Raffaele Bolla

List of Publications by Year
in descending order

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101	1,829	759233 12	345221 36
papers	citations	h-index	g-index

104	104	104	1296
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Energy Efficiency in the Future Internet: A Survey of Existing Approaches and Trends in Energy-Aware Fixed Network Infrastructures. IEEE Communications Surveys and Tutorials, 2011, 13, 223-244.	39.4	542
2	The potential impact of green technologies in next-generation wireline networks: Is there room for energy saving optimization?. , 2011, 49, 80-86.		143
3	Efficient application identification and the temporal and spatial stability of classification schema. Computer Networks, 2009, 53, 790-809.	5.1	135
4	Cutting the energy bills of Internet Service Providers and telecoms through power management: An impact analysis. Computer Networks, 2012, 56, 2320-2342.	5.1	125
5	Enabling backbone networks to sleep. IEEE Network, 2011, 25, 26-31.	6.9	70
6	Pc-based software routers. , 2008, , .		51
7	The Green Abstraction Layer: A Standard Power-Management Interface for Next-Generation Network Devices. IEEE Internet Computing, 2013, 17, 82-86.	3.3	46
8	Green Networking With Packet Processing Engines: Modeling and Optimization. IEEE/ACM Transactions on Networking, 2014, 22, 110-123.	3.8	43
9	Linux Software Router: Data Plane Optimization and Performance Evaluation. Journal of Networks, 2007, 2, .	0.4	43
10	Energy-aware performance optimization for next-generation green network equipment. , 2009, , .		38
11	DROPv2: energy efficiency through network function virtualization. IEEE Network, 2014, 28, 26-32.	6.9	35
12	Fine-Grained Energy-Efficient Consolidation in SDN Networks and Devices. IEEE Transactions on Network and Service Management, 2015, 12, 132-145.	4.9	32
13	GTVS: Boosting the Collection of Application Traffic Ground Truth. Lecture Notes in Computer Science, 2009, , 54-63.	1.3	27
14	Green network technologies and the art of trading-off. , 2011, , .		25
15	A Closed-Form Model for the IEEE 802.3az Network and Power Performance. IEEE Journal on Selected Areas in Communications, 2014, 32, 16-27.	14.0	21
16	Per flow packet sampling for high-speed network monitoring. , 2009, , .		19
17	A Comprehensive Tutorial for Mobility Management in Data Networks. IEEE Communications Surveys and Tutorials, 2014, 16, 812-833.	39.4	17
18	Performance and power consumption modeling for green COTS Software Router. , 2009, , .		14

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19	A northbound interface for power management in next generation network devices. , 2014, 52, 149-157.		13
20	Hierarchical dynamic control of multiple traffic classes in ATM networks. European Transactions on Telecommunications, 1994, 5, 747-755.	1.2	12
21	The hidden cost of network low power idle. , 2013, , .		12
22	A proposal of new price-based Call Admission Control rules for Guaranteed Performance services multiplexed with Best Effort traffic. Computer Communications, 2003, 26, 1470-1483.	5.1	11
23	An effective forwarding architecture for SMP Linux routers. , 2008, , .		11
24	Modeling and Identification of Nonlinear Dynamics for Freeway Traffic by Using Information From a Mobile Cellular Network. IEEE Transactions on Control Systems Technology, 2009, 17, 952-959.	5.2	11
25	Exporting data-plane energy-aware capabilities from network devices toward the control plane: The Green Abstraction Layer. , 2012, , .		11
26	Assessing the Potential for Saving Energy by Impersonating Idle Networked Devices. IEEE Journal on Selected Areas in Communications, 2016, 34, 1676-1689.	14.0	11
27	Design and Implementation of Cooperative Network Connectivity Proxy Using Universal Plug and Play. Lecture Notes in Computer Science, 2013, , 323-335.	1.3	11
28	A parametric optimization approach to admission control and bandwidth assignment in hybrid TDM networks. International Journal of Communication Systems, 1993, 6, 15-27.	0.2	10
29	The IP Lookup Mechanism in a Linux Software Router: Performance Evaluation and Optimizations. , 2007, , .		10
30	Theoretical and technological limitations of power scaling in network devices. , 2010, , .		10
31	Evaluating the energy-awareness of future Internet devices. , 2011, , .		10
32	Applying traffic merging to datacenter networks. , 2012, , .		10
33	Network Connectivity Proxy: An optimal strategy for reducing energy waste in network edge devices. , 2013, , .		10
34	The energy consumption of TCP. , 2013, , .		9
35	Improving Smartphones Battery Life by Reducing Energy Waste of Background Applications. , 2014, , .		9
36	Characterizing the network behavior of P2P traffic. , 2008, , .		8

