

## Michalis Faloutsos

## Curriculum Vitae

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### Personal Information

*Nationality* : Greek, Canadian

*Languages* : English and Greek (fluent), French (good))

### Research Interests

- Internet: protocols, measurements
- Network topology models
- Scalable networking
- Routing: QoS, multicasting
- Ad hoc networks: routing
- Distributed algorithms

### Education

**1995 - 1999:** PhD in Computer Science; Department of Computer Science, **University of Toronto**, Canada; *“The Greedy, the Naive and the Optimal Multicast Routing: from Theory to Internet Protocols”*. Supervised by: R. Pankaj, K. C. Sevcik, A. Banerjea.

**1993 - 1995:** Master of Science in Computer Science; Department of Computer Science, **University of Toronto**, Canada; *“Corrections, Improvements, Simulations and optiMSTic Algorithms for the Distributed Minimum Spanning Tree Problem”* Supervised by: M. Molle.

**1988 - 1993:** A five-year Bachelor’s Degree in the Department of Electrical and Computer Engineering, **National Technical University of Athens**, Greece; GPA : 9.14/10 (Excellent)

### Highlights and Exposure

1. Co-authored the top-20 most cited paper of 1999: “On powerlaw relationships of the Internet topology”, with Petros Faloutsos and Christos Faloutsos (Digital Library: [www.citeseer.nj.nec.com](http://www.citeseer.nj.nec.com), 320 citations in Jan 2005)

The paper was included in the collection of papers: “The structure and Dynamics of Networks”, by Newman et al. published by the Princeton University Studies.

2. Work referenced by popular magazine and books:  
Scientific American, in article “Scale-Free Networks”, vol. 288, no. 5, 2003  
Book: “Linked: by The New Science of Networks”, by Albert-Laszlo Barabasi

3. Co-authored a paper, which received publicity in the popular electronic and printed press. The paper is titled *“Is P2P dying or just hiding?”* and is in my list of papers later.

The article was the main focus of an article in the Wired magazine website. The press release article: “Song-Swap Networks Still Humming” discusses the findings of our paper. The Wired magazine is a popular computer magazine with a broad audience. <http://www.wired.com/news/digiwood/0,1412,65427,00.html>

The paper was referenced in the popular PC magazine, in its December 2004 issue.

The paper was also featured and cited in many other electronic news-cites such as:

1. USA Today: ”The rise and fall (?) of P2P music downloading”.  
[http://www.usatoday.com/tech/columnist/ericjsinrod/2004-10-27-sinrod\\_x.htm](http://www.usatoday.com/tech/columnist/ericjsinrod/2004-10-27-sinrod_x.htm)
2. ACM Tech News - Oct 29 electronic bulletin.
3. Slashdot, a major site for software and systems news.
4. Congressional Internet Caucus and its Advisory Committee: which consists of Congress persons, <http://www.netcaucus.org>.

## Honors and Awards

1. Excellence in Teaching Award, 2003-2004, from the College of Engineering, UCR (awarded to one professor each year).
2. Ontario Graduate Scholarship (1997) offered by the Ministry of Education and Training.
3. Teaching Assistant Award, Computer Science Department, U. of Toronto, Spring '96, second best among 120 TAs.
4. Connaught Scholarship (1994,1995,1996) a prestigious scholarship (offered to 2 out of 150 graduate students in CS) offered by the School of Graduate Studies of the University of Toronto.
5. University of Toronto Open Fellowship (1993), along with a Differential Fee Waiver for international students.
6. Annual awards for being in the top ten of the class of 150 students at the N.T.U. of Athens (1988, 1989, 1991).

## Grants

- ARSENAL: A cross layer ARchitecture for SEcure resilieNt tacticalAL mobile ad hoc networks, \$950K, supported by Dept. of Defense under the MURI program, 2007-2012  
PI: S. Krishnamurthy, Co-PIs: M. Faloutsos

