

Sonia Fahmy

List of Publications by Year in descending order

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Version: 2024-02-01

103
papers

5,719
citations

430874

18
h-index

265206

42
g-index

109
all docs

109
docs citations

109
times ranked

3574
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | HEED: a hybrid, energy-efficient, distributed clustering approach for ad hoc sensor networks. IEEE Transactions on Mobile Computing, 2004, 3, 366-379. | 5.8 | 3,871 |
| 2 | The ERICA switch algorithm for ABR traffic management in ATM networks. IEEE/ACM Transactions on Networking, 2000, 8, 87-98. | 3.8 | 163 |
| 3 | Topology-aware overlay networks for group communication. , 2002, , . | | 141 |
| 4 | Constraint-based routing in the internet: Basic principles and recent research. IEEE Communications Surveys and Tutorials, 2003, 5, 2-13. | 39.4 | 87 |
| 5 | Constructing Maximum-Lifetime Data-Gathering Forests in Sensor Networks. IEEE/ACM Transactions on Networking, 2010, 18, 1571-1584. | 3.8 | 84 |
| 6 | Analysis of vulnerabilities in Internet firewalls. Computers and Security, 2003, 22, 214-232. | 6.0 | 81 |
| 7 | A Survey of Application Layer Techniques for Adaptive Streaming of Multimedia. Real Time Imaging, 2001, 7, 221-235. | 1.6 | 65 |
| 8 | Analyzing video services in Web 2.0. , 2008, , . | | 57 |
| 9 | Characterizing Overlay Multicast Networks and Their Costs. IEEE/ACM Transactions on Networking, 2007, 15, 373-386. | 3.8 | 51 |
| 10 | Accurately Measuring Denial of Service in Simulation and Testbed Experiments. IEEE Transactions on Dependable and Secure Computing, 2009, 6, 81-95. | 5.4 | 51 |
| 11 | NFV-VITAL: A framework for characterizing the performance of virtual network functions. , 2015, , . | | 48 |
| 12 | Improving the performance of TCP over the ATM-UBR service. Computer Communications, 1998, 21, 898-911. | 5.1 | 42 |
| 13 | Issues and challenges in securing VoIP. Computers and Security, 2009, 28, 743-753. | 6.0 | 41 |
| 14 | An Architecture for Robust Sensor Network Communications. International Journal of Distributed Sensor Networks, 2005, 1, 305-327. | 2.2 | 38 |
| 15 | Towards user-centric metrics for denial-of-service measurement. , 2007, , . | | 36 |
| 16 | A Framework for Understanding Vulnerabilities in Firewalls Using a Dataflow Model of Firewall Internals. Computers and Security, 2001, 20, 263-270. | 6.0 | 31 |
| 17 | Experimental comparison of peer-to-peer streaming overlays: An application perspective. , 2008, , . | | 31 |
| 18 | Path-aware overlay multicast. Computer Networks, 2005, 47, 23-45. | 5.1 | 29 |

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|----|---|-----|-----------|
| 19 | Measuring denial Of service. , 2006, , . | | 28 |
| 20 | Optimal Sleep/Wake Scheduling for Time-Synchronized Sensor Networks With QoS Guarantees. IEEE/ACM Transactions on Networking, 2009, 17, 1508-1521. | 3.8 | 28 |
| 21 | A practical approach for provenance transmission in wireless sensor networks. Ad Hoc Networks, 2014, 16, 28-45. | 5.5 | 28 |
| 22 | Optimistic load balancing in a distributed virtual environment. , 2006, , . | | 27 |
| 23 | On detecting service violations and bandwidth theft in QoS network domains. Computer Communications, 2003, 26, 861-871. | 5.1 | 25 |
| 24 | Benchmarks for DDOS Defense Evaluation. , 2006, , . | | 24 |
| 25 | How to Test DoS Defenses. , 2009, , . | | 24 |
| 26 | FlowMate: scalable on-line flow clustering. IEEE/ACM Transactions on Networking, 2005, 13, 288-301. | 3.8 | 23 |
| 27 | RoCC. , 2020, , . | | 22 |
| 28 | <title>Comparison of load-based and queue-based active queue management algorithms</title>. , 2002, , . | | 21 |
| 29 | Optimal Sleep/Wake Scheduling for Time-Synchronized Sensor Networks with QoS Guarantees. IEEE International Workshop on Quality of Service, 2006, , . | 0.0 | 21 |
| 30 | Fidelity of network simulation and emulation. ACM Transactions on Modeling and Computer Simulation, 2008, 19, 1-29. | 0.8 | 21 |
| 31 | Mind Your Credit. , 2018, , . | | 20 |
| 32 | An empirical case for container-driven fine-grained VNF resource flexing. , 2016, , . | | 19 |
| 33 | BEADS: Automated Attack Discovery in OpenFlow-Based SDN Systems. Lecture Notes in Computer Science, 2017, , 311-333. | 1.3 | 19 |
| 34 | General weighted fairness and its support in explicit rate switch algorithms. Computer Communications, 2000, 23, 149-161. | 5.1 | 18 |
| 35 | On TCP throughput and window size in a multihop wireless network testbed. , 2007, , . | | 16 |
| 36 | SYREN: Synergistic Link Correlation-Aware and Network Coding-Based Dissemination in Wireless Sensor Networks. , 2013, , . | | 15 |