#	Article	IF	Citations
37	DROP: An Open-Source Project towards Distributed SW Router Architectures. , 2009, , .		8
38	Smart proxying: An optimal strategy for improving battery life of mobile devices. , 2013, , .		8
39	Saving energy by delegating network activity to home gateways. IEEE Transactions on Consumer Electronics, 2015, 61, 445-453.	3.6	8
40	Bandwidth allocation in a multiservice satellite network based on long-term weather forecast scenarios. Computer Communications, 2002, 25, 1037-1046.	5.1	7
41	Green extension of OpenFlow. , 2014, , .		7
42	OpenFlow in the Small: A Flexible and Efficient Network Acceleration Framework for Multi-Core Systems. IEEE Transactions on Network and Service Management, 2014, 11, 390-404.	4.9	7
43	Largeâ€scale validation and benchmarking of a network of powerâ€conservative systems using ETSI's Green Abstraction Layer. Transactions on Emerging Telecommunications Technologies, 2016, 27, 451-468.	3.9	7
44	Call admission control and bandwidth allocation in a multiservice DQDB network. Computer Communications, 1995, 18, 537-544.	5.1	6
45	Energy-Aware Resource Adaptation for Next-Generation Network Equipment. , 2009, , .		6
46	Energy-aware load balancing for parallel packet processing engines. , 2011, , .		6
47	Design of Home Energy Gateway boosting the development of Smart Grid applications at Home. , 2013, , .		6
48	An open-source platform for distributed Linux Software Routers. Computer Communications, 2013, 36, 396-410.	5.1	6
49	Network Connectivity Proxy: Architecture, Implementation, and Performance Analysis. IEEE Systems Journal, 2017, 11, 588-599.	4.6	6
50	The tracking and prediction of high intensity rainstorms. International Journal of Remote Sensing, 1996, 14, 151-183.	1.0	5
51	Integration of pricing models between best-effort and guaranteed performance services in telecommunication networks. Control Engineering Practice, 2003, 11, 1209-1226.	5.5	5
52	A context-aware architecture for QoS and transcoding management of multimedia streams in smart homes. , 2008, , .		5
53	Energy-aware equipment for next-generation networks. , 2009, , .		5
54	An analytical model for designing and controlling new-generation green devices. , 2010, , .		5

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55	Introducing standby capabilities into next-generation network devices. , 2010, , .		5
56	Dynamic voltage and frequency scaling in parallel network processors. , 2012, , .		5
57	Setting the Course for a Green Internet. Science, 2013, 342, 1316-1316.	12.6	5
58	Corrections to: "Green Networking With Packet Processing Engines: Modeling and Optimization". IEEE/ACM Transactions on Networking, 2024, , 1-1.	3.8	5
59	Simple schemes for traffic integration at call set-up level in ATM networks. Computer Communications, 1996, 19, 645-652.	5.1	4
60	A new model for network traffic forecast based on user's mobility in cellular networks with highway stretches. International Journal of Communication Systems, 2004, 17, 911-934.	2.5	4
61	Capacity planning in IP Virtual Private Networks under mixed traffic. Computer Networks, 2006, 50, 1069-1085.	5.1	4
62	On the Double-Faced Nature of P2P Traffic. , 2008, , .		4
63	Environmental benefits of a Universal Mobile Charger and energy-aware survey on current products. , 2011, , .		4
64	An Experimental Evaluation of the TCP Energy Consumption. IEEE Journal on Selected Areas in Communications, 2015, 33, 2761-2773.	14.0	4
65	Improving Efficiency of Edge Computing Infrastructures through Orchestration Models â€. Computers, 2018, 7, 36.	3.3	4
66	Hybrid optimization for QoS control in IP Virtual Private Networks. Computer Networks, 2008, 52, 563-580.	5.1	3
67	Handling mobility over the network. , 2009, , .		3
68	Designing optimal energy profiles for network hardware. , 2012, , .		3
69	Enabling the TCP segmentation offload to save energy. , 2013, , .		3
70	Seamless and transparent migration for TCP sessions. , 2014, , .		3
71	Energy adaptation in multi-core software routers. Computer Networks, 2014, 65, 111-128.	5.1	3
72	SDN-Enabled Energy-Efficient Network Management. , 0, , 323-338.		3

