Hiroki Nishiyama

List of Publications by Year
in descending order

149 papers	4,678 citations	136950 32 h-index	123424 61 g-index
150 all docs	150 docs citations	150 times ranked	4502 citing authors

#	Article	IF	Citations
1	Relay-by-smartphone: realizing multihop device-to-device communications. , 2014, 52, 56-65.		322
2	Hybrid Method for Minimizing Service Delay in Edge Cloud Computing Through VM Migration and Transmission Power Control. IEEE Transactions on Computers, 2017, 66, 810-819.	3.4	313
3	A Survey on Network Methodologies for Real-Time Analytics of Massive IoT Data and Open Research Issues. IEEE Communications Surveys and Tutorials, 2017, 19, 1457-1477.	39.4	300
4	Device-to-device communications achieve efficient load balancing in LTE-advanced networks. IEEE Wireless Communications, 2014, 21, 57-65.	9.0	202
5	On the Outage Probability of Device-to-Device-Communication-Enabled Multichannel Cellular Networks: An RSS-Threshold-Based Perspective. IEEE Journal on Selected Areas in Communications, 2016, 34, 163-175.	14.0	184
6	A dynamic trajectory control algorithm for improving the communication throughput and delay in UAV-aided networks. IEEE Network, 2016, 30, 100-105.	6.9	175
7	Machine Learning Meets Computation and Communication Control in Evolving Edge and Cloud: Challenges and Future Perspective. IEEE Communications Surveys and Tutorials, 2020, 22, 38-67.	39.4	164
8	Cloudlets Activation Scheme for Scalable Mobile Edge Computing with Transmission Power Control and Virtual Machine Migration. IEEE Transactions on Computers, 2018, 67, 1287-1300.	3.4	154
9	Disaster-resilient networking: a new vision based on movable and deployable resource units. IEEE Network, 2013, 27, 40-46.	6.9	130
10	New Perspectives on Future Smart FiWi Networks: Scalability, Reliability, and Energy Efficiency. IEEE Communications Surveys and Tutorials, 2016, 18, 1045-1072.	39.4	118
11	Toward Energy Efficient Big Data Gathering in Densely Distributed Sensor Networks. IEEE Transactions on Emerging Topics in Computing, 2014, 2, 388-397.	4.6	110
12	Toward Optimized Traffic Distribution for Efficient Network Capacity Utilization in Two-Layered Satellite Networks. IEEE Transactions on Vehicular Technology, 2013, 62, 1303-1313.	6.3	97
13	Extending the lifetime of wireless sensor networks: A hybrid routing algorithm. Computer Communications, 2012, 35, 1056-1063.	5.1	95
14	HYMN: A Novel Hybrid Multi-Hop Routing Algorithm to Improve the Longevity of WSNs. IEEE Transactions on Wireless Communications, 2012, 11, 2531-2541.	9.2	81
15	Effective Data Collection Via Satellite-Routed Sensor System (SRSS) to Realize Global-Scaled Internet of Things. IEEE Sensors Journal, 2013, 13, 3645-3654.	4.7	71
16	An optimal data collection technique for improved utility in UAS-aided networks. , 2014, , .		71
17	A Traffic Distribution Technique to Minimize Packet Delivery Delay in Multilayered Satellite Networks. IEEE Transactions on Vehicular Technology, 2013, 62, 3315-3324.	6.3	70
18	A MPCP-Based Centralized Rate Control Method for Mobile Stations in FiWi Access Networks. IEEE Wireless Communications Letters, 2015, 4, 205-208.	5.0	65