- NeTS-NBD: Physical Layer Dependent Neighbor Discovery and Topology Management in Ad hoc Networks, 2006- 2009: \$388K, supported by NSF  
PI: S. Krishnamurthy, Co-PIs: N. Young, M. Faloutsos
- Analyzing and Modeling Hybrid (Cellular-Ad hoc) Networks, 2006: \$98K, Supported by Qualcomm and MICRO matching program  
Co-PI: S. Krishnamurthy
- Preliminary Research on Development of a Scale-Free Network Approach to Animal Identification, 2006: \$10K  
Supported by UCR Interdisciplinary Teams and Networks Program  
PI: P. De Ley, Co-PI: E. Keogh
- Gift from Intel, \$10K, 2006.
- CRI: Imaging and Non-Imaging Sensor Laboratory for Urban Disaster Management, 2006: \$ 162,601  
Supported by NSF CNS 05-51719  
PIs: E. Turncel, V. Kalogeraki, S. Krishnamurthy, A. K. Roy-Chowdhury, V. Sundararajan Senior Personnel: M. Faloutsos,  
Duration 03/01/06 - 02/28/09.
- Understanding and Improving the Transport Layer Performance in MANETs, 2004: \$73,478  
Supported by Qualcomm Inc. and MICRO  
Co-PI: S. Krishnamurthy
- NetMine: Finding Patterns in Network Data, 2002: \$120,000  
Co-PI: Christos Faloutsos, NSF IIS-0208950
- SWIFT: Secure Wireless Fault-Tolerant Tunable Networks, 2001: \$2,200,000  
Supported by DARPA, Fault Tolerant Networks.  
Co-PIs: C. Ravishankar, S. Krishnamurthy, S. Tripathi
- Analysis of the Internet Topology, 2000: \$500,000  
Supported by DARPA, Network Modeling and Simulation, N66001-00-1-8936  
Co-PI: C. Faloutsos (subcontract)
- Multicast Protocols and Topology Models for the Internet, 2000: \$376,926  
Supported by NSF, CAREER award ANI-9985195
- Qos Routing and Voice over IP, 2000: \$80,000  
Supported by Tata Consulting Services Inc.  
Co-PIs: C. Ravishankar, M. Molle, S. Tripathi
- Infrastructure Support for Network-Based Content Delivery, 2001: \$154,000 plus \$500,000 in-kind  
Supported by Tata Consulting Services Inc.  
Co-PIs: C. Ravishankar, S. Tripathi, M. Molle
- Infrastructure Support for Network-Based Content Delivery, 1999: \$233,405.  
UC Digital Innovation Programm (DiMI) - matching fund  
Co-PIs: C. Ravishankar, M. Molle, S. Tripathi

- Improving QoS for the Next Generation Internet, 1999: \$150,000  
Supported by Nortel and the CoRe matching program  
Co-PIs: M. Molle, S. Tripathi
- Graduate Assistance in Areas of National Need (GAAN), 2000: \$201,999  
Supported by U.S. Department of Education  
Co-PIs: V. Tsotras, M. Molle, M. Chrobak
- Gift \$25,000 from AT&T, 2000.  
Shared by: D. Gunopulos, C. Ravishankar

## Publications

### Journals

20. “*Sampling Large Internet Topologies for Simulation Purposes*”, V. Krishnamurthy, M. Faloutsos, M. Chrobak, Li Lao, J-H. Cui, and Allon G. Percus Computer Networks, to appear.
19. “*Clustering by common friends finds locally significant proteins mediating modules*”, B. Andreopoulos and A. An and M. Faloutsos and X. Wang and M. Schroeder Bionformatics, Oxford Journals, to appear.
18. “*A Cross-Layer Framework for Exploiting Virtual MISO Links in Mobile Ad-hoc Networks*”, G. Jakllari, S. V. Krishnamurthy, M. Faloutsos, P. Krishnamurthy and O. Ercetin IEEE Transaction on Mobile Computing, to appear.
17. “*On Broadcasting with Cooperative Diversity in Multi-hop Wireless*”, G. Jakllari, S. V. Krishnamurthy, M. Faloutsos and P. V. Krishnamurthy, IEEE JSAC special issue on Cooperative Communications and Networking, to appear.
16. “*A New Binary Conflict Resolution based MAC protocol for Impulse-Based UWB Ad hoc Networks*”, I. Broustis, M. Molle, S. Krishnamurthy, M. Faloutsos and J. Foerster Journal of Wireless Communications and Mobile Computing, Special Issue on Wireless Ad hoc Networks: Technologies and Challenges, to appear.
15. “*A novel adaptive protocol for lightweight efficient multicasting in ad hoc networks*”, L.K. Law, S.V. Krishnamurthy and M. Faloutsos Computer Networks Journal, to appear.
14. “*Understanding and Exploiting the Tradeoffs between Broadcasting and Multicasting in Mobile Ad Hoc Networks*”, L.K. Law, S.V. Krishnamurthy and M. Faloutsos, IEEE Transactions on Mobile Computing, to appear.
13. “*DART: Dynamic Address Routing for Scalable Ad Hoc and Mesh Networks*”, J. Eriksson, M. Faloutsos, and S. V. Krishnamurthy accepted for publication in ACM Transactions on Networking, 2006.