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73	Standard Methodologies for Energy Efficiency Assessment. , 2012, , 83-102.		3
74	User-Centric Mobility for Multimedia Communication: Experience and Evaluation from a Live Demo. Journal of Networks, 2012, 7, .	0.4	3
75	Network Layer Performance in Peer-to-Peer File Sharing Systems. , 2008, , .		2
76	A steady-state model for energy-efficient packet processing engines under mixed traffic. , 2012, , .		2
77	Energy efficiency in optical networks. , 2012, , .		2
78	OpenFlow in the small. , 2013, , .		2
79	Resource Allocation Strategies for Multimedia Traffic in an ATM-based PON. , 1999, , 305-319.		2
80	Two Simulation Tools for Testing ATM Resource Allocation Strategies. Simulation, 1997, 68, 9-22.	1.8	1
81	Evaluation and comparison of cell loss and delay models for ATM multiplexers. Telecommunication Systems, 2001, 16, 41-54.	2.5	1
82	Analyzing the impact of edonkey traffic on internet access links. , 2007, , .		1
83	On the effectiveness of IEEE 802.11e implementations in real hardware. , 2009, , .		1
84	Beyond single-box SW router architectures. , 2009, , .		1
85	The TREND experimental activities on “green” communication networks. , 2013, , .		1
86	Optimizing the power-delay product in energy-aware packet forwarding engines. , 2013, , .		1
87	Trading off power consumption and delay in packet forwarding engines with adjustable service rate. , 2014, , .		1
88	User-centric mobility management for multimedia content access. Multimedia Tools and Applications, 2014, 70, 267-295.	3.9	1
89	Burst2Save: Reducing network-induced energy consumption in the home environment. Computer Communications, 2014, 52, 37-46.	5.1	1
90	Guest Editorial Special Issue on Green Communications, Computing, and Systems. IEEE Systems Journal, 2017, 11, 546-550.	4.6	1

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91	Energy-Efficient Management and Control in Video Distribution Networks: â€˜Legacyâ€™ Hardware-Based Solutions and Perspectives of Virtualized Networking Environments. Computer Communications and Networks, 2018, , 25-57.	0.8	1
92	An Integrated Multiple Access and Hierarchical Coding Scheme for Video Communication on Wireless Networks. European Transactions on Telecommunications, 2000, 11, 373-382.	1.2	0
93	WLC25-1: Dynamic Bandwidth Allocation for Wireless Networks in High-Mobility Environments. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	0
94	A scalable approach for steady state traffic modeling in high-speed backbone networks. , 2009, , .		0
95	Exploiting DHT functionalities for pervasive network mobility. , 2010, , .		0
96	Power scaling in network devices. , 2010, , .		0
97	Exposing energy-aware capabilities in next generation network devices. , 2013, , .		0
98	Message from the co-chairs. , 2013, , .		0
99	A client-side architecture to support energy efficiency for upcoming networks. , 2014, , .		0
100	The expected impact of smart devices visualization. , 2016, , .		0
101	Modeling Performance and Energy Efficiency of Virtualized Flexible Networks. Advances in Intelligent Systems and Computing, 2019, , 257-273.	0.6	0