

## Outline for April 13, 2000

1. Greetings and felicitations!
  - a. Web site up and running
  - b. Homeworks back via UCDisk
2. Policy
  - a. Define *security policy*, *secure system*, *breach of security* formally
  - b. Security models
  - c. Confidentiality, integrity policies; distinguish from military, commercial policies
  - d. Role of trust in modeling
  - e. DAC vs. MAC
  - f. Policy languages: high level, low level
3. Lattice models
  - a. poset,  $\leq$  the relation
  - b. highest and lowest
  - c. Set of classes  $SC$  is a partially ordered set under relation  $\leq$  with GLB (greatest lower bound), LUB (least upper bound) operators
  - d. Note: is reflexive, transitive, antisymmetric
  - e. Examples:  $(A, C) \leq (A', C')$  iff  $A \leq A'$  and  $C$  is a subset of  $C'$ ;  
 $LUB((A, C), (A', C')) = (\max(A, A'), \cup(C, C'))$ ,  $GLB((A, C), (A', C')) = (\min(A, A'), \cap(C, C'))$
4. Bell-LaPadula Model
  - a. Go through security levels, categories, compartments
  - b. Describe simple security property (no reads up) and \*-property (no writes down)
  - c. State Basic Security Theorem: if it's secure and transformations follow these rules, it's still secure
  - d. Add in discretionary security policy