12. “*Jellyfish: A Conceptual Model for the AS Internet Topology*” *Journal of Computer Networks*” G. Siganos, M. Faloutsos, L. Tauro, *Journal of Communications and Networks*, Vol. 8, No. 3, pp 339-350, Sep 2006.
11. “*AQoS-M: Scalable QoS Multicast Provisioning in Diff-Serv Networks*”, J. Cui, L. Lao, M. Faloutsos, M. Gerla, *Computer Networks* by Elsevier, Vol 50/1 pp 80-105, 2005.
10. “*Application versus Network Layer Multicasting in Ad Hoc Networks: the ALMA Routing Protocol*” M. Ge, S.V. Krishnamurthy, M. Faloutsos, *Ad Hoc Networks Journal* (by Elsevier), to appear.
9. “*The case for a Systematic Approach to Wireless Mobile Network Simulation*”, J. Jobin, M. Faloutsos and S. Tripathi, *Journal of High Speed Networks*, to appear.
8. “*Long-range dependence: Ten years of Internet traffic modeling*”, T. Karagiannis, M. Faloutsos and M. Molle, *IEEE Internet Computing*, Special Issue in “Measuring the Internet”, to appear.
7. “*A Linear-Time Optimal-Message Distributed Algorithm for Minimum Spanning Trees*”, Michalis Faloutsos and Mart Molle, *Distributed Computing*, vol. 17, no. 2, pp. 151-170, August, 2004.
6. “*A User-Friendly Self-Similarity Analysis Tool*”, Thomas Karagiannis, Michalis Faloutsos, Mart Molle Special Section on Tools and Technologies for Networking Research and Education, *ACM SIGCOMM Computer Communication Review*, vol. 33, no. 3, pp. 81-93, 2003.
5. “*An Architecture for Scalable, Efficient and Fast Fault-Tolerant Multicast Provisioning*”, Jun-Hong Cui, M. Faloutsos, and M. Gerla *IEEE Network special issue on Protection, Restoration, and Disaster Recovery*, vol. 18, no.2, pp. 26-34, March, 2004.
4. “*Power-Laws and the AS-level Internet Topology*”, Georgos Siganos, Michalis Faloutsos, Petros Faloutsos, Christos Faloutsos, *IEEE/ACM Transactions on Networking*, volume 11, no. 4, pp. 514-524, 2003.
3. “*The Effect of Asymmetry on the On-line Multicast Routing Problem*” M. Faloutsos, R. Pankaj, K. Sevcik, *International Journal on Foundations in Computer Science*, Vol. 13, No. 6, pp. 889-910, 2002.
2. “*QoS-Aware Multicast Routing for the Internet: The Design and Evaluation of QoS-MIC*”, S. Yan, M. Faloutsos and A. Banerjee, *IEEE/ACM Trans. on Networking*, volume 2, number 1, pp. 54-66, Feb 2002
1. “*Using Statistical Data for Reliable Mobile Communications*” J. Jobin, S. Tripathi, M. Faloutsos and S. Gokhale, *Journal of Wireless Communications and Mobile Computing Special Issue on “Reliable Transport Protocols for Mobile Computing”*, Feb, 2002.

