Projects on Steganography and Steganalysis

1. Facebook steganography

   Group:
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2. Twitter steganography

3. HTTP steganography

4. Google Suggest steganography

5. LSB audio steganography

6. VoIP steganography

   Sai Praveen Sadhu <ssadhu@gmu.edu>
Hardware Projects

1. High-speed Implementation of Authenticated Ciphers Competing in the CAESAR Contest

William Diehl <wdiehl@gmu.edu>
Ahmed Ferozpuri <aferozpu@gmu.edu>

2. Implementation of a PUF (Physical Unclonable Function)

3. Implementation of a selected Error Correction Code for PUFs

Brian Jarvis <bjarvis@gmu.edu>

4. Overview and Comparison of Open Source Hardware Cryptographic Cores
Software Projects

1. Software Extensions to CrypTool - Educational Tool for Learning Cryptography and Cryptanalysis (e.g., internet security protocols, internal operation of algorithms, codebreaking schemes, etc.)

   Group:
   1. Vikram Gawade <vgawade@gmu.edu>
   2. Harsh Vachharajani <hvachhar@gmu.edu>

2. Optimizing Best Available Software Implementations of Authenticated Ciphers candidates (using coding techniques, special instructions, assembly language, etc.)

3. Porting Selected C Implementations of Authenticated Ciphers to the TI MSP430 microcontroller or Other Microcontroller Available to You

4. Implementing a selected Cryptographic Algorithm in Cryptol - a new Domain Specific Language

5. Cryptographic Application for Android or iOS

6. Software Implementation of a Secure Distributed Storage System

7. Special Microprocessor Instructions Supporting AES and Other Cryptographic Algorithms

8. Overview and Comparison of Open Source Cryptographic Libraries

9. Comparison of Libraries Used to Implement SSL/TLS
Analytical Projects

1. **Bitcoin**

   **Group:**
   1. Yashwanth Gazula <ygazula@gmu.edu>
   2. Jaswant Katragadda <jkatraga@gmu.edu>
   3. Dibyojyoti Mukherjee <dmukher2@gmu.edu>

2. **Security of Voting Machines**

3. **Security of Metro/Subway Cards**

   **Group:**
   1. Rajiv Gautham Champati <rchampat@gmu.edu>
   2. Ashritha Rasa <arasa@gmu.edu>

4. **Security of Cloud Storage and Cloud Computing**

   Vinay Kumar Gorajala Chandra Shekar <vgorajal@gmu.edu>

   **Group:**
   1. Vincent Dasari <vdasari2@gmu.edu>
   2. Arun Bhargav Palaparthy <apalapar@gmu.edu>
   3. Kalyan Peddinti <kpeddint@gmu.edu>

5. **Homomorphic Encryption**

6. **Secure Distributed Storage**

   Gagandeep Singh Bamrah <gbamrah@gmu.edu>
   Ankita Pandey <apandey@gmu.edu>

7. **Analyzing the Influence of a Computer Platform on Ranking of the SHA-3 Candidates in Terms of Performance in Software**
8. **Survey of Codebreaking Machines and Projects Based on FPGAs, GPUs, Cell processors, etc.**

   **Group:**
   1. Swathi Guruduth <sgurudut@gmu.edu>
   2. Vivekanand Kamanuri <vkamanur@gmu.edu>
   3. Harshad Patil <hpattil2@gmu.edu>

9. **Encryption Schemes for Copy Protection of Digital Media**

10. **Security of Transactions Performed Using Credit Card Readers for Smartphones and Tablets**

11. **Attacks Against SSL and TLS**

   Jaya Surya Dondapati <jdondapa@gmu.edu>
   Akshay Reddy Veerayyagari <aveerayy@gmu.edu>
   Avinash Yeluri <ayeluri@gmu.edu>

12. **Security of Smartphones**

   **Group:**
   1. Shiting Pan <span3@gmu.edu>
   2. Sicheng Peng <speng2@gmu.edu>

13. **Wifi Security**

   Raghunath Pasumarthi <rpasumar@gmu.edu>

   **Group:**
   1. Giri-Praneeth Kommalapati <gkommala@gmu.edu>
   2. Venkat Raman Sriperumbudur <vsriperu@gmu.edu>
14. Quantum Cryptography

15. Quantum Computing

16. Post-Quantum Cryptography
Your Own Project Proposals

Malware Attacks Using Cryptography and Steganography

Group:
1. Ekta Binwani <ebinwani@gmu.edu>
2. Akhil Kumar <akumar12@gmu.edu>
3. Jatin Virmani <jvirmani@gmu.edu>

Hardware Implementation of an Authenticated Cipher Using High-Level Languages and Synthesis

Jeremy Trimble <jtrimbl2@gmu.edu>

Implementing Biometric Technology and Verification Systems

Cybersecurity and Biometrics

Biometric Authentication by Face Recognition