

CS 518

THE: Operating System Structure

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Background

- Written at a time when OS complexity was running amuck
- Influential paper: proposes “scientific” approach to OS design and implementation

Key Ideas

- Processes
 - A formal way of reasoning about concurrency
- Hierarchy
 - THE layers:
 - dispatcher (scheduler)
 - memory manager
 - console communications
 - I/O streams
 - user programs
 - operator
 - Useful structure, but does it always work?
- Semaphores
 - machine independent synchronization primitive
 - for mutual exclusion and scheduling
- Verification