#### Peer Reviewed Conferences

70. *"Link Positions Matter: A Noncommutative Routing Metric for Wireless Mesh Networks"*, G. Jakllari, S. Eidenbenz, N. Hengartner, S. V. Krishnamurthy and M. Faloutsos IEEE INFOCOM 2008, Phoenix, AZ, USA (Acceptance Ratio: 21%)
69. *"Capacity of Hybrid Cellular-Ad hoc Data Networks"*, L.K. "Eric" Law, S. V. Krishnamurthy and M. Faloutsos IEEE INFOCOM 2008, Phoenix, AZ, USA (Acceptance Ratio: 21%)
68. *"Characterizing and Modelling Clustering Features in AS-Level Internet Topology"*, Yan Li, Jun-Hong Cui, Dario Maggiorini, and Michalis Faloutsos IEEE INFOCOM'08, Phoenix, Arizona, USA, April 13-18, 2008 (Acceptance Ratio: 21%)
67. *"Policy-Aware Topologies for Efficient Inter-Domain Routing Evaluations"*, Y. He and S. V. Krishnamurthy and M. Faloutsos and M. Chrobak IEEE INFOCOM 2008 Mini-Conference, Phoenix, AZ, USA (Acceptance Ratio: 9.3% 85/900)
66. *"Cyber-Fraud is One Typo Away"*, Anirban Banerjee and Dhiman Barman and Michalis Faloutsos and Laxmi Bhuyan IEEE INFOCOM 2008 Mini-Conference, Phoenix, AZ, USA (Acceptance Ratio: 9.3% 85/900)
65. *"Network Monitoring Using Traffic Dispersion Graphs (TDGs)"*, M. Iliofotou, P. Pappu, M. Faloutsos, M. Mitzenmacher, S. Singh, G. Varghese ACM/USENIX Internet Measurement Conference (IMC 07), San Diego, CA, October 24-26, 2007 (short paper).
64. *"Routing amid Colluding Attackers"*, J. Eriksson, S. V. Krishnamurthy, and M. Faloutsos, IEEE ICNP 2007 (14.5%).
63. *"MDG: Measurement-Driven Guidelines for 802.11 WLAN Design"*, I. Broustis, K. Papagiannaki, S. V. Krishnamurthy, M. Faloutsos and V. Mhatre. ACM International Conference on Mobile Computing and Networking (MOBICOM), Montreal, Canada, September 2007.
62. *"Is Someone Tracking P2P Users"*, A. Banerjee, M. Faloutsos and L. Bhuyan, IFIP NETWORKING 2007, Atlanta, GA. (**best paper award**) (featured on DIGG.com and Torrentfreak.com)
61. *"Multiple Identities in BitTorrent Networks"*, J. Sun, A. Banerjee and M. Faloutsos, IFIP NETWORKING 2007, Atlanta, GA.
60. *"A Blueprint for a Manageable and Affordable Wireless Testbed: Design, Pitfalls and Lessons Learned"*, I. Broustis and J. Eriksson and S. V. Krishnamurthy and M. Faloutsos, IEEE International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom), Orlando, Florida, USA, May 2007.
59. *"Profiling the End Host"*, T. Karagiannis, D. Papagiannaki, N. Taft and M. Faloutsos, Passive and Active Measurement Conference, PAM '07, Belgium, 2007 (21/80).
58. *"Implications of Power Control in Wireless Networks: A Quantitative Study"*, I. Broustis and J. Eriksson and M. Faloutsos and S. Krishnamurthy Passive and Active Measurement Conference, PAM '07, Belgium, 2007 (21/80).

57. “ *A systematic framework for unearthing the missing links: Measurements and Impact*” Y. He and M. Faloutsos and S. Krishnamurthy, Symposium on Networked Systems Design and Implementation (NSDI '07), Boston, MA, 2007 (27/113).
56. “ *Neighborhood Watch for Internet Routing: Can we improve the Robustness of Internet Routing Today?* ” G. Siganos, M. Faloutsos, IEEE INFOCOM 2007, Anchorage, Alaska.
55. “ *Information Survival Threshold in Sensor and P2P Networks*”, D. Chakrabarti, J. Leskovec, C. Faloutsos, S. Madden, C. Guestrin and M. Faloutsos IEEE INFOCOM 2007, Anchorage, Alaska.
54. “ *TrueLink: A Practical Countermeasure to the Wormhole Attack in Wireless Networks*” J. Eriksson, S. V. Krishnamurthy , M. Faloutsos, IEEE ICNP, 12 p., S. Barbara, November 2006 (%14).
53. “ *Dude, where’s my Peer?*” A. Banerjee, A. Mitra, M. Faloutsos, IEEE Globecom, Internet Services and Enabling Technologies (ISET), 6 p., San Fransisco, November 2006
52. “ *Evolution versus Intelligent Design: Comparing the Topology of Protein-Protein Interaction Networks to the Internet*”, Q. Yang, G. Siganos, M. Faloutsos, S. Lonardi ’ LSS Computational Systems Bioinformatics Conference (CSB’06), 299-310, Stanford, CA, August 2006.
51. “ *BiToS: Enhancing BitTorrent for Supporting Streaming Applications*”, Aggelos Vlavianos and Marios Iliofotou and Michalis Faloutsos, Global Internet Workshop, in Conjunction with IEEE INFOCOM 2006 Barcelona, Spain, April 2006
50. “ *Overcoming the Challenge of Security in a Mobile Environment*”, I. Broustis, M. Faloutsos and S. Krishnamurthy First International Workshop on eSafety and Convergence of Heterogeneous Wireless Networks, (in conjunction with 25th IEEE International Performance, Computing, and Communications Conference), Phoenix, Arizona, USA, April 10-12, 2006.
49. “ *A Framework for Distributed Spatio-Temporal Communications in Mobile Ad hoc Networks*”, G. Jakllari, S. V. Krishnamurthy, M. Faloutsos, and P. V. Krishnamurthy and O. Ercetin IEEE INFOCOM 2006, Barcelona, Spain.
48. “ *BLINC: Multilevel Traffic Classification in the Dark*” , T. Karagiannis, D. Papa- giannaki, M. Faloutsos. ACM SIGCOMM 2005.
47. “ *Detection of BGP routing misbehavior against Cyber-Terrorism* ”, G. Siganos and M. Faloutsos In Proceedings MILCOM 2005, Oct, New Jersey, 2005
46. “ *A Multiband MAC Protocol for Impulse-based UWB Ad Hoc Networks*”, Ioannis Broustis, Srikanth Krishnamurthy, Michalis Faloutsos, Mart Molle, Jeffrey Foerster IEEE International Conference on Sensor and Ad Hoc Communications and Networks (SECON), 2005 (runner up for best paper award).
45. “ *On Routing Asymmetry in the Internet*”, Y. He, M. Faloutsos, S. V. Krishnamurthy, and B. Huffaker IEEE GLOBECOM, Autonomic Internet, St. Louis, Nov, 2005.

