Topic 1: OS Structure (Weeks 1-4)

Due Week 2 (October 3):
• The Nucleus of a Multiprogramming System Per Brinch Hansen Communications of the ACM 13(4), April 1970:

Due Week 3 (October 10):
• Paul Barham, Boris Dragovic, Keir Fraser, Steven Hand, Tim Harris, Alex Ho, Rolf Neugebauer, Ian Pratt, and Andrew Warfield. 2003. Xen and the art of virtualization. In Proceedings of the nineteenth ACM symposium on Operating systems principles (SOSP ’03). ACM, New York, NY, USA, 164-177.
• Filipe Manco (NEC Europe Ltd.); Costin Lupu (University Politehnica of Bucharest); Florian Schmidt, Jose Mendes, Simon Kuenzer, Sumit Sati, Kenichi Yasukata (NEC Europe Ltd.); Costin Raiciu (University Politehnica of Bucharest); Felipe Huici (NEC Europe Ltd.), My VM is Lighter (and Safer) than your Container, SOSP 2017

Due Week 4 (October 17):
• Philip Levis, Experiences from a Decade of TinyOS Development. 10th USENIX Symposium on Operating Systems Design and Implementation (OSDI ’12).
• Christopher Dall, Jason Nieh, KVM/ARM: The Design and Implementation of the Linux ARM Hypervisor. Proceedings of the 19th international conference on Architectural support for programming languages and operating systems (ASPLOS ’14), March 2014.
• Felix XiaoZhu Lin, Zhen Wang, and Lin Zhong, K2: A Mobile Operating System for Heterogeneous Coherence Domains. ASPLOS ’14, March 1–4, 2014, Salt Lake City, Utah, USA.
**Topic 2: Resource Management and Scheduling**

*Due Week 5 (October 24):*


*Due Week 6 (October 31):*

- Eli Cortez (Microsoft); Anand Bonde (Microsoft Research); Alexandre Muzio (ITA, Brazil); Mark Russinovich, Marcus Fontoura (Microsoft); Ricardo Bianchini (Microsoft Research), Resource Central: Understanding and Predicting Workloads for Improved Resource Management in Large Cloud Platforms. SOSP 2017.

**Topic 3: Synchronization**

*Due Week 7 (Nov 7):*


**Topic 4: Security**

*Due Week 8 (Nov. 14):*

- Brian Delgado and Karen L. Karavanic, EPA-RIMM.
- John Fastabend and Karen L. Karavanic, System Support for SMM.
- John Criswell, Nathan Dautenhahn, Vikram Adve, "Virtual Ghost: protecting applications from hostile operating systems." Proceedings of the 19th international conference on Architectural support for programming languages and operating systems (ASPLOS ’14), March 2014.
Topic 5: Consistency and Fault Tolerance
Due Week 9 (Nov. 21):

- Ang Chen and Hanjun Xiao and Andreas Haeberlen and Linh Thi Xuan Phan, Fault Tolerance and the Five-Second Rule, 15th Workshop on Hot Topics in Operating Systems (HotOS XV) 2015.

Topic 6: Memory and Storage
Due Week 10 (Nov. 28):

- Jian Xu, Lu Zhang, Amirsaman Memaripour, Akshatha Gangadharaiha, Amit Borase, Tamires Brito Da Silva (UC San Diego); Andy Rudoff (Intel); Steven Swanson (UC San Diego), NOVA-Fortis: A Fault-Tolerant Non-Volatile Main Memory File System, SOSP 2017

Final Project Presentations (Week 11 December 5)
All groups will present their final projects during the final exam slot.
Please notify Prof. Karavanic if you have a conflict with another final exam.