

Biswanath Mukherjee

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151
papers

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31
h-index

58
g-index

166
ext. papers

4,742
ext. citations

4.9
avg, IF

5.67
L-index

#	Paper	IF	Citations
151	A Survey on OFDM-Based Elastic Core Optical Networking. <i>IEEE Communications Surveys and Tutorials</i> , 2013 , 15, 65-87	37.1	226
150	Energy Efficiency in Telecom Optical Networks. <i>IEEE Communications Surveys and Tutorials</i> , 2010 , 12, 441-458	37.1	221
149	Interleaved Polling with Adaptive Cycle Time (IPACT): A Dynamic Bandwidth Distribution Scheme in an Optical Access Network. <i>Photonic Network Communications</i> , 2002 , 4, 89-107	1.7	198
148	Hybrid Wireless-Optical Broadband-Access Network (WOBAN): A Review of Relevant Challenges. <i>Journal of Lightwave Technology</i> , 2007 , 25, 3329-3340	4	195
147	Optical Network Design With Mixed Line Rates and Multiple Modulation Formats. <i>Journal of Lightwave Technology</i> , 2010 , 28, 466-475	4	169
146	Ethernet PON (ePON): Design and Analysis of an Optical Access Network. <i>Photonic Network Communications</i> , 2001 , 3, 307-319	1.7	166
145	A survey on routing algorithms for wireless Ad-Hoc and mesh networks. <i>Computer Networks</i> , 2012 , 56, 940-965	5.4	151
144	Building a Green Wireless-Optical Broadband Access Network (WOBAN). <i>Journal of Lightwave Technology</i> , 2010 , 28, 2219-2229	4	138
143	Design of Disaster-Resilient Optical Datacenter Networks. <i>Journal of Lightwave Technology</i> , 2012 , 30, 2563-2573	4	116
142	Disaster survivability in optical communication networks. <i>Computer Communications</i> , 2013 , 36, 630-644	5.1	104
141	Network adaptability from disaster disruptions and cascading failures. <i>IEEE Communications Magazine</i> , 2014 , 52, 230-238	9.1	91
140	Survivable Traffic Grooming in Elastic Optical Networks Shared Protection. <i>Journal of Lightwave Technology</i> , 2013 , 31, 903-909	4	90
139	Minimizing the Risk From Disaster Failures in Optical Backbone Networks. <i>Journal of Lightwave Technology</i> , 2014 , 32, 3175-3183	4	83
138	. <i>IEEE Communications Surveys and Tutorials</i> , 2016 , 18, 2244-2281	37.1	74
137	Dynamic Traffic Grooming in Elastic Optical Networks. <i>IEEE Journal on Selected Areas in Communications</i> , 2013 , 31, 4-12	14.2	70
136	Availability-Aware Provisioning Strategies for Differentiated Protection Services in Wavelength-Convertible WDM Mesh Networks. <i>IEEE/ACM Transactions on Networking</i> , 2007 , 15, 1177-1190	3.8	69
135	Energy-Efficient Virtual Base Station Formation in Optical-Access-Enabled Cloud-RAN. <i>IEEE Journal on Selected Areas in Communications</i> , 2016 , 34, 1130-1139	14.2	64