44. "Power Efficient Broadcasting with Cooperative Diversity in Ad hoc Networks", G. Jakllari, S. V. Krishnamurthy, M. Faloutsos, and P. V. Krishnamurthy, IEEE WPMC 2005, Aalborg, Denmark.
43. "Reducing Large Internet Topologies for Faster Simulations", Vaishnavi Krishnamurthy, Michalis Faloutsos, Marek Chrobak, Li Lao, Jun-Hong Cui, and Allon G. Percus In Proceedings of IFIP Networking 2005, Waterloo, Ontario, Canada, May 2-6, 2005
42. "Fireworks: An Adaptive Group Communications Protocol for Mobile Ad Hoc Networks", L.K. (Eric) Law, S.V. Krishnamurthy, M. Faloutsos In Proceedings of IFIP Networking 2005, Waterloo, Ontario, Canada, May 2-6, 2005
41. "Justice: Flexible and Enforceable Per-Source Bandwidth Allocation", J. Eriksson, M. Faloutsos, S.V. Krishnamurthy In Proceedings of IFIP Networking 2005, Waterloo, Ontario, Canada, May 2-6, 2005
40. "Local Versus Global Power Adaptive Broadcasting in Ad Hoc Networks", Kyriakos Karenos, Asheq Khan, Srikanth Krishnamurthy, Michalis Faloutsos, Xiaohu Chen IEEE Wireless Communications and Networking Conference, 2005.
39. "Transport layer identification of p2p traffic", Thomas Karagiannis, Andre Broido, Michalis Faloutsos, kc claffy, ACM SIGCOMM/USENIX Internet Measurement Conference (IMC 2004), Taormina, Italy, October, 2004.
38. "Overlay Multicasting for Ad Hoc Networks", Min Ge, S. V. Krishnamurthy, Michalis Faloutsos, The Third Annual Mediterranean Ad Hoc Networking Workshop (Med-Hoc-Net 2004), Bodrum, Turkey, June, 2004.
37. "Understanding the Interactions between Unicast and Group Communications Sessions in Ad Hoc Networks" L. K. Law, S.V. Krishnamurthy, M. Faloutsos IFIP MWCN, 2004, October, Paris (to appear).
36. "On Evaluating the Trade-offs between Broadcasting and Multicasting in Ad Hoc Networks" L. K. Law, S.V. Krishnamurthy, M. Faloutsos MILCOM 2004, October-November, Monterey, CA (to appear).
35. "TCP Friendly Medium Access Control for Ad-Hoc Wireless Networks: Alleviating Self Contention", Dan Berger, Zhenqiang Ye, Prasun Sinha, Srikanth Krishnamurthy, Michalis Faloutsos, Satish Tripathi The 1st IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS 2004), October 24-27, 2004, Fort Lauderdale, Florida, USA
34. "Is P2P dying or just hiding?", Thomas Karagiannis, Andre Broido, Nevil Brownlee, kc claffy, Michalis Faloutsos, IEEE GLOBECOM 2004 - Global Internet and Next Generation Networks, Dallas, Texas, November, 2004.
33. "Quantifying Routing Asymmetry in the Internet at the AS Level " Y. He. M. Faloutsos, S. V. Krishnamurthy IEEE GLOBECOM 2004 - Global Internet and Next Generation Networks, Dallas, Texas, November, 2004.
32. "Analyzing BGP Policies: Methodology and Tool ", G. Siganos, M. Faloutsos IEEE INFOCOM, Hong Kong, 2004.

