Franco Davoli

List of Publications by Year
in descending order

176 papers	2,223 citations	516710 16 h-index	315739 38 g-index
187 all docs	187 docs citations	187 times ranked	1650 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	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
4	Satellite Networking Integration in the 5G Ecosystem: Research Trends and Open Challenges. IEEE Network, 2018, 32, 9-15.	6.9	95
5	A survey of architectures and scenarios in satellite‐based wireless sensor networks: system design aspects. International Journal of Satellite Communications and Networking, 2013, 31, 1-38.	1.8	80
6	Small satellites and CubeSats: Survey of structures, architectures, and protocols. International Journal of Satellite Communications and Networking, 2019, 37, 343-359.	1.8	51
7	Decentralized optimal control of Markov chains with a common past information set. IEEE Transactions on Automatic Control, 1987, 32, 1028-1031.	5.7	50
8	Static and dynamic resource allocation in a multiservice satellite network with fading. International Journal of Satellite Communications and Networking, 2003, 21, 469-487.	1.8	50
9	The Green Abstraction Layer: A Standard Power-Management Interface for Next-Generation Network Devices. IEEE Internet Computing, 2013, 17, 82-86.	3.3	46
10	Green Networking With Packet Processing Engines: Modeling and Optimization. IEEE/ACM Transactions on Networking, 2014, 22, 110-123.	3.8	43
11	Bandwidth allocation and admission control in ATM networks with service separation. , 1997, 35, 130-137.		39
12	Energy-aware performance optimization for next-generation green network equipment. , 2009, , .		38
13	Fine-Grained Energy-Efficient Consolidation in SDN Networks and Devices. IEEE Transactions on Network and Service Management, 2015, 12, 132-145.	4.9	32
14	LABNET: Towards Remote Laboratories With Unified Access. IEEE Transactions on Instrumentation and Measurement, 2006, 55, 1551-1558.	4.7	25
15	Green network technologies and the art of trading-off. , 2011, , .		25
16	A Multi-Clustering Approach to Scale Distributed Tenant Networks for Mobile Edge Computing. IEEE Journal on Selected Areas in Communications, 2019, 37, 499-514.	14.0	25
17	An SDN/NFV Platform for Personal Cloud Services. IEEE Transactions on Network and Service Management, 2017, 14, 1143-1156.	4.9	22
18	Networking Challenges for Non-Terrestrial Networks Exploitation in 5G. , 2019, , .		22

#	ARTICLE	IF	CITATIONS
19	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
20	Radio resource management across multiple protocol layers in satellite networks: a tutorial overview. International Journal of Satellite Communications and Networking, 2005, 23, 265-305.	1.8	20
21	Independent Stations Algorithm for the Maximization of One-Step Throughput in a Multiaccess Channel. IRE Transactions on Communications Systems, 1987, 35, 795-800.	0.6	19
22	Long-Lived TCP Connections Via Satellite: Cross-Layer Bandwidth Allocation, Pricing, and Adaptive Control. IEEE/ACM Transactions on Networking, 2006, 14, 1019-1030.	3.8	18
23	Partially nested information structures with a common past. IEEE Transactions on Automatic Control, 1984, 29, 846-850.	5.7	16
24	Control of multirate synchronous streams in hybrid TDM access networks. IEEE/ACM Transactions on Networking, 1997, 5, 291-304.	3.8	16
25	Neural Approximation of Open-Loop Feedback Rate Control in Satellite Networks. IEEE Transactions on Neural Networks, 2005, 16, 1195-1211.	4.2	15
26	Peer-to-peer middleware for bandwidth allocation in sensor networks. IEEE Communications Letters, 2005, 9, 285-287.	4.1	15
27	Performance Constrained Power Consumption Optimization in Distributed Network Equipment. , 2009, , .		15
28	On implicit modelling theory: Basic concepts and application to adaptive control. Automatica, 1987, 23, 189-201.	5.0	14
29	A general framework for networked multimedia applications enabling access to laboratory equipment: the LABNET project experience. , 0, , .		14
30	Networking with multi-service GEO satellites: cross-layer approaches for bandwidth allocation. International Journal of Satellite Communications and Networking, 2006, 24, 387-403.	1.8	14
31	e-Infrastructure for Remote Instrumentation. Computer Standards and Interfaces, 2012, 34, 476-484.	5.4	13
32	A northbound interface for power management in next generation network devices. , 2014, 52, 149-157.		13
33	Feeder-link outage prediction algorithms for SDN-based high-throughput satellite systems. , 2016, , .		13
34	Adaptive bandwidth allocation by hierarchical control of multiple ATM traffic classes. , 1992, , .		12
35	Hierarchical dynamic control of multiple traffic classes in ATM networks. European Transactions on Telecommunications, 1994, 5, 747-755.	1.2	12
36	Adaptive cross-layer bandwidth allocation in a rain-faded satellite environment. International Journal of Communication Systems, 2006, 19, 509-530.	2.5	12

