



What is Computer Science?

- Three paradigms (CACM 1/89)
 - Theory (math): definitions, theorems, proofs, interpretations
 - Abstraction (science): hypothesize, model, experiment, analyze data, results
 - Design (engineering): state requirements, design, implement, test

How to choose a method, tool, technique?

- Common sense
- Consultants
- Theoretical proof
- Benchmark
- Case study
- Survey
- Experimentation in the Small
- Experimentation in the Large?



Experiment Design – Define/Describe

- Subjects
- Independent Variables and Levels
- Dependent Variables
- Confounding Variables (noise) and how controlled
- Group Selection
- Treatment vs Measurement