

Before We Start

CS656: Operating Systems

Schedule

Mon	Wed	Fri
AuthN in Dis Sys SecVisor 14	Locus Singularity 16	Project Due NOON! 18
Class mini-conference (5 papers) 21	Class mini-conference (5 papers) 23	
Class mini-conference (4 papers) + awards 28		
5	7	Final exam 0900-noon 9

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Announcing...

- Research papers now due Sunday Apr 20 at midnight
- HARD deadline!

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Mini-Conference: Presenters

- Like a “real” conference
 - Audience has NOT read your paper
 - General goal: get them to read the entire paper!
- 15 min apiece, including everything
- Recommendation: 10 slides maximum!
 - Send them to me beforehand for my feedback (not required)
- Generally follow the format of your paper
 - Problem
 - Approach/Plan
 - Implementation details
 - Evaluation
 - [Novelty]
- Have fun!

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Mini-Conference: Audience

- Like a “real” conference
 - Papers generally *not* available beforehand, so...
 - General goal: listen attentively; determine whether or not to read the entire paper!
- Grade each presentation on the following -- 1-10 (10 is best), with 1-2 sentences justifying your ratings as appropriate:
 - Problem
 - Approach/Plan
 - Implementation details
 - Evaluation
 - [Novelty]
- Hand in evaluation as you leave the classroom that day
 - Put your name on the sheet, only *I* will know how you rated something (I will provide sheets)
- Have fun!

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Mini-Conference: Schedule (Day 1: Mon Apr 21)

- A Hands-on Networking Assignment for Undergraduate OS Classes (Steven Baker)
- Marooned on the Islands of Trust (Will Ashford and Mike Dietz)
- File-Level Prefetching (Michael Holroyd and Robert Dickerson)
- Finding Bugs in Linux via Static Analysis (Claire Le Goues and Dan Lepage)
- Implementing Lottery Scheduling in WRK (Paul Lee and Ming Mao)

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Mini-Conference: Schedule (Day 2: Wed Apr 23)

- Multi-Queue Lottery Scheduling for Linux (Qiang Li)
- An Encrypting File System for Windows CE (Joel Coffman and Andrew Jurik)
- Multicore Enabled Aggressive Prepaging (MEAP) (Jason Mars and Hengchang Liu)
- Embracing Data-Level Parallelism On Linux (Jiayuan Meng and Jiakang Lu)
- DIOS: Dynamic Instrumentation for Outstanding Scheduling (Blake Sutton)

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Mini-Conference: Schedule (Day 3: Mon Apr 28)

- Exposing Instabilities and Security Vulnerabilities via System Call Manipulation (Tim Chaplin and Blake Sheridan)
- Quantitative Comparison of the Windows Vista Scheduler and the Windows XP Scheduler (Ke Dang and Lukasz Szafaryn)
- Implementing Lottery Scheduling in WRK (Colleen O'Hagan and Eric Weatherwax)
- Implementation and Study of Different Scheduling Algorithms in Operating Systems (Yafeng Wu and Jian Lu)
- Power Management in TinyOS (JD Lee and Zhiheng Xie)

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LOCUS

- Success or failure?
- Let's make pretend. A DOS created in 1985, and it's now 2005 and we're looking back to determine why it's NOT being used. Potential reasons?
 - Too complicated? / did not always work?
 - Did NFS (late 1980s) solve the problem?
 - Did RAID (late 1980s) solve the problem?
 - Was the source code not shared enough?
 - Did it require throwing everything out (no support for legacy stuff)?
 - Was performance too bad – was performance sacrificed to create the "transparencies"?
 - Was it not needed?

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Singularity

- A much broader discussion – this is essentially the last class of the semester, and we've read all of the papers.. So...
- What's the state of OS and/or OS research?
 - "solved" problems:
 - "unsolved" problems:
- How would you design an OS "from scratch"?
 - Is this paper all about security?
 - What would *YOU* do differently as compared to Singularity?
 - It seems pretty cool, doesn't it?

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