# Fixed vs. Variable Space

How to determine how much memory to give to each process?

**Fixed space algorithms**

- Each process is given a limit of pages it can use

- When it reaches the limit, it replaces from its own pages

➡ Local replacement : some processes may do well while others suffer

**Variable space algorithms**

- Process' set of pages grows and shrinks dynamically

➡ Global replacement : one process can ruin it for the rest

# Working Set Model

A working set of a process is used to model the dynamic locality of its memory usage

WS(t,w) = {pages P | P was referenced in the time interval (t, t-w)}
t – time, w – working set window (measured in page refs)

➡ A page is in the working set (WS) only if it was referenced in the last w references