Project Conditions:

1. This mid-term project is designed to give you the opportunity to engage in an intensive individual study on a focused topic related to distributed computing and Internet security that can apply some of the material you have learned in class.

2. Select a distinct topic from the following list of 20 research topics. Your choice must be different from the rest of the class. We have created a list of essential references (also attached in this handout). You can access this list via: http://andy.usc.edu/security/research-papers.htm

3. Submit a 2-page Research Proposal (typed in word document) by Email attachment within a week. I will review your proposal and return it to you on Oct. 17 with some feedback suggestions. If your proposal does not make sense, I will assign an alternate topic to you.

4. The Project Report (30% of course performance) is due in 4 weeks. Besides a hard-copy report, you must submit the electronic version in a word document (limited to 20 pages). The report must include a list of 10-20 references. All quoted material must be explicitly cited. Attach the hard copy of a recent paper as an appendix (unlimited in length) to your report. This attached paper must appear within the last 24 months (1999-2000).

5. I will schedule each of you to give a 25-minute PowerPoint Presentation, which counts 15% of your course performance, on Nov. 7 or 14. The schedule will be posted once your proposal is approved in mid-October.

List of Topics to select from:

1. Computer anti-virus techniques
2. Password protection schemes
3. The IBM digital immune system
4. Assessment of anti-virus products
5. Statistical anomaly intrusion detection
6. Rule-based intrusion detection
7. Distributed intrusion detection
8. Intrusion response systems
9. Packet filtering firewalls
10. Security proxies in firewalls
11. Firewalls for wireless networks
12. Network security protocols
13. Application-layer security protocols
14. Security agents for intrusion detection
15. Agent-based security systems
16. Security performance metrics
17. Linux firewalls and intrusion detection tools
18. Security projects at a selected university
19. Evaluation of commercial firewall systems
20. E-commerce security solutions