Topics for Research Project[Tentative] COMP90043

Some suggestions for the topics are given below:

- 1. Security in Steganography and Watermarking
- 2. Security in Block Chain Technologies.
- 3. Electronic Voting Protocols
- 4. Attacks on SSL

Dan Boneh, Twenty Years of Attacks on the RSA Cryptosystem, NOTICES OF THE AMS, pp 203-213, 1999.

- 5. Security for IoT.
- 6. Side channel resistant Cryptography.
- 7. Any Cryptographic implementation project from

http://hms.isi.jhu.edu/acsc/

- 8. Cryptography for Privacy Preserving data aggregation Claude Castelluccia, Aldar C.-F. Chan, Einar Mykletun, Gene Tsudik: Efficient and provably secure aggregation of encrypted data in wireless sensor networks. TOSN 5(3) (2009)
- 9. Network Security, Man-in-the-Middle Attack Demonstration.
 An implementation project. You need to implement a client, a MITM server that sits between the client and a server.