

### Routing/Distributed state ###

\*\* Weak state routing/signaling \*\*

"An Evaluation of Weak State Mechanism Design for Indirection in Dynamic Networks",  
Utku Günay Acer, Alhussein A. Abouzeid, Shivkumar Kalyanaraman,  
under review (SECONDARY)

"Weak State Routing for Large Scale Dynamic Networks",  
Utku Günay Acer, Shivkumar Kalyanaraman, Alhussein A. Abouzeid,  
MOBICOM 2007 (PRIMARY)

\*\* Distributed state maintenance\*\*

"Sliver: A Fast Distributed Slicing Algorithm"

Vincent Gramoli and Ymir Vigfusson and Ken Birman and Anne-Marie Kermarrec and Robert van Ren  
PODC 2008

\*\* Consensus routing \*\*

"Consensus Routing: The Internet as a Distributed System"

John P. John, Ethan Katz-Bassett, Arvind Krishnamurthy, and Thomas Anderson, Arun  
Venkataramani  
NSDI 2008

\*\* More classical routing \*\*

"Source selectable path diversity via routing deflections."

Xiaowei Yang, David Wetherall  
SIGCOMM 2006: 159-170

"Achieving convergence-free routing using failure-carrying packets."

Karthik Lakshminarayanan, Matthew Caesar, Murali Rangan, Tom Anderson, Scott  
Shenker, Ion Stoica  
SIGCOMM 2007: 241-252

### Graphs ###

\*\* Network optimal design implies scale-free networks \*\*

"Optimization in Complex Networks"

Ramon Ferrer Cancho and Ricard V. Sole  
[http://complex.upf.es/~ricard/optimization\\_Sitges.pdf](http://complex.upf.es/~ricard/optimization_Sitges.pdf)

ALTERNATIVES

| "Scale-free networks from optimal design",  
| S. Valverde, R. F. Cancho, and R. V. Sole,  
| Europhys. Lett., 60 (2002), pp. 512-517 [<http://arxiv.org/pdf/cond-mat/0204344v2>]

| "Size and form in efficient transportation networks",

| Jayanth R. Banavar, Amos Maritan, and Andrea Rinaldo  
| Nature, 1999

| <http://www.nature.com/nature/journal/v399/n6732/pdf/399130a0.pdf>

\*\* Graph evolution over time \*\*

"Graphs over Time: Densification Laws, Shrinking Diameters and Possible  
Explanations"

Jure Leskovec, Jon Kleinberg, Christos Faloutsos

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SIGKDD 2005

<http://www.cs.cornell.edu/home/kleinber/kdd05-time.pdf>

**\*\* Graph Anonymity \*\***

"Wherefore Art Thou R3579X? Anonymized Social Networks, Hidden Patterns, and Structural Steganography."

L. Backstrom, C. Dwork, J. Kleinberg.

Proc. 16th Intl. World Wide Web Conference, 2007.

[<http://www.cs.cornell.edu/home/kleinber/www07-anon.pdf>]

"Resisting Structural Identification in Anonymized Social Networks,"

Michael Hay, Gerome Miklau, David Jensen, Don Towsley, and Philipp Weis, VLDB 2008.

[[ftp://gaia.cs.umass.edu/pub/Hay08\\_\\_GraphReidentification.pdf](ftp://gaia.cs.umass.edu/pub/Hay08__GraphReidentification.pdf)]

INVITE →  
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**\*\* Infection / information propagation \*\***

"Cascading Behavior in Networks: Algorithmic and Economic Issues",

Jon Kleinberg,

Chapter 24 of Algorithmic Game Theory, edited by Noam Nisan, Tim Roughgarden, Eva Tardos, and Vijay Vazirani (Cambridge University Press, 2007).

[<http://www.cs.cornell.edu/home/kleinber/agtbook-ch24.pdf>]

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**\*\* IP traceback \*\***

"Trade-offs in probabilistic packet marking for IP traceback"

Micah Adler

J. ACM 52(2): 217-244 (2005)

<http://portal.acm.org/citation.cfm?doid=1059513.1059517>

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**\*\* Measurements \*\***

"Network Discovery from Passive Measurements",

Brian Eriksson, Paul Barford, Robert Nowak,

SIGCOMM 2008 [ [<http://ccr.sigcomm.org/online/files/p291-erikssonA.pdf> ] ] ]

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"Sampling Biases in IP Topology Measurements,"

Anukool Lakhina, John W. Byers, Mark Crovella and Peng Xie.