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37	Managing 5G network slicing and edge computing with the MATILDA telecom layer platform. Computer Networks, 2021, 194, 108090.	5.1	12
38	Dynamic hierarchical control of resource allocation in an integrated services broadband network. Computer Networks, 1993, 25, 1079-1087.	1.0	11
39	Title is missing!. Mobile Networks and Applications, 1997, 2, 45-53.	3.3	11
40	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
41	Exporting data-plane energy-aware capabilities from network devices toward the control plane: The Green Abstraction Layer. , 2012, , .		11
42	Non-linear coding and decoding strategies exploiting spatial correlation in wireless sensor networks. IET Communications, 2012, 6, 2198.	2.2	11
43	A Game for Energy-Aware Allocation of Virtualized Network Functions. Journal of Electrical and Computer Engineering, 2016, 2016, 1-10.	0.9	11
44	The dark side of network functions virtualization: A perspective on the technological sustainability. , 2017, , .		11
45	Mobile Edge Vertical Computing over 5G Network Sliced Infrastructures: An Insight into Integration Approaches. IEEE Communications Magazine, 2019, 57, 78-84.	6.1	11
46	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
47	A two-level stochastic approximation for admission control and bandwidth allocation. IEEE Journal on Selected Areas in Communications, 2000, 18, 222-233.	14.0	10
48	Theoretical and technological limitations of power scaling in network devices. , 2010, , .		10
49	An Experimental Study on the Quality-of-Service of Video Encoded Sequences Over an Emulated Rain-Faded Satellite Channel. IEEE Journal on Selected Areas in Communications, 2004, 22, 229-237.	14.0	9
50	On elastic traffic via contention resolution diversity slotted aloha satellite access. International Journal of Communication Systems, 2016, 29, 522-534.	2.5	9
51	A scalable SDN slicing scheme for multi-domain fog/cloud services. , 2017, , .		9
52	A MEC Approach to Improve QoE of Video Delivery Service in Urban Spaces. , 2018, , .		9
53	Remote Laboratory Experiments in a Virtual Immersive Learning Environment. Advances in Multimedia, 2008, 2008, 1-11.	0.4	8
54	Surveying Multidisciplinary Aspects in Real-Time Distributed Coding for Wireless Sensor Networks. Sensors, 2015, 15, 2737-2762.	3.8	8

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55	A Model-Based Approach Towards Real-Time Analytics in NFV Infrastructures. IEEE Transactions on Green Communications and Networking, 2020, 4, 529-541.	5.5	8
56	Bandwidth allocation in a multiservice satellite network based on long-term weather forecast scenarios. Computer Communications, 2002, 25, 1037-1046.	5.1	7
57	The DORII project test bed: Distributed eScience applications at work. , 2009, , .		7
58	Green extension of OpenFlow. , 2014, , .		7
59	Large‐scale validation and benchmarking of a network of power‐conservative systems using ETSI's Green Abstraction Layer. Transactions on Emerging Telecommunications Technologies, 2016, 27, 451-468.	3.9	7
60	Personal Services Placement and Low-Latency Migration in Edge Computing Environments. , 2018, , .		7
61	Call admission control and bandwidth allocation in a multiservice DQDB network. Computer Communications, 1995, 18, 537-544.	5.1	6
62	An adaptive neural network admission controller for dynamic bandwidth allocation. IEEE Transactions on Systems, Man, and Cybernetics, 1998, 28, 592-601.	5.0	6
63	Resource allocation in satellite networks: certainty equivalent approaches versus sensitivity estimation algorithms. International Journal of Communication Systems, 2005, 18, 3-36.	2.5	6
64	Energy-Aware Resource Adaptation for Next-Generation Network Equipment. , 2009, , .		6
65	Load dynamics of a multiplayer online battle arena and simulative assessment of edge server placements. , 2016, , .		6
66	Design, Development and Orchestration of 5G-Ready Applications over Sliced Programmable Infrastructure. , 2017, , .		6
67	Load Estimation and Control in Best-Effort Network Domains. Journal of Network and Systems Management, 2000, 8, 527-541.	4.9	5
68	QoS-aware routing in ATM and IP-over-ATM. Computer Communications, 2001, 24, 811-821.	5.1	5
69	Integration of pricing models between best-effort and guaranteed performance services in telecommunication networks. Control Engineering Practice, 2003, 11, 1209-1226.	5.5	5
70	Construction of Simulation for Probabilistic Inference in Uncertain and Dynamic Networks Based on Bayesian Networks. , 2006, , .		5
71	Prediction Strategies for Proactive Management in Dynamic Distributed Systems. , 0, , .		5
72	Traffic volume analysis of a nation-wide eMule community. Computer Communications, 2008, 31, 2485-2495.	5.1	5

