mashatan, S Ghose. Authenticated Secure Quantum-Based Communication Scheme in Internet-of-Drones Deployment. [doi.org/10.1109/ACCESS.2022.3204793](https://doi.org/10.1109/ACCESS.2022.3204793). * **Abulkasim H.**, Mashatan, A., Ghose, S., Security improvements for privacy-preserving quantum multiparty computation based on circular structure. *Quantum Information Processing*. 2022 Jan;21(1):1-2. * **Abulkasim H.**, Alabdulkreem E, Karim F, Ahmed N, Jamjoom M, Hadjouni M, Abbas S. Crypt- analysis and Improvements on Quantum Key Agreement Protocol Based on Quantum Search Algorithm. *Security and Communication Networks*. 2022 Mar 17;2022. * **Abulkasim H.**, Alabdulkreem E., Hamad S. Improved Multi-party Quantum Key Agreement with Four-qubit Cluster States. *CMC-COMPUTERS MATERIALS & CONTINUA*. 2022 May 18, 73(1), doi:10.32604/cmc.2022.025727. * **Abulkasim H.**, Jamjoom M, Abbas S. Securing Copyright Using 3D Objects Blind Watermarking Scheme. *CMC-COMPUTERS MATERIALS & CONTINUA*. 2022 Apr 21, 72(3), doi:10.32604/cmc.2022.027999. * **Abulkasim H.**, Mashatan, A., Ghose, S., Secure multiparty quantum key agreement against collusive attacks. *Nature - Scientific Reports*. 2021 May 4;11(1):1-8. * **Abulkasim, H.**, Mashatan A, Ghose S. Quantum-based Privacy-Preserving Sealed-bid Auction on the Blockchain. *Optik*. 2021 Apr 30:167039. * Elhadad, A., Abbas, S., **Abulkasim, H.**, and Hamad, S. (2020). Improving the security of multiparty quantum key agreement with five-qubit Brown states. *Computer Communications*. Volume 159, (2020):155-160. * Elhadad, A., Hamad, S., Khalifa, A., and **Abulkasim, H**. (2020). A steganography approach for hiding privacy in video surveillance systems. *Book Chapter: In Digital Media* Steganography (pp. 165-187). Academic Press. * **Abulkasim, H.**, Farouk, A., Alsuqaih, H., Hamdan, W., Hamad, S., Mashatan, A., Ghose, S. ” Secure dynamic multiparty quantum private comparison”. *Nature - Scientific Report*, 9.1 (2019): 1-16. * **Abulkasim, H.**, and Alotaibi, A. ”Improvement on ‘Multiparty Quantum Key Agreement with Four-Qubit Symmetric W State’.” *Int J. Theo. Phy*. 58.12 (2019): 4235-4240. * **Abulkasim, H.**, Farouk, A., Alsuqaih, H., Hamdan, W., Hamad, S. and Ghose, S. ” Improved Dynamic Multi-Party Quantum Private Comparison for Next Generation Mobile Network.” *IEEE Access* (2019): doi:10.1109/ACCESS.2019.2894101. * **Abulkasim, H.**, Farouk, A., Alsuqaih, H., Hamdan, W., Hamad, S. and Ghose, S. ”Improving the se- curity of quantum key agreement protocols with single photon in both polarization and spatial- mode degrees of freedom.” *Quantum Information Processing* 17, no. 11 (2018): 316. * **Abulkasim, H.**, Hamad S, Elhadad A. Reply to Comment on ’Authenticated quantum secret sharing with quantum dialogue based on Bell states’. *Physica Scripta*. (2018) Jan 9;93(2): 027001. * **Abulkasim, H.**, Hamad S, Khalifa A, El Bahnasy K. Quantum secret sharing with identity au- thentication based on Bell states. *International Journal of Quantum Information*. June 2017; 15(4), 1750023. * **Abulkasim, H.**, Hamad S, El Bahnasy K, Rida SZ. Authenticated quantum secret sharing with quantum dialogue based on Bell states. Physica Scripta. 2016 Jul 12;91(8):085101. * Marghny H. Mohamed and **Abulkasim, H.**. Article: Data Hiding by LSB Substitution using Gene Expression Programming. *International Journal of Computer Applications* 45(14):13-20, May 2012. | | | | | | | | | | | | | | | | | | | | |
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| **3. Conferences:** | | | | | | | | | | | | | | | | | | | | |
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| **PROFESSIONAL AND ACADEMIC ACTIVITIES** | | | | | | | | | | | | | | | | | | | | | |
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| 1. **Professional Training/webinars/seminars**   **•** **Speaker** (Panel 1: Quantum cybersecurity): The Smart Cybersecurity Network (Serene-risc) 2020 Annual, October 21-22, 2020, in Montréal, Canada.  • **Speaker** Quantum cryptography for the Internet-of-Drones: QCrypt 2020 (online) August, Ams- Amsterdam, Netherlands.  • Invited Researcher IBM conference CASCON |EVOKE Nov. (2019), Markham, Ontario, Canada.  • **Speaker** Quantum cryptography for optimal secure computations: Blockchain technology Symposium 18 Feb, University of Toronto. 2020 Toronto, Canada.  • **Speaker** Quantum cryptography for optimal secure computations: Blockchain technology Symposium 18 Feb, University of Toronto. 2020 Toronto, Canada.  • **Presenter** Secure quantum private computations: CRL Research Exhibit, December 04, 2019, Ryerson University, Toronto, Canada. | | | | | | | | | | | | | | | | | | | | | |
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| 1. **Master Theses Supervision** | | | | | | | | | | | | | | | | | | | | | |
| **Ahmed Rashad:** Thesis title: Hiding privacy and clinical information in medical images, Granted (2022)  **Hossam Ahmed**: Thesis title: Privacy-preserving technique for Smart IoT applications, in progress. | | | | | | | | | | | | | | | | | | | | | |
| 1. **Doctorate Theses Supervision**   None | | | | | | | | | | | | | | | | | | | | | |
| 1. **Journal Reviewer and Scientific activities:**   • **Associate Editor**: Journal of IET quantum communication.  • **Editorial Board Member**: Journal of Complex and Intelligent Systems.  • **Topical Advisory Panel Member**: Electronics, MDPI.  • **Lead Guest Editor (SI)**: Electronics: Recent Trends and Applications in Cybersecurity.  • **Lead Guest Editor (SI**): Sustainability: Recent Trends and Applications in Intelligent Systems for Sustainability.    • **Lead Guest Editor (SI**): Multimedia tools and applications: Recent Advances in Multimedia Information Security: Cryptography and steganography.  • **A reviewer** for many high-impact journals, such as Scientific Reports, Quantum Information Processing, IEEE Transactions on Industrial Informatics, IEEE Intelligent Transportation Systems, IEEE Internet of Things Journal, IEEE Access, Physical Review A, IEEE transactions on information theory, and others | | | | | | | | | | | | | | | | | | | | | |

1. **Conference Technical Committee and chairs**

* **Section Organizer:** Mini symposium “Quantum Information and Quantum Computation” at the V AMMMCS international Conference on Aug 18-23 (2019), Wilfrid Laurier University, Waterloo, Canada.

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| **MEMBERSHIP IN PERIODICALS AND SCIENTIFIC JOURNALS** |
| IEEE Member |
| **Funded Projects** |
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| * Multiparty Quantum Communications and Cryptography for IoT-Blockchain Applications, Funded by the Academy of Scientific Research and Technology (ASRT), Egypt, Project No. 6626 from 2019- 2020, Role: PI, budget: 100000 EGP**.** |
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