#	Article	IF	Citations
19	Bringing movable and deployable networks to disaster areas: development and field test of MDRU. IEEE Network, 2016, 30, 86-91.	6.9	63
20	On Minimizing the Impact of Mobility on Topology Control in Mobile Ad Hoc Networks. IEEE Transactions on Wireless Communications, 2012, 11, 1158-1166.	9.2	61
21	A Feedback Control-Based Crowd Dynamics Management in IoT System. IEEE Internet of Things Journal, 2017, 4, 1466-1476.	8.7	60
22	Intrusion detection system (IDS) for combating attacks against cognitive radio networks. IEEE Network, 2013, 27, 51-56.	6.9	58
23	Relay by Smart Device: Innovative Communications for Efficient Information Sharing Among Vehicles and Pedestrians. IEEE Vehicular Technology Magazine, 2015, 10, 54-62.	3.4	57
24	Virtual Cell Based Resource Allocation for Efficient Frequency Utilization in Unmanned Aircraft Systems. IEEE Transactions on Vehicular Technology, 2018, 67, 3495-3504.	6.3	55
25	On Load Distribution over Multipath Networks. IEEE Communications Surveys and Tutorials, 2011, , .	39.4	54
26	Cluster-Based Certificate Revocation with Vindication Capability for Mobile Ad Hoc Networks. IEEE Transactions on Parallel and Distributed Systems, 2013, 24, 239-249.	5.6	54
27	An Energy-Efficient and Delay-Aware Wireless Computing System for Industrial Wireless Sensor Networks. IEEE Access, 2015, 3, 1026-1035.	4.2	51
28	A stochastic geometry analysis of D2D overlaying multi-channel downlink cellular networks. , 2015, , .		48
29	Toward Fair Maximization of Energy Efficiency in Multiple UAS-Aided Networks: A Game-Theoretic Methodology. IEEE Transactions on Wireless Communications, 2015, 14, 305-316.	9.2	46
30	Internet of Things (IoT): Present State and Future Prospects. IEICE Transactions on Information and Systems, 2014, E97.D, 2568-2575.	0.7	43
31	Construction of a Flexibility Analysis Model for Flexible High-Throughput Satellite Communication Systems With a Digital Channelizer. IEEE Transactions on Vehicular Technology, 2018, 67, 2097-2107.	6.3	43
32	Efficient Resource Allocation Utilizing Q-Learning in Multiple UA Communications. IEEE Transactions on Network Science and Engineering, 2019, 6, 293-302.	6.4	40
33	Exact throughput capacity under power control in mobile ad hoc networks. , 2012, , .		36
34	Prospects and challenges of context-aware multimedia content delivery in cooperative satellite and terrestrial networks. , 2014, 52, 55-61.		35
35	A cloud radio access network with power over fiber toward 5G networks: QoE-guaranteed design and operation. IEEE Wireless Communications, 2015, 22, 58-64.	9.0	34
36	DAPA: Capacity Optimization in Wireless Networks Through a Combined Design of Density of Access Points and Partially Overlapped Channel Allocation. IEEE Transactions on Vehicular Technology, 2016, 65, 3715-3722.	6.3	32

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37	Effectively Collecting Data for the Location-Based Authentication in Internet of Things. IEEE Systems Journal, 2017, 11, 1403-1411.	4.6	32
38	Postdisaster User Location Maneuvering Method for Improving the QoE Guaranteed Service Time in Energy Harvesting Small Cell Networks. IEEE Transactions on Vehicular Technology, 2017, 66, 9410-9420.	6.3	32
39	A Novel Radio Resource Optimization Method for Relay-Based Unmanned Aerial Vehicles. IEEE Transactions on Wireless Communications, 2018, 17, 7352-7363.	9.2	30
40	Smart FiWi Networks: Challenges and Solutions for QoS and Green Communications. IEEE Intelligent Systems, 2013, 28, 86-91.	4.0	29
41	A Spectrum- and Energy-Efficient Scheme for Improving the Utilization of MDRU-Based Disaster Resilient Networks. IEEE Transactions on Vehicular Technology, 2014, 63, 2027-2037.	6.3	29
42	On the Energy-Efficient of Throughput-Based Scheme Using Renewable Energy for Wireless Mesh Networks in Disaster Area. IEEE Transactions on Emerging Topics in Computing, 2015, 3, 420-431.	4.6	29
43	Cooperative QoS Control Scheme Based on Scheduling Information in FiWi Access Network. IEEE Transactions on Emerging Topics in Computing, 2013, 1, 375-383.	4.6	28
44	Throughput maximization for long-distance real-time data transmission over multiple UAVs. , 2016, , .		27
45	An Internet of Things Traffic-Based Power Saving Scheme in Cloud-Radio Access Network. IEEE Internet of Things Journal, 2019, 6, 3087-3096.	8.7	26
46	QoE-Guaranteed and Power-Efficient Network Operation for Cloud Radio Access Network With Power Over Fiber. IEEE Transactions on Computational Social Systems, 2015, 2, 127-136.	4.4	24
47	Fairness issue in message delivery in delay- and Disruption-Tolerant Networks for disaster areas. , 2013, , .		23
48	Multi-Hop Wireless Transmission in Multi-Band WLAN Systems: Proposal and Future Perspective. IEEE Wireless Communications, 2019, 26, 108-113.	9.0	23
49	Cross Layer Analysis on ONU Energy Consumption in Smart FiWi Networks. IEEE Wireless Communications Letters, 2013, 2, 695-698.	5.0	21
50	A novel gateway selection method to maximize the system throughput of Wireless Mesh Network deployed in disaster areas. , 2012, , .		20
51	Throughput Capacity of MANETs with Power Control and Packet Redundancy. IEEE Transactions on Wireless Communications, 2013, 12, 3035-3047.	9.2	20
52	Capacity and Delay of Probing-Based Two-Hop Relay in MANETs. IEEE Transactions on Wireless Communications, 2012, 11, 4172-4183.	9.2	19
53	On the Delivery Probability of Two-Hop Relay MANETs with Erasure Coding. IEEE Transactions on Communications, 2013, 61, 1314-1326.	7.8	19
54	An Adaptive Beam Control Technique for Q Band Satellite to Maximize Diversity Gain and Mitigate Interference to Terrestrial Networks. IEEE Transactions on Emerging Topics in Computing, 2019, 7, 115-122.	4.6	19