134	Demand-Aware Network Function Placement. <i>Journal of Lightwave Technology</i> , 2016 , 34, 2590-2600	4	55
133	Greening the cloud using renewable-energy-aware service migration. <i>IEEE Network</i> , 2013 , 27, 36-43	11.4	49
132	Hybrid wireless-optical broadband access network(woban) : prototype development and research challenges. <i>IEEE Network</i> , 2009 , 23, 41-48	11.4	49
131	Hybrid wireless-optical broadband access network (WOBAN): network planning and setup. <i>IEEE Journal on Selected Areas in Communications</i> , 2008 , 26, 12-21	14.2	48
130	A novel delay-aware routing algorithm (DARA) for a hybrid wireless-optical broadband access network (WOBAN). <i>IEEE Network</i> , 2008 , 22, 20-28	11.4	47
129	Green Provisioning for Optical WDM Networks. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2011 , 17, 437-445	3.8	46
128	Disaster-Aware Datacenter Placement and Dynamic Content Management in Cloud Networks. <i>Journal of Optical Communications and Networking</i> , 2015 , 7, 681	4.1	44
127	Software-defined optical networks (SDONs): a survey. <i>Photonic Network Communications</i> , 2014 , 28, 4-18	1.7	43
126	. <i>IEEE Journal on Selected Areas in Communications</i> , 2018 , 36, 529-541	14.2	41
125	. <i>IEEE/ACM Transactions on Networking</i> , 2011 , 19, 657-669	3.8	40
124	Sparse Wavelength Conversion in Wavelength-Routed WDM Optical Networks*. <i>Photonic Network Communications</i> , 1999 , 1, 183-205	1.7	36
123	Auto-Scaling VNFs Using Machine Learning to Improve QoS and Reduce Cost 2018 ,		32
122	On Hybrid IR and AR Service Provisioning in Elastic Optical Networks. <i>Journal of Lightwave Technology</i> , 2015 , 33, 4659-4670	4	31
121	Control Plane for Advance Bandwidth Scheduling in Ultra High-Speed Networks 2006 ,		31
120	Rapid Data Evacuation for Large-Scale Disasters in Optical Cloud Networks [Invited]. <i>Journal of Optical Communications and Networking</i> , 2015 , 7, B163	4.1	30
119	Reliable Multipath Provisioning for High-Capacity Backbone Mesh Networks. <i>IEEE/ACM Transactions on Networking</i> , 2007 , 15, 803-812	3.8	30
118	Holding-Time-Aware Dynamic Traffic Grooming. <i>IEEE Journal on Selected Areas in Communications</i> , 2008 , 26, 28-35	14.2	29
117	Traveling Repairman Problem for Optical Network Recovery to Restore Virtual Networks After a Disaster [Invited]. <i>Journal of Optical Communications and Networking</i> , 2015 , 7, B81	4.1	28

116	On service-chaining strategies using Virtual Network Functions in operator networks. <i>Computer Networks</i> , 2018 , 133, 1-16	5.4	26
115	Green Data Center Placement in Optical Cloud Networks. <i>IEEE Transactions on Green Communications and Networking</i> , 2017 , 1, 347-357	4	25
114	Energy-Efficient Long-Reach Passive Optical Network: A Network Planning Approach Based on User Behaviors. <i>IEEE Systems Journal</i> , 2010 , 4, 449-457	4.3	25
113	RADAR: Risk-and-Delay Aware Routing Algorithm in a Hybrid Wireless-Optical Broadband Access Network (WOBAN) 2007 ,		25
112	Energy Saving via Dynamic Wavelength Sharing in TWDM-PON. <i>IEEE Journal on Selected Areas in Communications</i> , 2014 , 32, 1566-1574	14.2	21
111	Channel, capacity, and flow assignment in wireless mesh networks. <i>Computer Networks</i> , 2011 , 55, 2241-2258	3.4	21
110	Algorithms for Integrated Routing and Scheduling for Aggregating Data from Distributed Resources on a Lambda Grid. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2008 , 19, 24-34	3.7	21
109	Low-Latency and Energy-Efficient BBU Placement and VPON Formation in Virtualized Cloud-Fog RAN. <i>Journal of Optical Communications and Networking</i> , 2019 , 11, B37	4.1	19
108	Impairment Aware Routing, Bit Loading, and Spectrum Allocation in Elastic Optical Networks. <i>Journal of Lightwave Technology</i> , 2019 , 37, 3009-3020	4	19
107	Dynamic Workload Migration Over Backbone Network to Minimize Data Center Electricity Cost. <i>IEEE Transactions on Green Communications and Networking</i> , 2018 , 2, 570-579	4	18
106	Disaster-survivable cloud-network mapping. <i>Photonic Network Communications</i> , 2014 , 27, 141-153	1.7	18
105	Optimal Network Function Virtualization Realizing End-to-End Requests 2015 ,		17
104	Disaster-resilient control plane design and mapping in software-defined networks 2015 ,		17
103	A Comprehensive Study on Backup-Bandwidth Reprovisioning After Network-State Updates in Survivable Telecom Mesh Networks. <i>IEEE/ACM Transactions on Networking</i> , 2008 , 16, 1366-1377	3.8	17
102	. <i>IEEE Transactions on Communications</i> , 2020 , 68, 4946-4959	6.9	16
101	Multilayer Protection with Availability Guarantees in Optical WDM Networks. <i>Journal of Network and Systems Management</i> , 2012 , 20, 34-55	2.1	15
100	Disaster-aware service provisioning with manycasting in cloud networks. <i>Photonic Network Communications</i> , 2014 , 28, 123-134	1.7	15
99	Dynamic Scheduling of Survivable Connections with Delay Tolerance in WDM Networks 2009 ,		15

