

## List of papers for presentation in class

The list of papers for presentation by the students is given below per major course topic. One paper will be assigned to each student.

Consider the following resources as help:

- S. Keshav, How to read a paper, ACM Computer Communications, vol. 37, no. 3, pp. 83-84, July 2007
- the material at Henning Schulzrinne's pages, especially those referring to talks and reports

ALL

### 1. Peer to Peer Networks

#### BitTorrent

1.1. B. Fan, D. Chiu, and J. C. S. Lui, "The Delicate Tradeoffs in BitTorrent-Like File Sharing Protocol Design," in Proc. of ICNP, 2006.  
<http://www.ieee-icnp.org/2006/papers/s7a1.pdf>

1 guy  
Ilani  
17/3

1.2 David R. Choffnes and Fabián E. Bustamante, Taming the Torrent: A Practical Approach to Reducing Cross-ISP Traffic in P2P Systems,  
<<http://ccr.sigcomm.org/online/?q=node/403>>, SIGCOMM 2008

#### File Sharing : Hash/Lookup

1.3. Ion Stoica, Robert Morris, David Karger, M. Frans Kaashoek, Hari Balakrishnan, Chord: A Scalable Peer to peer Lookup Service for Internet Applications \_ MIT Laboratory for Computer Science

1.4. K. Gummadi, R. Gummadi, S. Gribble, S. Ratnasamy, S. Shenker, I. Stoica, The Impact of DHT Routing Geometry on Resilience and Proximity, ACM Sigcom2003.  
[www.mpi-sws.org/~gummadi/papers/p1101-gummadi.ps](http://www.mpi-sws.org/~gummadi/papers/p1101-gummadi.ps)

Sub 2  
week 3 yossi saso  
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#### File sharing: ISP-vs-P2P:

**Sub 3 week 5**  
**ophir + Guy**  
**paskar**  
**21/4**

*1.5. A Modeling Framework to Understand the Tussle between ISPs and Peer-to-Peer File Sharing Users*

Michele Garetto (University of Torino, Italy);  
Daniel Figueiredo (EPFL, Switzerland); Rossano  
Gaeta (Universita degli Studi di Torino, Italy);  
Matteo Sereno (University of Torino, Italy)  
Performance Evaluation, June 2007

**P2P Incentives:**

1.6 One hop Reputations for Peer to Peer File Sharing Workloads,

Michael Piatek Tomas Isdal Arvind  
Krishnamurthy Thomas Anderson,  
<http://www.cs.washington.edu/homes/arvind/papers/onehop.pdf>

**Sub 5. week 2**  
**dror 24/3**

1.7 Optimizing Scrip Systems:

Efficiency, Crashes, Hoarders, and Altruists, Ian A. Kash, Eric J. Friedman, Joseph Y. Halpern,  
<http://www.cs.cornell.edu/home/halpern/papers/heterogeneity.pdf>

**P2P-VoD**

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1.8. Cheng Huang, Jin Li, Keith W. Ross, "Can Internet Video-on-Demand Be Profitable," in Proc. of ACM SIGCOMM, August 2007

<http://www.sigcomm.org/ccr/drupal/?q=node/253>

**Sub 4 week 4**  
**Constantin**  
**14/4**

1.9. N. Parvez C. Williamson, Anirban Mahanti, Niklas Carlsson  
Analysis of BitTorrent-like Protocols for On-Demand Stored Media Streaming, Sigmetrics 2008  
<http://www.cse.iitd.ernet.in/~mahanti/papers/sig08.pdf>

**P2P-Streaming**

Sub 6 amit  
Lichtenberg  
28/4

## Surveys

1.10. Jiangchuan Liu<sub>,</sub> Sanjay G. Rao<sup>†</sup>, Bo Li<sup>‡</sup>, and

Hui Zhang <sub>,</sub> Opportunities and Challenges of Peer-to-Peer Internet Video Broadcast, <http://esm.cs.cmu.edu/technology/papers/Hui-P2PBroadcastr.pdf>

1.11. Yong Liu · Yang Guo · Chao Liang, A survey on peer-to-peer video streaming systems, Peer-to-Peer Netw Appl (2008) 1:18–28  
<http://www.springerlink.com/index/C62114G6G4863T32.pdf>

## Papers:

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1.12. Y. P. Zhou, D. M. Chiu, C. S. Lui, "A Simple Model for Analyzing P2P Streaming Protocols," in Proc. of IEEE ICNP 2007.

