

Srinivas University

Mangalore - India



Atomic Research Centre Cyber Security/forensics, AI and Quantum computing



Dr A M Sudhakara, Research Professor
Department of Computer science and
engineering, Srinivasa Institute of
Engineering and Technology, Mukka
campus, Surathkal, DK.

1. Purpose of ARC : To study and do research to evaluate quantum computing, AI to possible solution to cyber security issues. Quantum computers will be able to solve problems that are far too complex for classical computers to figure out. This includes **solving the algorithms behind encryption keys that protect our data and the Internet's infrastructure.**

2. Objective of ARC : To develop a robust Cyber security systems to counter all types of frauds in real time.

3. Description on Proposed Research:

- Study the quantum computing, AI/ML/DL and Cyber security issues
- Evaluate the effectiveness of AI on Cyber security
- Evaluate the quantum computing on Cyber security issues
- Write research papers on collaborative work using AI/ML/DL on cyber security
- Setup a research lab to develop new security tools
- Conduction of webinar/workshop/conferences in collaboration with universities doing research on quantum computing/AI/ML/DL and Cyber security

4. Expected Outcome :

High index Research papers on quantum computing, AI/ML/DL and Cyber security.
New cyber security and forensics AI_QC tools.

List of the Team Members :

1. Dr K T Veeramanju
2. Dr Gururaj
3. Mr Karthik J Kulkarni
4. Mrs Swetha H Perody

5. List of related Papers articles :

1. <https://quantumxc.com/blog/quantum-computing-impact-on-cybersecurity/>
2. How Quantum Computing Will Transform Cybersecurity
(<https://www.forbes.com/sites/forbestechcouncil/2021/01/04/how-quantum-computing-will-transform-cybersecurity/?sh=36a4f63f7d3f>)
3. <https://www.ibm.com/thought-leadership/institute-business-value/report/quantumsecurity>
4. <https://www.americanscientist.org/article/is-quantum-computing-a-cybersecurity-threat>
5. <https://www.belfercenter.org/publication/quantum-computing-and-cybersecurity>
6. <https://www.weforum.org/agenda/2021/11/in-a-quantum-future-our-economy-needs-to-be-protected-a-cybersecurity-expert-explains-why/>
7. <https://www.cigionline.org/articles/quantum-threat-cyber-security/>
8. https://socialmovementtechnologies.org/digital-security/?gclid=CjwKCAjw9qiTBhBbEiwAp-GE0a3Mq0WH7ZXTp_BhLd1bAti1APHSyHRdEwQ9IhtwQOscChuuAY4LixoCr_wQAvD_BwE
9. <https://www.analyticsinsight.net/how-is-quantum-computing-impacting-the-cybersecurity-industry/>
10. <https://www.quora.com/Will-quantum-computing-eliminate-the-need-for-cyber-security-professionals>
11. <https://www.reply.com/en/topics/quantum-computing/cybersecurity-in-the-age-of-quantum-supremacy>
12. <https://www.thalesgroup.com/en/germany/magazine/quantum-computing-and-cybersecurity>
13. <https://techbeacon.com/security/quantum-computing-end-security-we-know-it>
14. https://www.researchgate.net/post/What_will_be_the_future_of_cyber_security_if_quantum_will_become_commercial_or_applied_on_TCP_IP_model
15. <https://cybersecurityventures.com/quantum-computing-decrypting-the-future/>

6. List of related Published Papers in Journals, Proceedings, Book Chapters, Magazines by this Group.

- Evolving Business Intelligent System Tunnel with Data Mining, AI, Fuzzy Logic and Neural Network
- "Enhancing Quality of Service (QoS) in Healthcare Services with Information Management (IM) Enabled E-Governance"

Name & Signature of Coordinator with date. Date : 28/04/2022