INFOCOM '03 [<http://www.cs.bu.edu/fac/byers/pubs/samplingbias.pdf>]

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ALTERNATIVE

| (the following paper is similar to the previous one but finds the actual distributions)

| "On the bias of traceroute sampling: or, power-law degree distributions in regular graphs"

| Dimitris Achlioptas, Aaron Clauset, David Kempe, Cristopher Moore

| STOC 2005

| [<http://portal.acm.org/>

[ft\\_gateway.cfm?id=1060693&type=pdf&coll=GUIDE&dl=GUIDE&CFID=4009088&CFTOKEN=54107819](http://portal.acm.org/ft_gateway.cfm?id=1060693&type=pdf&coll=GUIDE&dl=GUIDE&CFID=4009088&CFTOKEN=54107819)]

### P2P ###

**\*\* Live streaming \*\***

"Epidemic Live Streaming: Optimal Performance Trade-Offs",

Thomas Bonaldy, Laurent Massoulié, Fabien Mathieuy, Diego Perinoy, Andrew Twigg,

SIGMETRICS 2008

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"Challenges, Design and Analysis of a Large-scale P2P-VoD System",

Yan Huang, Tom Z. J. Fu, Dah-Ming Chiu, John C. S. Lui and Cheng Huang,

SIGCOMM 2008, <http://ccr.sigcomm.org/online/files/p375-huangA.pdf>

**\*\* Network coding \*\***

Network Coding for Large Scale Content Distribution

Christos Gkantsidis, Pablo Rodriguez Rodriguez,

INFOCOM 2005, [http://research.microsoft.com/%7Epablo/papers/nc\\_contentdist.pdf](http://research.microsoft.com/%7Epablo/papers/nc_contentdist.pdf)

**\*\* P2P + Traffic engineering \*\***

"Cooperative Content Distribution and Traffic Engineering,"

Wenjie Jiang, Rui Zhang-Shen, Mung Chiang, and Jennifer Rexford,

ACM SIGCOMM NetEcon workshop, August 2008. [<http://conferences.sigcomm.org/sigcomm/2008/workshops/netecon/papers/p7.pdf>]

**\*\* Bittorrent-like networks \*\***

"P4P: Provider Portal for Applications",

Haiyong Xie, Y. Richard Yang, Arvind Krishnamurthy, Yanbin Liu, Avi Silberschatz,

SIGCOMM 2008, <http://ccr.sigcomm.org/online/files/p351-xieA.pdf>.

"Bittorrent is an auction: analyzing and improving bittorrent's incentives",

Dave Levin, Katrina LaCurts, Neil Spring, Bobby Bhattacharjee

SIGCOMM 2008, [http://portal.acm.org/](http://portal.acm.org/ft_gateway.cfm?id=1402987&type=pdf&coll=ACM&dl=ACM&CFID=4010893&CFTOKEN=84146883)

[ft\\_gateway.cfm?id=1402987&type=pdf&coll=ACM&dl=ACM&CFID=4010893&CFTOKEN=84146883](http://portal.acm.org/ft_gateway.cfm?id=1402987&type=pdf&coll=ACM&dl=ACM&CFID=4010893&CFTOKEN=84146883)

**### Wireless ###**

**\*\* Network coding / harvesting interference \*\***

"ZIG ZAG" (MIT)

"Symbol-level Network Coding for Wireless Mesh Networks",

Sachin Katti, Dina Katabi, Hari Balakrishnan, and Muriel Medard,

SIGCOMM 2008,

[<http://ccr.sigcomm.org/online/files/p401-kattiA.pdf>]

"FatVAP: Aggregating AP Backhaul Capacity to Maximize Throughput"

Srikanth Kandula, Kate Ching-Ju Lin, Tural Badirkhanli and Dina Katabi,

NSDI 2008

"Harnessing Exposed Terminals in Wireless Networks"

Mythili Vutukuru, Kyle Jamieson, and Hari Balakrishnan,

NSDI 2008

"Taking the Sting out of Carrier Sense: Interference Cancellation for Wireless LANs",

Daniel Halperin, Thomas Anderson, David Wetherall,

MobiCom'08

[<http://www.cs.washington.edu/homes/djw/papers/sic-mobicom.pdf>]

**\*\* Taking network structures into account \*\***

"Line-of-Sight Networks"