31. *"Scalable Ad Hoc Routing: The Case for Dynamic Addressing"*, J. Eriksson, M. Faloutsos, S. V. Krishnamurthy IEEE INFOCOM 2004, Hong Kong, 2004.
30. *"A Nonstationary Poisson View of Internet Traffic"*, T. Karagiannis, M. Molle, M. Faloutsos, A. Broido IEEE INFOCOM, Hong Kong, 2004.
29. *"Modeling Hotspots in Wireless Cellular Network Simulation"*, J. Jobin, M. Faloutsos, S. K. Tripathi, S. V. Krishnamurthy, IEEE INFOCOM, Hong Kong, 2004. (1/5)
28. *"Improving the performance of TCP in the presence of interacting UDP flows in ad hoc networks"*, V. Gupta, S. V. Krishnamurthy, M. Faloutsos, IFIP Networking, Athens, Greece, 2004. (1/5)
27. *"Power adaptive broadcasting with local information in ad hoc networking"*, X. Chen, M. Faloutsos, S. Krishnamurthy 11th IEEE International Conference on Network Protocols (ICNP), Atlanta, Georgia, 2003.
26. *"Measuring and Modelling the Group Membership in the Internet"*, Jun-Hong Cui, Michalis Faloutsos, Dario Maggiorini, Mario Gerla, Khaled Bousetta, ACM SIGCOMM Internet Measurement Conference. Miami, Florida, Oct 2003.
25. *"Sampling Internet Topologies: How Small Can We Go?"*, Vaishnavi Krishnamurthy, Junhong Sun, Michalis Faloutsos, Sudhir Tauro, International Conference on Internet Computing, Las Vegas, 2003.
24. *"PeerNet: Pushing Peer-To-Peer Down the Stack"*, Jakob Eriksson, Michalis Faloutsos and Srikanth V. Krishnamurthy International Workshop on Peer-to-Peer Systems (IPTPS '03), Berkeley, Lecture Notes in Computer Science 2735, pp. 268-277, 2003.
23. *"Split TCP for Mobile Ad Hoc Networks"* Swastik Kopparty, Srikanth V. Krishnamurthy, Michalis Faloutsos, Satish K. Tripathi, Symposium on Ad-Hoc Wireless Networks (SAWN in GLOBECOM), Taipei, Taiwan, November 17-21, 2002
22. *"Scalable QoS Multicast Provisioning in Diff-Serv-Supported MPLS Networks"* Jun-Hong Cui, Jinkyu Kim, Aiguo Fei, Michalis Faloutsos, Mario Gerla, IEEE GLOBECOM, Taipei, Taiwan, November 17-21, 2002
21. *"Long-Range Dependence: Now you see it, now you don't!"* T. Karagiannis, M. Faloutsos, R. Riedi IEEE GLOBECOM - Global Internet Symposium, Taipei, Taiwan, November 17-21, 2002
20. *"BGP Routing Properties at a Large Time Scale"* G. Siganos, M. Faloutsos IEEE GLOBECOM - Global Internet Symposium, Taipei, Taiwan, November 17-21, 2002
19. *"Denial of Service Attacks at the MAC Layer in Wireless Ad Hoc Networks"*, Vikram Gupta, Srikanth Krishnamurthy, Michalis Faloutsos, MILCOM - Network Security, Anaheim, October 2002
18. *"Distance Adaptive (DAD) Broadcasting for Ad Hoc Networks"*, X. Chen, M. Faloutsos, S. V. Krishnamurthy, MILCOM, Anaheim, October 2002
17. *"Simplifying the Analysis of Wireless Network Simulation"* J. Jobin, M. Faloutsos, S. Tripathi, 2002 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS 2002), San Diego, CA, June, 2002.