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55	A Study on Certificate Revocation in Mobile Ad Hoc Networks. , 2011, , .		18
56	A PSO model with VM migration and transmission power control for low Service Delay in the multiple cloudlets ECC scenario. , 2017, , .		18
57	Toward modeling ad hoc networks: current situation and future direction. IEEE Wireless Communications, 2013, 20, 51-58.	9.0	16
58	THUP: A P2P Network Robust to Churn and DoS Attack Based on Bimodal Degree Distribution. IEEE Journal on Selected Areas in Communications, 2013, 31, 247-256.	14.0	16
59	An efficient traffic detouring method by using device-to-device communication technologies in heterogeneous network. , 2014, , .		16
60	Replication Control for Ensuring Reliability of Convergecast Message Delivery in Infrastructure-Aided DTNs. IEEE Transactions on Vehicular Technology, 2014, 63, 3223-3231.	6.3	16
61	An efficient method for minimizing energy consumption of user equipment in storage-embedded heterogeneous networks. IEEE Wireless Communications, 2014, 21, 70-76.	9.0	16
62	Assessing packet delivery delay in multi-layered satellite networks. , 2012, , .		15
63	Resource allocation for data gathering in UAV-aided wireless sensor networks. , 2014, , .		15
64	On Efficient Traffic Distribution for Disaster Area Communication Using Wireless Mesh Networks. Wireless Personal Communications, 2014, 74, 1311-1327.	2.7	15
65	Flexibility-Enhanced HTS System for Disaster Management: Responding to Communication Demand Explosion in a Disaster. IEEE Transactions on Emerging Topics in Computing, 2020, 8, 159-167.	4.6	15
66	Toward terminal-to-terminal communication networks: A hybrid MANET and DTN approach. , 2013, , .		14
67	An adaptive beam control technique for diversity gain maximization in LEO satellite to ground transmissions. , 2016, , .		14
68	Adaptive Frequency Band and Channel Selection for Simultaneous Receiving and Sending in Multiband Communication. IEEE Wireless Communications Letters, 2019, 8, 460-463.	5.0	14
69	Optimal Forwarding Games in Mobile Ad Hoc Networks with Two-Hop f-cast Relay. IEEE Journal on Selected Areas in Communications, 2012, 30, 2169-2179.	14.0	13
70	MA-LTRT: A Novel Method to Improve Network Connectivity and Power Consumption in Mobile Ad-hoc Based Cyber-Physical Systems. IEEE Transactions on Emerging Topics in Computing, 2013, 1, 366-374.	4.6	13
71	A Cooperative ONU Sleep Method for Reducing Latency and Energy Consumption of STA in Smart-FiWi Networks. IEEE Transactions on Parallel and Distributed Systems, 2015, 26, 2621-2629.	5.6	13
72	Model Predictive Joint Transmit Power Control for Improving System Availability in Energy-Harvesting Wireless Mesh Networks. IEEE Communications Letters, 2018, 22, 2112-2115.	4.1	13

