

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

## This week's readings

- [1] Ratul Mahajan, Neil Spring, David Wetherall, and Thomas Anderson. User-level Internet path diagnosis. In *Proceedings of the ACM Symposium on Operating Systems Principles (SOSP)*, pages 106–119. Bolton Landing, NY, October 2003. URL <http://www.cs.washington.edu/research/networking/tulip/bits/sosp2003-tulip.pdf>.
- [2] Venkata N. Padmanabhan, Lili Qiu, and Helen J. Wang. Passive network tomography using bayesian inference. In *Proceedings of the ACM SIGCOMM Internet Measurement Workshop (IMW)*, pages 93–94. Marseille, France, November 2002. URL <http://www.research.microsoft.com/~padmanab/papers/imw2002.pdf>.
- [3] Renata Teixeira and Jennifer Rexford. A measurement framework for pin-pointing routing changes. In *Proceedings of the ACM SIGCOMM Network Troubleshooting Workshop*, pages 313–318. Portland, OR, August 2004. URL <http://www.cs.princeton.edu/~jrex/papers/omni.pdf>.
- [4] Ratul Mahajan, David Wetherall, and Thomas Anderson. Understanding BGP misconfiguration. In *Proceedings of the ACM SIGCOMM Conference on Applications, Technologies, Architectures, and Protocols for Computer Communication*, pages 3–16. Pittsburgh, PA, August 2002. URL <http://www.cs.washington.edu/homes/ratul/bgp/bgp-misconfigs.pdf>.

- 
1. Tulip and Padmanabhan's inference approach both combine *active* measurement, sending packets into the network to see how they perform, and *passive* measurement, observing traffic that happens ordinarily. (a) what are two main challenges (obstacles in the way) of passive measurement? (b) what are two main challenges (obstacles in the way) of active measurement?
  2. For Monday, review Omni (paper #4). A review should consist of:
    - (a) A (at most two-paragraph) summary of the paper, at least a sentence per section.
    - (b) Three major strength in a bullet list: what might get this paper accepted?
    - (c) Three major weaknesses in a bullet list: what might get this paper rejected? Include some justification why this weakness is important
    - (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 4" BEFORE NOON so that I have a chance to skim before lecture.

---

Vocabulary (some of this may be covered in class)

- bottleneck bandwidth
- ICMP errors
- ICMP timestamps
- link capacity
- link latency
- NANOG
- ping