16. “ *A Simple Conceptual Model for the Internet Topology*“, L. Tauro, C. Palmer, G. Siganos, M. Faloutsos, IEEE GLOBECOM - Global Internet, San Antonio, Texas, November 25-29, 2001
15. “*Aggregated Multicast with Inter-Group Sharing*“, A. Fei, J. Cui, M. Gerla, M. Faloutsos, Networked Group Communications (NGC), London, November, 2001
14. “ *Performance evaluation of mobile wireless networks: a new perspective*“, J. Jobin, M. Faloutsos, S. Tripathi, The Fourth ACM International Workshop on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM), July 21, 2001, Rome, Italy
13. “*Aggregated Multicast: an Approach to Reduce Multicast State*“, A. Fei, J. Cui, M. Gerla, M. Faloutsos, Global Internet, San Antonio, Texas, November 25-29, 2001
12. “*Scalable QoS Multicast using tree aggregation*“, M. Gerla, A. Fei, J. Cui, M. Faloutsos, IEEE Tyrrhenian International Workshop on Digital Communications, Setp 2001, Taormina, Italy.
11. “*The Connectivity and Fault-Tolerance of the Internet Topology*“, C. Palmer, G. Siganos, M. Faloutsos, C. Faloutsos and P. Gibbons, Workshop on Network-Related Data Management (NRDM 2001) In cooperation with ACM SIGMOD/PODS 2001 Santa Barbara, May, 2001
10. “*Video Multicasting with Variable Bandwidth Requirements*“, M. Samidi, M. Faloutsos, R. Pankaj, and K. Sevcik MIS 2000, Chigago, Oct, 2000.
9. “*On Power-law Relationships of the Internet Topology*“, M. Faloutsos, P. Faloutsos and C. Faloutsos, ACM SIGCOMM'99, Cambridge MA, September 1-3, 1999.
8. “*QoS-Sensitive Routing for Real-time Multicasting*“, S. Yan, M. Faloutsos and A. Banerjea, Real-Time Internet Applications Workshop (RTAW'99), Vancouver BC, June 1, 1999.
7. “*QoSMIC: Quality of Service sensitive Multicast Internet protoCol*“, Michalis Faloutsos, Anindo Banerjea and Rajesh Pankaj, ACM SIGCOMM'98, Vancouver BC, September 2-4, 1998.
6. “*Multicast Routing with Heterogeneous Quality*“, M. Faloutsos, R. Pankaj, and K. C. Sevcik, The Fourth IEEE Workshop on the Architecture and Implementation of High Performance Communication Systems (HPCS'97), Sani Beach, Chalkidiki, Greece, June 23-25, 1997.
5. “*Bounds for the On-line Multicast Problem in Directed Graphs*“, M. Faloutsos, R. Pankaj and K. C. Sevcik, 4th International Colloquium on Structural Information and Communication Complexity (SIROCCO '97), Monte Verita, Ascona, Switzerland, July 24-26, 1997
4. “*Multicasting in Directed Graphs*“, M. Faloutsos, R. Pankaj and K. C. Sevcik, 18th Biennial Symposium on Communications, Kingston, Canada June 2-5, pp. 29-32, 1996.
3. “*BIVTECI: A Bibliography Visualization Tool*“, D. Modjeska, V. Tzerpos, P. Faloutsos and M. Faloutsos, in the CD-ROM of the Proceedings of CASCON '96, Toronto, Canada, 1996.

2. “*What Features Really Make Distributed Minimum Spanning Tree Algorithms Efficient?*”, M. Faloutsos and M. Molle, International Conference on Parallel and Distributed Systems 1996 (ICPADS’96), Tokyo, Japan.
1. “*Optimal distributed algorithm for minimum spanning trees revisited*”, M. Faloutsos and M. Molle, Fourteenth ACM Symposium on Principles of Distributed Computing (PODC ’95), Ottawa, Ontario, August 1995.

### **Book Chapters**

1. J. Eriksson, S.V. Krishnamurthy and M. Faloutsos, ”Routing Scalability in MANETs”, in *Theoretical and Algorithmic Aspects of Sensor, Ad Hoc and Peer-to-Peer Networks*, Jie Wu edited. CRC Press, 2004.

### **Short Papers**

1. “*Generating Small Realistic Topologies*“, J. Sun M. Faloutsos Network Group Communications, poster, 2000.
2. “*Fault-Tolerance and Robustness of the Internet topology*” , S.L. Tauro and M. Faloutsos, PRDC 2000, (abstract), Los Angeles, 2000
3. “*Multicast Routing Algorithms for Real-time Dynamic Applications on ATM Networks*” , M. Faloutsos and I. Katzela, 9th IEEE Workshop on Local and Metropolitan Area Networks (LANMAN’98), Banff, Alberta, Canada, May 1998.

### **Internet Drafts**

1. A. Banerjea, M. Faloutsos and R. Pankaj, “*Protocol Specification of QoSMIC: A Quality of Service sensitive Multicast Internet protoCol*”, IETF-IDMR Internet Draft: draft-banerjea-qosmic-00.txt.
2. Jun-Hong Cui, Mario Gerla, Khaled Boussetta, Michalis Faloutsos, Aiguo Fei, Jinkyu Kim, Dario Maggiorini, ”*Aggregated Multicast: A Scheme to Reduce Multicast States*” February 2002, Internet Draft.

### **Technical Reports and Other Publications**

1. M. Faloutsos, R. Pankaj and K. C. Sevcik, “*Video Multicasting with Hierarchical Encoding: The Fixed and the General Problem*”, University of Toronto, Technical Report CSRI-367, 1997
2. M. Faloutsos and M. Molle, “*Creating Optimal Distributed Algorithms for Minimum Spanning Trees*”, University of Toronto, Computer Science, Technical Report CSRI-327, 1995
3. M. Faloutsos, “*Corrections, Improvements, Simulations and optiMSTic Algorithms for the Distributed Minimum Spanning Tree Problem*”, University of Toronto, Computer Science, Technical Report CSRI-316, 1995

## Tutorials

- SIGMETRICS 2003, half day, “Internet Research meets Data Mining: Current Knowledge and New Tools” (jointly with C. Faloutsos), San Diego, June 2003.
- INFOCOM 2003, full day, “Data-mining the Internet” (jointly with C. Faloutsos), San Francisco, March, 2003
- SIGCOMM 2002, full day, “Data-mining the Internet: What we know, what we don’t, and how we can learn more” (jointly with C. Faloutsos), Pittsburgh, 2002

