

Name: \_\_\_\_\_

## This week's readings

- [1] Alec Wolman, Geoffrey M. Voelker, Nitin Sharma, Neal Cardwell, Anna Karlin, and Henry M. Levy. On the scale and performance of cooperative web proxy caching. In *Proceedings of the ACM Symposium on Operating Systems Principles (SOSP)*, pages 16–31. Kiawah Island Resort, SC, December 1999. URL <http://www.cs.washington.edu/research/networking/websys/pubs/sosp99/sosp99.pdf>.
- [2] Michalis Faloutsos, Petros Faloutsos, and Christos Faloutsos. On power-law relationships of the Internet topology. In *Proceedings of the ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communication*, pages 251–262. Cambridge, MA, September 1999. URL <http://www.cs.ucr.edu/~michalis/PAPERS/FFF.pdf>.
- [3] Lun Li, David Alderson, Walter Willinger, and John Doyle. A first-principles approach to understanding the Internet's router-level topology. In *Proceedings of the ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communication*, pages 3–14. Portland, OR, August 2004. URL <http://netlab.caltech.edu/pub/papers/topology-sigcomm04.pdf>.
- [4] Réka Albert, Hawoong Jeong, and Albert-László Barabási. Error and attack tolerance of complex networks. In *Nature*, volume 406, pages 378–382. July 2000. URL [http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v406/n6794/full/406378a0.fs.html&content\\_filetype=pdf](http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v406/n6794/full/406378a0.fs.html&content_filetype=pdf).
- [5] Allen Downey. Evidence for long-tailed distributions in the Internet. In *Proceedings of the ACM SIGCOMM Internet Measurement Workshop (IMW)*, pages 229–241. San Francisco, CA, November 2001. URL <http://alldowney.com/research/longtail/downey01evidence.pdf>.
- [6] Neil Spring, Ratul Mahajan, and David Wetherall. Measuring ISP topologies with Rocketfuel. In *Proceedings of the ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communication*, pages 133–146. Pittsburgh, PA, August 2002. URL <http://www.cs.umd.edu/~nspring/papers/sigcomm2002.pdf>.

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1. Review Wolman (cooperative caching) for monday.

- (a) A (at most two-paragraph) summary of the paper
- (b) Three major strengths: what might get this paper accepted? (use a bullet list.)
- (c) Three major weaknesses: what might get this paper rejected? (use a bullet list.)
- (d) Contributions: why is this paper valuable? why might it be cited by others?
- (e) Unresolved questions: missing methodology, missing evaluation, unclear presentation. We may review some of these questions in class.

A page is sufficient, two pages probably too long. Email it to me with a subject of “711 review Wolman” BEFORE I am so that I have a chance to skim before lecture.

2. Review Alderson (HOT) for wednesday.

- (a) A (at most two-paragraph) summary of the paper
- (b) Three major strengths: what might get this paper accepted? (use a bullet list.)
- (c) Three major weaknesses: what might get this paper rejected? (use a bullet list.)
- (d) Contributions: why is this paper valuable? why might it be cited by others?
- (e) Unresolved questions: missing methodology, missing evaluation, unclear presentation. We may review some of these questions in class.

CMSC 711 Homework, Week 11, Number 1

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Vocabulary (some of this may be covered in class)

- Power law
- Small world graph
- Web proxy caching
- Zipf distribution