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| 37 | Contain-ed. Computer Communication Review, 2017, 47, 54-60. | 1.8 | 14 |
| 38 | Design considerations for the virtual source/virtual destination (VS/VD) feature in the ABR service of ATM networks. Computer Networks, 1998, 30, 1811-1824. | 1.0 | 13 |
| 39 | Latency-sensitive power control for wireless ad-hoc networks. , 2005, , . | | 13 |
| 40 | Competitive Online Convex Optimization with Switching Costs and Ramp Constraints. , 2018, , . | | 13 |
| 41 | Monitoring and controlling QoS network domains. International Journal of Network Management, 2005, 15, 11-29. | 2.2 | 12 |
| 42 | Sleep/wake scheduling for multi-hop sensor networks: Non-convexity and approximation algorithm. Ad Hoc Networks, 2010, 8, 681-693. | 5.5 | 12 |
| 43 | <title>Fairness for ABR multipoint-to-point connections</title>. , 1998, , . | | 11 |
| 44 | Buffer management and rate guarantees for TCP over satellite-ATM networks. International Journal of Satellite Communications and Networking, 2001, 19, 111-139. | 0.6 | 11 |
| 45 | DDoS Benchmarks and Experimenter's Workbench for the DETER Testbed. , 2007, , . | | 11 |
| 46 | Pegasus: Precision hunting for icebergs and anomalies in network flows. , 2013, , . | | 11 |
| 47 | Optimal QoS-aware Sleep/Wake Scheduling for Time-Synchronized Sensor Networks. , 2006, , . | | 10 |
| 48 | Dynamic queue control functions for ATM ABR switch schemes: design and analysis. Computer Networks, 1999, 31, 1935-1949. | 5.1 | 9 |
| 49 | Resource management in an active measurement service. , 2008, , . | | 9 |
| 50 | Forwarding devices. ACM Transactions on Modeling and Computer Simulation, 2011, 21, 1-23. | 0.8 | 9 |
| 51 | Link correlation and network coding in broadcast protocols for wireless sensor networks. , 2012, , . | | 9 |
| 52 | Synergy: An overlay internetworking architecture and implementation. Journal of Communications and Networks, 2010, 12, 181-190. | 2.6 | 8 |
| 53 | Detecting unsafe BGP policies in a flexible world. , 2012, , . | | 8 |
| 54 | Contain-ed. , 2017, , . | | 8 |

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| 55 | Design and evaluation of the S<sup>3</sup> monitor network measurement service on GENI. , 2012, , . | | 7 |
| 56 | Competitive Online Convex Optimization With Switching Costs and Ramp Constraints. IEEE/ACM Transactions on Networking, 2021, 29, 876-889. | 3.8 | 7 |
| 57 | The Cost of Stateless Network Functions in 5G. , 2021, , . | | 7 |
| 58 | Design and evaluation of feedback consolidation for ABR point-to-multipoint connections in ATM networks. Computer Communications, 1999, 22, 1085-1103. | 5.1 | 6 |
| 59 | Quality of service for Internet traffic over ATM service categories. Computer Communications, 1999, 22, 1307-1320. | 5.1 | 6 |
| 60 | A Black-box Router Profiler. , 2007, , . | | 6 |
| 61 | An energy-efficient approach for provenance transmission in wireless sensor networks. , 2012, , . | | 6 |
| 62 | Content retrieval using cloud-based DNS. , 2012, , . | | 6 |
| 63 | LiTMaS: Live road traffic maps for smartphones. , 2015, , . | | 6 |
| 64 | AI-Driven Provisioning in the 5G Core. IEEE Internet Computing, 2021, 25, 18-25. | 3.3 | 6 |
| 65 | Energy-efficient provenance transmission in large-scale wireless sensor networks. , 2011, , . | | 5 |
| 66 | Flow-based partitioning of network testbed experiments. Computer Networks, 2014, 58, 141-157. | 5.1 | 5 |
| 67 | Use-it-or-lose-it policies for the available bit rate (ABR) service in ATM networks. Computer Networks, 1998, 30, 2293-2308. | 1.0 | 4 |
| 68 | A Secure Programming Paradigm for Network Virtualization. , 2006, , . | | 4 |
| 69 | On the Utility of Inference Mechanisms. , 2009, , . | | 4 |
| 70 | Predicting Prefix Availability in the Internet. , 2010, , . | | 4 |
| 71 | On the Cost of Network Inference Mechanisms. IEEE Transactions on Parallel and Distributed Systems, 2011, 22, 662-672. | 5.6 | 4 |
| 72 | Mitigating interference in a network measurement service. , 2011, , . | | 4 |