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73	A general model for store-carry-forward routing schemes with multicast in delay tolerant networks. , 2011, , .		12
74	A Novel Gateway Selection Technique for Throughput Optimization in Configurable Wireless Mesh Networks. International Journal of Wireless Information Networks, 2013, 20, 195-203.	2.7	12
75	Cyber Physical Systems for Intelligent Disaster Response Networks: Conceptual Proposal and Field Experiment. IEEE Network, 2017, 31, 120-128.	6.9	12
76	A novel routing method for improving message delivery delay in hybrid DTN-MANET networks. , 2013, , .		11
77	On the throughput evaluation of wireless mesh network deployed in disaster areas. , 2013, , .		10
78	On the effect of cooperation between power saving mechanisms in WLANs and PONs. , 2013, , .		10
79	An efficient utilization of intermittent surface–satellite optical links by using mass storage device embedded in satellites. Performance Evaluation, 2015, 87, 37-46.	1.2	10
80	Dynamic Replication and Forwarding Control Based on Node Surroundings in Cooperative Delay-Tolerant Networks. IEEE Transactions on Parallel and Distributed Systems, 2015, 26, 2711-2719.	5.6	10
81	Threshold-Based RRH Switching Scheme Considering Baseband Unit Aggregation for Power Saving in a Cloud Radio Access Network. IEEE Systems Journal, 2019, 13, 2676-2687.	4.6	10
82	End-to-end delay in mobile ad hoc networks with generalized transmission range and limited packet redundancy. , 2012, , .		9
83	Field measurement of an implemented solar powered BS-based wireless mesh network. IEEE Wireless Communications, 2015, 22, 137-143.	9.0	9
84	Towards a Low-Delay Edge Cloud Computing through a Combined Communication and Computation Approach. , 2016, , .		9
85	An efficient throughput-aware resource allocation technique for data transmission in unmanned aircraft systems. , 2017, , .		9
86	A novel heuristic-based traffic distribution method for disaster zone Wireless Mesh Networks. , 2012, , .		8
87	A Cooperative User-System Approach for Optimizing Performance in Content Distribution/Delivery Networks. IEEE Journal on Selected Areas in Communications, 2012, 30, 476-483.	14.0	8
88	Synchronized Power Saving Mechanisms for Battery-Powered Mobile Terminals in Smart FiWi Networks. , 2014, , .		8
89	An Overlay-Based Data Mining Architecture Tolerant to Physical Network Disruptions. IEEE Transactions on Emerging Topics in Computing, 2014, 2, 292-301.	4.6	8
90	Traffic Pattern-Based Content Leakage Detection for Trusted Content Delivery Networks. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 301-309.	5.6	8

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91	A modeling technique utilizing feedback control theory for performance evaluation of IoT system in real-time. , 2015, , .		8
92	A delay-based traffic distribution technique for Multi-Layered Satellite Networks. , 2012, , .		7
93	On joint optimal placement of access points and partially overlapping channel assignment for wireless networks. , 2014, , .		7
94	A novel communication mode selection technique for DTN over MANET architecture. , 2014, , .		7
95	A Probabilistic Approach to Deploying Disaster Response Network. IEEE Transactions on Vehicular Technology, 2018, 67, 12086-12094.	6.3	7
96	A Novel Multichannel Streaming Scheme to Reduce Channel Switching Delay in Application Layer Multicast. IEEE Systems Journal, 2011, 5, 545-554.	4.6	6
97	Optimal rate selection scheme in a two-hop relay network adopting Chase combining HARQ in Rayleigh block-fading channels. , 2012, , .		6
98	On real-time data gathering in next generation satellite-routed sensor system (SRSS). , 2012, , .		6
99	A bandwidth allocation method to improve user QoS satisfaction without decreasing system throughput in wireless access networks. , 2012, , .		6
100	Multicast capacity, delay and delay jitter in intermittently connected mobile networks. , 2012, , .		6
101	Toward integrating overlay and physical networks for robust parallel processing architecture. IEEE Network, 2014, 28, 40-45.	6.9	6
102	Stand-Alone and Cooperative Deep Sleep for Battery-Driven Optical Network Unit. IEEE Internet of Things Journal, 2016, 3, 494-502.	8.7	6
103	An evaluation of flexible frequency utilization in high throughput satellite communication systems with digital channelizer. , 2017, , .		6
104	A TD-LTE-A Based Efficient Radio Access Scheme for Real-Time Data Transmission over Relay Unmanned Aerial Vehicle Networks. , 2017, , .		6
105	Multi-Carrier Relaying for Successive Data Transfer in Earth Observation Satellite Constellations. , 2017, , .		6
106	Novel Group Paging Scheme for Improving Energy Efficiency of IoT Devices over LTE-A Pro Networks with QoS Considerations. , 2018, , .		6
107	Performance Modeling for Relay Cooperation in Delay Tolerant Networks. Mobile Networks and Applications, 2013, 18, 186-194.	3.3	5
108	Throughput-delay tradeoff in mobile ad hoc networks with correlated mobility. , 2014, , .		5

