

**ECE Capstone program  
Spring 2018  
Project Abstract & Info**

Please provide the following information to be shared with on capstone information exchange platform:

- 1. Project number:** 53
- 2. Project title (as will appear on the poster):** CypherChat
- 3. Team members:** Annette Brucato, Ashish Kumar, Jonathan Boccardi, Varun Sundar
- 4. Adviser(s) name(s):** Maria Striki
- 5. Up to 5 keywords that will help to classify the project scope:**  
Security, Network, Encryption, Communication
- 6. Project abstract (up to 250 words) to be shared with judges:**

As the scope of internet based applications widens daily, the need for security and privacy is growing exponentially. Attackers constantly attempt to exploit flaws and weaknesses in workplace settings that cause damage in the form of information leaks, monetary theft, and a lowered sense of trust in their systems. CypherChat is a new communication option for organizations that provides more security from these kinds of attacks. With CypherChat, an organization will be able to set up a private and biometrically protected messaging server that is loaded onto a USB drive that protects the program from being copied or modified in any way. In addition, the USB drive offers the safety of 3-factor authentication by being a hardware requirement and having fingerprint recognition, and password protection which can be used together in a matter of seconds. Furthermore, chats are encrypted and are never stored outside a server's local network. Another application can allow users to upload files and protect them in the same way that the CypherChat application is protected, giving every user an easy way to carry sensitive information outside of the workplace and have it be secured through a multiple layer authentication system.