Alan Frieze, Jon Kleinberg, R. Ravi, Warren Debany

SODA 2007

[<http://www.cs.cornell.edu/home/kleinber/soda07-los.pdf>]

**\*\* Capacity \*\***

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"Traffic Capacity of Multi-Cell WLANs",  
Thomas Bonald, Ali Ibrahim, James Roberts,  
SIGMETRICS 2008

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**\*\* Power / Scheduling \*\***

"Noncooperative Power Control and Transmission Scheduling in Wireless Collision Channels",  
Ishai Menache, Nahum Shimkin,  
SIGMETRICS 2008, <http://delivery.acm.org/10.1145/1380000/1375497/p349-menache.pdf>

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"Can CSMA/CA Networks be Made Fair?",  
Ying Jian, Shigang Chen,  
Mobicom 2008 []

"Capacity of Large Scale Wireless Networks under Gaussian Channel Model,"  
Shi Li, Yunhao Liu, and Xiang-Yang Li (Illinois Institute of Technology, USA),  
Mobicom 2008

**\*\* ~~Adaptive power / Bandwidth~~ \*\***

"A Case for Adapting Channel Width in Wireless Networks",  
Ranveer Chandra, Ratul Mahajan, Thomas Moscibroda, Ramya Raghavendra, Paramvir Bahlm,  
SIGCOMM 2008,  
[<http://ccr.sigcomm.org/online/files/p135-chandra.pdf>]

**\*\* Maintenance in Wireless networks \*\***

"Towards a Versatile Problem Diagnosis Infrastructure",  
Konrad Iwanicki1, and Maarten van Steen,  
On the Move to Meaningful Internet Systems 2007: OTM 2007 Workshops.  
[<http://www.springerlink.com/content/u24q161p3417w271/fulltext.pdf>]

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"Continuous versus Discrete Model in Autodiagnosis Systems for Wireless Networks, "  
Raquel Barco, Pedro Lázaro, Luis Díez, and Volker Wille,  
IEEE Transactions on Mobile Computing, June 2008 (Vol. 7, No. 6) pp. 673-681

"Adaptive correctness monitoring for wireless sensor networks using hierarchical distributed run-time invariant checking, "  
Douglas Herbert, Vinaitheerthan Sundaram, Yung-Hsiang Lu, Saurabh Bagchi, and Zhiyuan Li,  
ACM Transactions on Autonomous and Adaptive Systems (TAAS) archive Volume 2, Issue 3 (September 2007).

**\*\* Wireless network security through Physical-layer enhancement \*\***

"Securing wireless systems via lower layer enforcement",  
Zang Li, Wenyan Xu, Rob Miller, and Wade Trappe,  
WiSe'06, September 29, 2006

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"Detecting Identity-based attacks in wireless networks using signalprints",  
Daniel B. Faria and David R. Cheriton,  
WiSe'06, September 29, 2006,

"Advancing Wireless Link Signatures for Location Distinction"  
Junxing Zhang, M. H. Firooz, Neal Patwari, and Sneha Kumar Kasera,  
MOBICOM, September 2008.

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### Clock synchronization ###

"Exploiting Manufacturing Variations for Compensating Environment-induced Clock Drift in Time Synchronization",

Thomas Schmid, Zainul Charbiwala, Young Cho, Mani Srivastava,  
SIGMETRICS 2008, [http://nesl.ee.ucla.edu/fw/thomas/os\\_sig\\_08.pdf](http://nesl.ee.ucla.edu/fw/thomas/os_sig_08.pdf)

### IDS / Itrusion analysis from traces ###

"Enriching Network Security Analysis with Time Travel",

Gregor Maier, Robin Sommer, Holger Dreger, Anja Feldmann, Vern Paxson,  
SIGCOMM 2008 (Stream processing)

"Early Recognition of Encrypted Applications."

Laurent Bernaille, Renata Teixeira  
PAM 2007: 165-175

### Mobility ###

"BreadCrumbs: Forecasting Mobile Connectivity,"

Anthony Nicholson and Brian Noble  
Mobicom 2008

### Data Stream Algorithms ###

"One Sketch for All: Fast Algorithms for Compressed Sensing",

A. C. Gilbert, M. J. Strauss, J. A. Tropp, and R. Vershynin  
STOC 2007

<http://www.math.lsa.umich.edu/~annacg/papers/GSTV07.HHS.pdf>

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