<http://personal.ie.cuhk.edu.hk/~dmchiu/p2pstreaming.pdf>

Sub 8a  
P4P arkadi  
30/4

1.13. Haiyong Xie, Y. Richard Yang, Arvind Krishnamurthy, Yanbin Liu and Avi Silberschatz , P4P: Provider Portal for Applications, SIGCOMM 2008  
<http://ccr.sigcomm.org/online/files/p351-xieA.pdf>

Sub 8b Itai  
5/5

**1.14** D. Wu, Y. Liu, K.W. Ross, Queuing Network Models for Multi-Channel Live Streaming Systems, IEEE Infocom, Rio de Janeiro, April 2009.

<http://cis.poly.edu/~ross/papers/VUDTheory.pdf>

## 2. Wireless Mesh Networks

**2.1** T-S. Kim, H. Lim, J. Hou, **Understanding and improving the spatial reuse in multihop wireless networks**, IEEE Transactions on Mobile Computing, vol. 7, no. 10, pp. 1200-1212, October 2008.

Keywords: spatial reuse, wireless ad hoc networks, 802.11 MAC, power control, carrier sense threshold, protocol parameter tuning

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ariel  
26/5

**2.2 C. Bettstetter, On the Connectivity of ad hoc networks, Computer Journal, vol. 47, no.4, pp. 432-447, 2004**

Keywords: connectivity, random mobility models, node degree, k-connectivity, hop count

**2.3 S. Radocavac, A. Cardenas, J. Baras, and G. Moustakides, Detecting IEEE 802.11 MAC layer misbehavior in ad hoc networks: Robust strategies against individual and colluding attackers, Journal of Computer Security, IOS Press, pp. 103-128, 2007**

Keywords: Ad hoc networks, MAC layer, intrusion detection, security, IEEE 802.11, back-off manipulation

### **3. Mobility Modeling**

**3.1 M. Kim, D. Kotz, S. Kim, Extracting a Mobility Model from Real User Traces, in Proc. IEEE INFOCOM 2006.**

Keywords: user mobility, trace processing, WiFi network, Kalman filtering

**3.2 V. Naumov, R. Baumann, T. Gross, An Evaluation of Inter-Vehicle Ad Hoc Networks Based on Realistic Vehicular Traces, in Proc. ACM MobiHoc 2006.**

Keywords: VANET, ad hoc network, broadcasting, greedy forwarding, inter-vehicle communication, realistic mobility model, routing, simulation, vehicular network

### **4. Delay Tolerant Networks**

**4.1 A. Balasubramanian, B. N. Levine, A. Venkataramani, DTN routing as a resource allocation problem, in Proc. ACM SIGCOMM 2007.**

Keywords: DTN, deployment, mobility, routing, utility

**4.2 V. Erramilli, A. Chaintreau, M. Crovella, C. Diot, Delegation Forwarding, in Proc. ACM MobiHoc 2008.**

Keywords: delay-tolerant networks, forwarding algorithms, mobile opportunistic networks, optimal stopping, pocket switched networks

### **5. Social Networks**

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Sub 11 (replaced by  
a new subject)  
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Sub 12  
eyal + ilana  
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**5.1 M. Cha, H. Kwak, P. Rodriguez, Y. Ahn, S. Moon, I tube, you tube, everybody tubes: analyzing the world's largest user generated content video system, in Proc. ACM IMC 2007.**

Keywords: caching, content aliasing, long tail, p2p, popularity analysis, power-law, user generated content, vod

**5.2 P. Hui, J. Crowcroft, E. Yoneki, Bubble Rap: Social Based Forwarding in Delay Tolerant Networks, in Proc. ACM MobiHoc 2008.**

Keywords: centrality, community, delay tolerant network, forwarding, pocket switched network, social network

## **6. Network Security: DoS, DDoS, and Stop-It**

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**6.1 Xin Liu, Xiaowei Yang, and Yanbin Lu "To Filter or to Authorize: Network-Layer DoS Defense Against Multimillion-node Botnets"**

Published: SIGCOMM'08, August 17-22, 2008, Seattle, Washington, USA.

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<http://ccr.sigcomm.org/online/files/p195-liu.pdf>

Sub 11 (new)  
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**6.2 TAO PENG, CHRISTOPHER LECKIE, and KOTAGIRI RAMAMOHANARAO "Survey of Network-Based Defense Mechanisms Countering the DoS and DDoS Problems"**

Published: ACM Computing Surveys, Vol. 39, No. 1, Article 3, Publication date: April 2007.

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<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.91.3927&rep=rep1&type=pdf>