98	Bandwidth Provisioning for Virtual Machine Migration in Cloud: Strategy and Application. <i>IEEE Transactions on Cloud Computing</i> , 2018 , 6, 967-976	3.3	14
97	Improved Approaches for Cost-Effective Traffic Grooming in WDM Ring Networks: Uniform-Traffic Case*. <i>Photonic Network Communications</i> , 2001 , 3, 245-254	1.7	14
96	Minimizing the Disaster Risk in Optical Telecom Networks 2012 ,		14
95	Optimizing HTTP-based Adaptive Video Streaming for wireless access networks 2010 ,		13
94	On Provisioning in All-Optical Networks: An Impairment-Aware Approach. <i>IEEE/ACM Transactions on Networking</i> , 2009 , 17, 1989-2001	3.8	13
93	Data Security in MANETs using Multipath Routing and Directional Transmission 2006 ,		13
92	Holding-time-aware and availability-guaranteed connection provisioning in optical WDM mesh networks 2007 ,		12
91	Heterogeneous Bandwidth Provisioning for Virtual Machine Migration over SDN-Enabled Optical Networks 2014 ,		11
90	Towards Global Optimization of Multiple ONU Placement in Hybrid Optical-Wireless Broadband Access Networks 2006 ,		11
89	A disaster-resilient multi-content optical datacenter network architecture 2011 ,		10
88	Interference-aware routing for multi-hop Wireless Mesh Networks. <i>Computer Communications</i> , 2010 , 33, 1961-1971	5.1	10
87	2008 ,		10
86	Architecture, Control, and Management of Optical Switching Networks 2007 ,		10
85	RASCAR: Recovery-Aware Switch-Controller Assignment and Routing in SDN. <i>IEEE Transactions on Network and Service Management</i> , 2018 , 15, 1222-1234	4.8	10
84	IPTV over EPON: Synthetic traffic generation and performance evaluation. <i>Optical Switching and Networking</i> , 2015 , 18, 180-190	1.6	9
83	Resilient cloud network mapping with virtualized BBU placement for cloud-RAN 2016 ,		9
82	Robust hierarchical control plane for Transport Software-Defined Networks. <i>Optical Switching and Networking</i> , 2018 , 30, 10-22	1.6	9
81	Optimal Placement of Virtualized BBU Processing in Hybrid Cloud-Fog RAN over TWDM-PON 2017 ,		9

80	Robust upgrade in optical networks under traffic uncertainty 2012 ,		9
79	Enhancing the Performance of Video Streaming in Wireless Mesh Networks. <i>Wireless Personal Communications</i> , 2011 , 56, 535-557	1.9	9
78	Risk-Aware Routing for Optical Transport Networks 2010 ,		9
77	Dynamic SLA Redefinition for Shared-Path-Protected Connections with Known Duration 2008 ,		9
76	MADF: Mobile-assisted data forwarding for wireless data networks. <i>Journal of Communications and Networks</i> , 2004 , 6, 216-225	4.1	9
75	Ethernet-over-SONET(EoS) over WDM in Optical Wide-Area Networks (WANs): Benefits and Challenges. <i>Photonic Network Communications</i> , 2005 , 10, 107-118	1.7	9
74	Cost-efficient live VM migration based on varying electricity cost in optical cloud networks. <i>Photonic Network Communications</i> , 2015 , 30, 376-386	1.7	8
73	Wavelet-Based Traffic Analysis for Identifying Video Streams over Broadband Networks 2008 ,		8
72	Dynamic traffic grooming of subwavelength connections with known duration 2007 ,		8
71	A Call-Admission Control (CAC) Algorithm for Providing Guaranteed QoS in Cellular Networks. <i>International Journal of Wireless Information Networks</i> , 2003 , 10, 73-85	1.9	8
70	. <i>Journal of Lightwave Technology</i> , 2020 , 38, 2656-2668	4	7
69	. <i>IEEE Transactions on Network and Service Management</i> , 2020 , 17, 1501-1514	4.8	7
68	Provisioning Short-Term Traffic Fluctuations in Elastic Optical Networks. <i>IEEE/ACM Transactions on Networking</i> , 2019 , 27, 1460-1473	3.8	7
67	Self-Healing Optical Access Networks (SHOAN) Operated by Optical Switching Technologies. <i>IEEE Transactions on Network and Service Management</i> , 2011 , 8, 234-244	4.8	7
66	Synthetic traffic generation for streaming video to model IPTV 2011 ,		7
65	The photonic ring: Algorithms for optimized node arrangements. <i>Fiber and Integrated Optics</i> , 1993 , 12, 133-171	0.8	7
64	The Evolution of Optical Networking [Scanning the Issue]. <i>Proceedings of the IEEE</i> , 2012 , 100, 1017-1022	14.3	6
63	Application-aware software-defined EPON access network. <i>Photonic Network Communications</i> , 2015 , 30, 324-336	1.7	6

