Working Sets Past and Present

- Abstract modeling
- Study of program behavior
- Optimal load control
- Discussions

Modeling Paging Policies

- Reference string
- Resident set
- Swapping-curve/lifetime-curve
- Space-time product

Page Replacement Algorithms

- Belady's anomaly
- Stack algorithms or inclusion property
- Offline versus online algorithms
- Typical algorithms

A bit more theory

- Competitive ratio
  - the ski-rental problem
    - application: spin-waiting and blocking
- Pros and Cons of competitive ratio as a way to compare algorithms

Working Set

- a tool for measuring memory demand
- Examples

Program Behavior

- Formal models:
  - simple renewal model
  - LRU stack
  - Independent reference model
  - Phase-transition model
- Program reorganization
- Behavior of modern programs:
  - check techreport from www.cs.wisc.edu/~gid

Optimal Load Control

- the L=S criterion
- the minimizing space-time produce per program criterion
- the Working Set policy
  - comparison of WS with global CLOCK and LRU