## **Lecture 11: E-Mail Security**

Date: October 21, 2013 Homework Due: Nov. 1 at 5:00pm

- 1. Web identity
  - a. Cryptographic Key Infrastructure
  - b. Certificates (X.509, PGP)
  - c. State and cookies
- 2. E-mail
  - a. Structure of a letter: header fields, body, attachments
  - b. How mail moves through the Internet: UAs, MTAs
  - c. Mail addresses: MX records
- 3. E-mail and encryption
  - a. Basic idea
  - b. Interchange keys
  - c. Data encryption key
  - d. Doing the encryption
  - e. Building the letter
  - f. Decrypting the letter and verifying the signature
- 4. Mail relays
  - a. Cypherpunk type 1 remailers
  - b. Cypherpunk type 2 (mixmaster) remailers