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73	Optimization of an eMule-like modifier strategy. Computer Communications, 2008, 31, 3876-3882.	5.1	5
74	An analytical model for designing and controlling new-generation green devices. , 2010, , .		5
75	Setting the Course for a Green Internet. Science, 2013, 342, 1316-1316.	12.6	5
76	Adaptive Frequency Control of Packet Processing Engines in Telecommunication Networks. IEEE Communications Letters, 2014, 18, 1135-1138.	4.1	5
77	Neural Approximations of Analog Joint Source-Channel Coding. IEEE Signal Processing Letters, 2015, 22, 421-425.	3.6	5
78	Joint Power Scaling of Processing Resources and Consolidation of Virtual Network Functions. , 2016, , .		5
79	Corrections to: "Green Networking With Packet Processing Engines: Modeling and Optimization". IEEE/ACM Transactions on Networking, 2024, , 1-1.	3.8	5
80	Towards Prediction of Power Consumption of Virtual Machines for Varying Loads. , 2018, , .		5
81	Move with Me: Scalably Keeping Virtual Objects Close to Users on the Move. , 2018, , .		5
82	Validation of IaaS-based Technologies for 5G-Ready Applications Deployment. , 2020, , .		5
83	Design and analysis of an MAC-layer protocol for a car-to-infrastructure packet radio network. IEEE Transactions on Vehicular Technology, 1992, 41, 152-158.	6.3	4
84	A network management and control scenario for multimedia applications. Annales Des Telecommunications/Annals of Telecommunications, 1994, 49, 65-74.	2.5	4
85	Simple schemes for traffic integration at call set-up level in ATM networks. Computer Communications, 1996, 19, 645-652.	5.1	4
86	Filtering and prediction techniques in radar tracking of vehicles for assisted driving. , 0, , .		4
87	A Dynamic Cross Layer Control Strategy for Resource Partitioning in a Rain Faded Satellite Channel with Long-Lived TCP Connections. , 2004, , 83-96.		4
88	Capacity planning in IP Virtual Private Networks under mixed traffic. Computer Networks, 2006, 50, 1069-1085.	5.1	4
89	Using P2P overlays to provide QoS in service-oriented wireless networks. IEEE Wireless Communications, 2009, 16, 32-38.	9.0	4
90	A Decision Theoretic Approach to Gaussian Sensor Networks. , 2009, , .		4

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91	Bandwidth Adaptation for Vertical QoS Mapping in Protocol Stacks for Wireless Links. , 2009, , .		4
92	Performance evaluation of measurement data acquisition mechanisms in a distributed computing environment integrating remote laboratory instrumentation. Future Generation Computer Systems, 2013, 29, 460-471.	7.5	4
93	Decentralized Scalable Dynamic Load Balancing Among Virtual Network Slice Instantiations. , 2018, , .		4
94	Debunking the â€œGreenâ€•NFV Myth: An Assessment of the Virtualization Sustainability in Radio Access Networks. , 2020, , .		4
95	From Cloud-Native to 5G-Ready Vertical Applications: An Industry 4.0 Use Case. , 2021, , .		4
96	Adaptive Bandwidth Partitioning Among TCP Elephant Connections over Multiple Rain-Faded Satellite Channels. Lecture Notes in Computer Science, 2005, , 559-573.	1.3	4
97	Multi-Site Resource Allocation in a QoS-Aware 5G Infrastructure. IEEE Transactions on Network and Service Management, 2022, 19, 2034-2047.	4.9	4
98	P2P in satellite networks: a tutorial on related problems and some possible solutions. , 0, , .		3
99	A packet snif.ng and synchronization technique to boost P2P satellite networks. , 0, , .		3
100	Hybrid optimization for QoS control in IP Virtual Private Networks. Computer Networks, 2008, 52, 563-580.	5.1	3
101	Sensor Network-Based Localization for Continuous Tracking Applications: Implementation and Performance Evaluation. Advances in Multimedia, 2008, 2008, 1-11.	0.4	3
102	Video Streaming Transfer in a Smart Satellite Mobile Environment. International Journal of Digital Multimedia Broadcasting, 2009, 2009, 1-12.	0.6	3
103	Designing optimal energy profiles for network hardware. , 2012, , .		3
104	Model-based analytics for profiling workloads in virtual network functions. , 2017, , .		3
105	Evaluating the Impact of Micro-Data Center (Î¼DC) Placement in an Urban Environment. , 2018, , .		3
106	Enabling Edge Computing Deployment in 4G and Beyond. , 2020, , .		3
107	ANNs Going Beyond Time Series Forecasting: An Urban Network Perspective. IEEE Communications Magazine, 2021, 59, 88-94.	6.1	3
108	SDN-Enabled Energy-Efficient Network Management. , 0, , 323-338.		3

