

# CS 275

## Final Exam Study Guide

- A. Basic scheme functions: car, cdr, cons, append, lambda, if, cond, etc.
- B. How Lets, Lambdas and Applications are evaluated by the system.
- C. Map and Apply
- D. Foldl and foldr
- E. Unrestricted lambdas
- F. Representing data structures
- G. Trees
- H. Environments
- I. Programming language issues
  - a. State and set!
  - b. Static vs dynamic binding
  - c. Procedure calling mechanisms (call-by-value, name, reference, etc.)
- J. Our interpreter project
  - a. How specific expressions are parsed/evaluated in our Minischeme project including
    - i. Let
    - ii. Lambda
    - iii. Procedure applications
  - b. What would happen if we did something differently, such as changing from call-by-value to call-by-reference
- K. Streams
- L. Tail recursions, deep recursions
- M. Continuations and continuation-passing style
- N. Nothing on call/cc
- O. Nothing on Combinators
- P. Nothing on Backtracking