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|----|---|-----|-----------|
| 73 | Partitioning Network Testbed Experiments. , 2011, , . | | 4 |
| 74 | ERUPT: Energy-efficient trustworthy provenance trees for wireless sensor networks. , 2014, , . | | 4 |
| 75 | Data-driven resource flexing for network functions visualization. , 2018, , . | | 4 |
| 76 | Downscaling Network Scenarios with Denial of Service (DoS) Attacks. , 2008, , . | | 3 |
| 77 | BGP molecules: Understanding and predicting prefix failures. , 2011, , . | | 3 |
| 78 | Reducing the complexity of BGP stability analysis with hybrid combinatorial-algebraic models. , 2012, , . | | 3 |
| 79 | Nascent: Tackling Caller-ID Spoofing in 4G Networks via Efficient Network-Assisted Validation. , 2019, , . | | 3 |
| 80 | Adaptive Deterrence of DNS Cache Poisoning. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2018, , 171-191. | 0.3 | 3 |
| 81 | <title>Simulation study of World Wide Web traffic over the ATM ABR service</title>. , 1998, , . | | 2 |
| 82 | Fair flow control for ATM-ABR multipoint connections. Computer Communications, 2002, 25, 741-755. | 5.1 | 2 |
| 83 | When is service really denied?. , 2007, , . | | 2 |
| 84 | Distributed Partial Inference under Churn. , 2010, , . | | 2 |
| 85 | Prediction models for long-term Internet prefix availability. Computer Networks, 2011, 55, 873-889. | 5.1 | 2 |
| 86 | EasyScale: Easy mapping for large-scale network security experiments. , 2013, , . | | 2 |
| 87 | Feluda: Provenance-Enabled Diagnosis of Elusive Network Failures in Wireless Sensor Networks. , 2016, , . | | 2 |
| 88 | Omnify: Investigating the Visibility and Effectiveness of Copyright Monitors. Lecture Notes in Computer Science, 2011, , 122-132. | 1.3 | 2 |
| 89 | Design and Simulation of Asynchronous Transfer Mode-Available Bit Rate End System Congestion Control. Simulation, 2002, 78, 150-162. | 1.8 | 1 |
| 90 | SYNC-NET: distributed time synchronization in clustered sensor networks. Wireless Communications and Mobile Computing, 2008, 8, 797-809. | 1.2 | 1 |

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| 91 | Detecting the unintended in BGP policies. , 2012, , . | | 1 |
| 92 | Location matters: Eliciting responses to direct probes. , 2013, , . | | 1 |
| 93 | Infinity Learning: Learning Markov Chains from Aggregate Steady-State Observations. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 3922-3929. | 4.9 | 1 |
| 94 | When is service really denied?. Performance Evaluation Review, 2007, 35, 357-358. | 0.6 | 0 |
| 95 | Wired/wireless internet communications. Computer Communications, 2007, 30, 1441-1442. | 5.1 | 0 |
| 96 | On the Impact of Filters on Analyzing Prefix Reachability in the Internet. , 2009, , . | | 0 |
| 97 | Message from the technical program committee chairs. , 2010, , . | | 0 |
| 98 | An Experimental Framework for BGP Security Evaluation. IT - Information Technology, 2013, 55, 147-154. | 0.9 | 0 |
| 99 | TPC chair's welcome. , 2015, , . | | 0 |
| 100 | Towards High Fidelity Network Emulation. , 2017, , . | | 0 |
| 101 | CoRE: Non-Linear 3D Sampling for Robust 360° Video Streaming. , 2019, , . | | 0 |
| 102 | Invenio. , 2021, , . | | 0 |
| 103 | Procedure-driven deployment support for the microservice era. , 2021, , . | | 0 |