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109	A decentralized closed-loop solution to the routing problem in networks. Annual Review in Automatic Programming, 1985, 13, 9-17.	0.2	2
110	A call admission control strategy for multiservice wireless cellular packet networks. International Journal of Wireless Information Networks, 1996, 3, 235-242.	2.7	2
111	Wireless access to the global Internet: mobile radio networks and satellite systems. International Journal of Communication Systems, 2003, 16, 1-4.	2.5	2
112	A Neural Network Solution to QoS-IP Team-Optimal Dynamic Routing. , 0, , .		2
113	Adaptive Pricing without Explicit Knowledge of Users Traffic Demands and Utility Functions. , 2007, , .		2
114	Medium access control scheme for supporting user mobility in digital video broadcasting-return channel via satellite/satellite second generation – general architecture and functionalities. IET Communications, 2010, 4, 1532.	2.2	2
115	A measurement-based adaptive control mechanism for pricing in telecommunication networks. Journal of Communications and Networks, 2010, 12, 253-265.	2.6	2
116	A steady-state model for energy-efficient packet processing engines under mixed traffic. , 2012, , .		2
117	Evaluation of energy consumption and data access time in data fetching in grid-based data-intensive applications. , 2013, , .		2
118	Improving Prediction Accuracy for Power Consumption in Virtual Environments. , 2019, , .		2
119	Best-Effort and Guaranteed Performance Services in Telecommunications Networks: Pricing and Call Admission Control Techniques. Lecture Notes in Computer Science, 2003, , 261-275.	1.3	2
120	Call Admission Control and Routing of QoS-Aware and Best-Effort Flows in an IP-over-ATM Networking Environment. Lecture Notes in Computer Science, 2001, , 33-49.	1.3	2
121	Engineering Applications on the eInfrastructure: The Case of Telecommunication Measurement Instrumentation. Computational Methods in Science and Technology, 2009, 15, 41-47.	0.3	2
122	Resource Allocation Strategies for Multimedia Traffic in an ATM-based PON. , 1999, , 305-319.		2
123	Satellite Networking in the Context of Green, Flexible and Programmable Networks. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2016, , 1-11.	0.3	2
124	Flow Assignment in Multi-Core Network Processors. AIRO Springer Series, 2019, , 493-503.	0.6	2
125	Distributed Coordinated Deflection Routing Algorithms for High Speed Networks. Journal of High Speed Networks, 1995, 4, 287-297.	0.8	1
126	Two Simulation Tools for Testing ATM Resource Allocation Strategies. Simulation, 1997, 68, 9-22.	1.8	1

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127	Evaluation and comparison of cell loss and delay models for ATM multiplexers. Telecommunication Systems, 2001, 16, 41-54.	2.5	1
128	Handling local user mobility and QoS in a controlled ad-hoc environment. , 2007, , .		1
129	Analyzing the impact of edonkey traffic on internet access links. , 2007, , .		1
130	Optimal control of communication in energy constrained sensor networks through team theory and Extended RItz Method. , 2009, , .		1
131	Remote instrumentation infrastructure for e-Science. Approach of the DORII project. , 2009, , .		1
132	Linear quadratic control of service rate allocation in a satellite network. IET Communications, 2010, 4, 1580.	2.2	1
133	Optimizing the power-delay product in energy-aware packet forwarding engines. , 2013, , .		1
134	Trading off power consumption and delay in packet forwarding engines with adjustable service rate. , 2014, , .		1
135	Equivalent bandwidth adaptation with energy preservation under delay constraints. , 2014, , .		1
136	Virtualization of set-top-box devices in next generation SDN-NFV networks. , 2017, , .		1
137	An Implementational Model of Telecommunications Networks for the Energy Analyst. , 2018, , .		1
138	Exploiting Satellite Broadcast Despite HTTPS. , 2019, , .		1
139	Planning Multiservice VPN Networks: An Analytical/Simulative Mechanism to Dimension the Bandwidth Assignments. Lecture Notes in Computer Science, 2005, , 176-190.	1.3	1
140	Interconnection of Laboratory Equipment via Satellite and Space Links: Investigating the Performance of Software Platforms for the Management of Measurement Instrumentation. Signals and Communication Technology, 2008, , 657-666.	0.5	1
141	Probabilistic Fault Management. Chapman & Hall/CRC Studies in Informatics Series, 2009, , 309-347.	0.1	1
142	Integration of the Laboratory Instruments with e-Infrastructure. Computational Methods in Science and Technology, 2010, Special Issue, 125-133.	0.3	1
143	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
144	Evaluating Urban Network Activity Hotspots through Granular Cluster Analysis of Spatio-Temporal Data. , 2021, , .		1