## Seminars and Talks

- Sprint Inc. “DART: Scalable Ad hoc Routing”, August, 2004.
- Georgia Institute of Technolog, “DART: The Case for Dynamic Routing in MANETs”, Nov., 2003.
- DIMACS, “The Internet is like a Jellfish”, Workshop on Measuring, Mapping and Modeling the Internet, May 2002 (invited talk).
- CMU, “The Hunt for Long-Range Dependence: The SELFIS Tool”, Dec, 2002.
- Parallel and Distributed Simulation (PADS), “Skip the Details and Give me the Intuition”, invited panel talk, May 2001.
- Sprint Labs, “The Internet Topology Evolution and Mushrooms”, June 2001.
- DIMACS, “Reducing the Multicast Routing State”, Workshop on Multicasting, May 2001 (invited talk).
- UCLA, “Fractals, Powerlaws, and Internet Topology”, Oct 1999, Invited Talk
- Stanford U., “Fractals, Powerlaws, and Internet Topology” Invited talk at the Stanford Networking Seminar, Feb 2000

## Professional Service

- TPC Co-Chair for IEEE Global Internet 2007
- Panel Chair in ICNP 2006
- Poster Chair in ICNP 2005
- Editor in ACM SIGCOMM Computer Communication Review, started 2005.
- TPC member ICNP 2006
- Poster Session Chair ICNP 2005
- SIGCOMM 2005: Organizing committee, poster chair
- TPC member for INFOCOM 2004, 2005
- TPC member for ICNP 2003, 2006
- Local arrangements chair ICNP 2001
- TPC member for SIGCOMM 2001
- TPC member for IEEE GLOBECOM and Global Internet 2001, Global Internet 2002, Global Internet and Next Generation Networks 2004.
- TPC member for IFIP Networking 2004.
- Reviewer for the IEEE Journal on Selected Areas in Communications, IEEE INFOCOM '97 and '98, IEEE GLOBECOM '98, the Journal of Theoretical Computer Science and various conferences.
- Session chair for INFOCOM 2000 and 2001, SIGCOMM 2001
- Panelist at DIMACS Workshop on Internet Measurements and Modeling, May 2001
- Panelist at DIMACS Workshop on Multicasting, May 2001
- Member of the Inter-Domain Multicast Routing group (IDMR) of the Internet Engineering Task Force (IETF).
- Member of the Engineering Chamber of Greece

## University Service

- Member of the Instructional Committee
- Faculty advisor of the ACM student club, Sep, 2002
- Judge at the High School Science Fair, Poster Competition, May, 2003
- Member of the Executive Committee of the Engineering College Sep 2001 - Sep 2003
- Speaker at Industry Day, 2001, and 2002
- Speaker at the Freshman Academic Workshop Panel, Jan 2002
- Speaker for the highschool outreach event, Feb 2001
- Speaker for Preview Day for highschool students, Oct 2001
- Committee member for Mohan De Souza's Master thesis, 2001

- Member of the graduate program team; reformed the graduate program

## Student Supervision

- 2001: supervised Master's report of Michael Samidi
- 2001: supervised Master's thesis of Leslie Tauro
- 2001: supervised Master's report of Qiao Sun
- 2000: supervised Master's thesis of Junhong Sun

## Teaching Experience

- 1999+: taught graduate courses: Advanced Networks, Performance Analysis and Simulations, Seminar in Computer Networks
- 1999+: taught undergraduate courses: Computer Graphics, Graph Algorithms
- 1994-1997: Teaching Assistant CS Dept. of U. of Toronto (5 different full and half year courses, including Computer Networks, UNIX and C, Data Management, Artificial Intelligence, Graphics etc)

## Work Experience

- 1999- now:** Faculty Position at the Dpt. of Computer Science at the University of California, Riverside.
- 1997 - 1998:** Research associate in a CITR project on Broadband ATM Networks employed by Prof. I. Katzela; real-time dynamic multicast routing algorithms for Wide Area ATM Networks; lead of a team of students in the design of an Object-Oriented simulator in C++/OPNET-based simulator.
- 1992 - 1993:** Researcher at INTRACOM company and N.T. University of Athens, Greece; designed tools for the automatic measurement of the Quality of Service in BISDN networks, in the project RACE of the European Community.

## Software Skills

- built a simulator in C++ for testing different multicast routing algorithms.
- extended the SMURPH simulation package, written on top of C++, by introducing new classes. These extensions provide higher level functionalities for simulations of distributed algorithms.
- participated in the creation of an object oriented database in C by developing an interface layer between the application and physical layer.