

# Workstation Security – Privacy and Protection from Hackers

Bruce P. Tis  
bruce.tis@simmons.edu  
Simmons College  
Computer Science  
Boston, MA 02115

**Keywords:** security, privacy, authentication, spyware, firewalls, malware

## Abstract

Issues relating to computing security appear in the news and trade press on a daily basis. Web site defacement, stolen credit card numbers, denial of service attacks, the effects of viruses and worms, violations of privacy, and the loss of data integrity seem to be the norm, rather than the exception. The nation's interest in cyber security, as part of our national defense, has obviously heightened in the past two years. Even the casual user of today's technology is required to have an understanding of security fundamentals and tools in order to protect oneself. As educators we have the responsibility to be knowledgeable ourselves, and to integrate security fundamentals and practices into our curricula. Students must be educated to use, design and implement secure systems, as well as develop new techniques to address the security issues of the future.

Due to the sophistication of modern operating systems, networked applications, and our "always on" Internet connections, a user's workstation is particularly vulnerable to attack and compromise. This workshop addresses the security issues, techniques, and defenses applicable to the single user workstation - primarily a personal computer running Windows.

After attending this workshop, the attendee should be familiar with basic security concepts and terminology, be able to reduce the risk of attack to ones workstation, be able to take the necessary steps to maintain privacy, and be prepared to impart this knowledge to students.

## Topical Outline

- Introduction and basic concepts
- Cryptography
- Types of attacks
- Authentication
- Malware
- Firewalls
- Spyware
- Secure e-mail – PGP, S/MIME
- Web Browser configuration
- Verifying your workstation's ability to resist attack
- Steps to improve the security and privacy of your workstation