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109	Context-aware task allocation for fast parallel big data processing in optical-wireless networks. , 2014, , .		5
110	A Failure-Tolerant and Spectrum-Efficient Wireless Data Center Network Design for Improving Performance of Big Data Mining. , 2015, , .		5
111	A Novel Graph-Based Topology Control Cooperative Algorithm for Maximizing Throughput of Disaster Recovery Networks. , 2016, , .		5
112	Delivery ratio in two-hop relay MANETs with limited message lifetime and redundancy. , 2012, , .		4
113	GHAR: Graph-based hybrid adaptive routing for cognitive radio based disaster response networks. , 2016, , .		4
114	A novel information diffusing method with virtual cells based Wi-Fi direct in disaster area networks. , 2018, , .		4
115	Dynamic topology update mechanism in local tree-based reliable topology (LTRT) based MANETs. , 2012, , .		3
116	On the optimal transmission distance for power-aware routing in Ad Hoc networks. , 2013, , .		3
117	A Framework for Information Propagation in Mobile Sensor Networks. , 2013, , .		3
118	Packet Transfer Delay Minimization by Network-Wide Equalization of Unbalanced Traffic Load in Multi-Layered Satellite Networks. , 2013, , .		3
119	Joint design of density of access points and partially overlapped channel assignment for capacity optimization in wireless networks. , 2014, , .		3
120	A novel network design and operation for reducing transmission power in cloud radio access network with power over fiber. , 2015, , .		3
121	QoE-Guaranteed and Sustainable User Position Guidance for Post-Disaster Cloud Radio Access Network. , 2016, , .		3
122	A mobility-based mode selection technique for fair spatial dissemination of data in multi-channel device-to-device communication. , 2016, , .		3
123	Probing-based two-hop relay with limited packet redundancy. , 2012, , .		2
124	Throughput capacity of the group-based two-hop relay algorithm in MANETs. , 2012, , .		2
125	Mesh router selection to maximize system throughput in dense Wireless Mesh Networks. , 2013, , .		2
126	A centralized multiple access scheme for data gathering in Satellite-Routed Sensor System (SRSS). , 2013, , .		2

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127	An intelligent routing scheme effectively utilizing mass storage embedded on satellites to mitigate network congestions. , 2013, , .		2
128	On the Effect of Data Request Message Flooding in Dense Wireless Sensor Networks with a Mobile Sink. , 2013, , .		2
129	A Performance Evaluation of Multiple MDRUs Based Wireless Mesh Networks. , 2014, , .		2
130	On Energy Efficient Scheduling and Load Distribution Based on Renewable Energy for Wireless Mesh Network in Disaster Area. , 2014, , .		2
131	A partially centralized messaging control scheme using star topology in delay and disruption tolerant networks. , 2014, , .		2
132	Energy-Efficient Service Multiplexing on Profile-Based TWDM Access Systems. IEEE Internet of Things Journal, 2016, 3, 1427-1436.	8.7	2
133	Capacity vs. delivery delay in MANETs with power control and f-cast relay. , 2012, , .		1
134	On the fast-convergence of delay-based load balancing over multipaths for dynamic traffic environments. , 2013, , .		1
135	Performance modeling of three-hop relay routing in Intermittently Connected Mobile Networks. , 2013, , .		1
136	An Efficient Data Transfer Method for Distributed Storage System over Satellite Networks. , 2013, , .		1
137	An efficient utilization of intermittent satellite-to-ground links by using mass storage device embedded in satellites. , 2014, , .		1
138	Earth Stations deployment for maximizing system throughput in Satellite/Solar-Powered Mesh Integrated Network. , 2015, , .		1
139	A novel access control scheme to construct fresh database of ambient information in Internet of Things. , 2015, , .		1
140	A Highly Efficient DAMA Algorithm for Making Maximum Use of both Satellite Transponder Bandwidth and Transmission Power. IEICE Transactions on Communications, 2012, E95.B, 2619-2630.	0.7	1
141	Message delivery probability of two-hop relay with erasure coding in MANETs. , 2012, , .		0
142	Traffic distribution to mitigate downlink congestionin two-layerd satellite netwoeks. , 2012, , .		0
143	Modeling ad hoc mobile networks: The general k-hop relay routing. , 2013, , .		0
144	Throughput analysis for two-hop relay mobile ad hoc networks with receiver probing. , 2013, , .		0

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145	A divide and conquer approach for efficient bandwidth allocation in next generation satellite-routed sensor system (SRSS). , 2013, , .		0
146	An overlay network construction technique for minimizing the impact of physical network disruption in cloud storage systems. , 2014, , .		0
147	An energy efficient upload transmission method in storage-embedded wireless mesh networks. , 2014, , .		0
148	A method for collecting uniform amount of fresh data from areas with varying population density. , 2015, , .		0
149	Characterizing the Impact of Non-uniform Deployment of APs on Network Performance under Partially Overlapped Channels. Lecture Notes in Computer Science, 2013, , 244-254.	1.3	0