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145	Resource Allocation in Satellite Networksâ€"From Physical to Virtualized Network Functions. Lecture Notes in Networks and Systems, 2022, , 559-580.	0.7	1
146	PAD: A graphical and numerical enhancement of structural coding to facilitate thematic analysis of a literature corpus. MethodsX, 2022, 9, 101633.	1.6	1
147	Cross-Layer Approaches for Resource Management. , 2007, , 95-115.		1
148	Development of optimal routing policies in a queueing network. Annual Review in Automatic Programming, 1985, 12, 404-407.	0.2	0
149	On the Existence of Stationary Team-Optimal Strategies for the Maximization of Average Expected Throughput in a Multiple Access Broadcast Channel. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 215-220.	0.4	0
150	A Two-Level Parameter-Adaptive Access Multiplexer. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 227-233.	0.4	0
151	Service Quality Control in Multimedia Wireless Networks. European Transactions on Telecommunications, 2000, 11, 323-325.	1.2	0
152	A Combined Forward Error Control and Multiple Access Protocol for Wireless Voice/Data Integration. International Journal of Wireless Information Networks, 2000, 7, 231-240.	2.7	0
153	A multiple access protocol with explicit and implicit reservation. International Journal of Communication Systems, 2001, 14, 251-262.	2.5	0
154	Quality of service control in multimedia network clusters. International Journal of Communication Systems, 2003, 16, 701-714.	2.5	0
155	An overlay scheme to provide loose QoS for wireless nodes. , 2006, , .		0
156	SAT01-4: A Study of Fairness Issues in the Assignment of Bandwidth to Elephant TCP Connections Sharing a Rain-Faded GEO Satellite Channel. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	0
157	Linear and non-linear strategies for power mapping in Gaussian sensor networks. , 2010, , .		0
158	Exposing energy-aware capabilities in next generation network devices. , 2013, , .		0
159	Message from the co-chairs. , 2013, , .		0
160	Linear and non-linear montecarlo approximations of analog joint source-channel coding under generic probability distributions. , 2014, , .		0
161	The expected impact of smart devices visualization. , 2016, , .		0
162	Smart Gateway Diversity Strategies for Q/V Feeder Links in SDN-Satellite Networks. , 2020, , .		0

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163	Definition and Experimental Evaluation of an Architecture for Joint Quality of Service Control in Multimedia Networks. Lecture Notes in Computer Science, 2001, , 81-95.	1.3	0
164	A Bandwidth Broker Assignment Scheme in DiffServ Networks. Lecture Notes in Computer Science, 2001, , 251-265.	1.3	0
165	Security in peer-to-peer applications and remote instrumentation over satellite: a scenario including Public Protection and Disaster Relief (PPDR). , 2009, , .		0
166	Energy and Distortion Minimization in â€œRefiningâ€•and â€œExpandingâ€•Sensor Networks. , 2010, , 319-327.		0
167	The DORII Project e-Infrastructure: Deployment, Applications, and Measurements. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2011, , 285-295.	0.3	0
168	Performance Evaluation of the DORII Instrument Element Data Transfer Capabilities. , 2012, , 15-24.		0
169	Network Performance Monitoring for Remote Instrumentation Services: The DORII Platform Test Case. , 2012, , 285-303.		0
170	Remote Laboratory Experiments in Virtual Immersive Learning Environments. , 2012, , 2819-2823.		0
171	Modeling Performance and Energy Efficiency of Virtualized Flexible Networks. Advances in Intelligent Systems and Computing, 2019, , 257-273.	0.6	0
172	On-off Dual Channel Coding as a Team Decision Problem. , 2019, , .		0
173	Activity in Satellite Resource Management. , 2007, , 43-65.		0
174	Call Admission Control. , 2007, , 177-205.		0
175	Dynamic Bandwidth Allocation. , 2007, , 207-238.		0
176	Resource Management and Network Layer. , 2007, , 243-286.		0