62	Inverse multiplexing gain considering physical layer impairments in mixed line rate networks 2012 ,		6
61	EPON protocol over coax (EPoC): overview and design issues from a MAC layer perspective? 2013 , 51, 144-153		6
60	Multi-Layer Resilient Design for Layer-1 VPNs 2008 ,		6
59	Routing and wavelength assignment in optical WDM networks with maximum quantity of edge disjoint paths. <i>Photonic Network Communications</i> , 2006 , 12, 145-152	1.7	6
58	Auto-Scaling Network Service Chains Using Machine Learning and Negotiation Game. <i>IEEE Transactions on Network and Service Management</i> , 2020 , 17, 1322-1336	4.8	6
57	Distributed sub-light-tree based multicast provisioning with shared protection in elastic optical datacenter networks. <i>Optical Switching and Networking</i> , 2019 , 31, 39-51	1.6	6
56	Data evacuation from data centers in disaster-affected regions through software-defined satellite networks. <i>Computer Networks</i> , 2019 , 148, 88-100	5.4	6
55	A survey on high-precision time synchronization techniques for optical datacenter networks and a zero-overhead microsecond-accuracy solution. <i>Photonic Network Communications</i> , 2018 , 36, 56-67	1.7	6
54	Load balancing and latency reduction in multi-user CoMP over TWDM-VPONs 2016 ,		5
53	Call admission and handoff control in multi-tier cellular networks: algorithms and analysis. <i>Wireless Personal Communications</i> , 2007 , 43, 857-878	1.9	5
52	Reliable multi-path provisioning for high-capacity optical backbone mesh networks		5
51	Design, Analysis, and a Terabit Implementation of a Source-Routing-Based SDN Data Plane. <i>IEEE Systems Journal</i> , 2021 , 15, 56-67	4.3	5
50	Dynamic workload migration over optical backbone network to minimize data center electricity cost 2017 ,		4
49	Cost-efficient live VM migration based on varying electricity cost in optical cloud networks 2014 ,		4
48	Mixed-line-rate optical network design with wavebanding. <i>Optical Switching and Networking</i> , 2012 , 9, 286-296	1.6	4
47	Exploiting connection-holding time for an efficient dynamic traffic grooming 2007 ,		4
46	A novel approach to provision differentiated services in survivable IP-over-WDM networks. <i>Optical Switching and Networking</i> , 2008 , 5, 170-176	1.6	4
45	OPN07-6: New Approaches for Dynamic Routing with Availability Guarantee for Differentiated Services in Survivable Mesh Networks: The Roles of Primary-Backup Link Sharing and Multiple Backup Paths. <i>IEEE Global Telecommunications Conference (GLOBECOM)</i> , 2006 ,		4

44	Impairment-aware Waveband Switching in Optical Networks 2007 ,		4
43	Infrastructure-efficient Virtual-Machine Placement and Workload Assignment in Cooperative Edge-Cloud Computing over Backhaul Networks. <i>IEEE Transactions on Cloud Computing</i> , 2021 , 1-1	3-3	4
42	QoE Enhancement Schemes for Video in Converged OFDMA Wireless Networks and EPONs. <i>Journal of Optical Communications and Networking</i> , 2018 , 10, 229	4-1	4
41	Performance of 10G-EPON in streaming IPTV 2012 ,		3
40	Isolation and resource efficiency of virtual optical networks 2012 ,		3
39	SLA-Aware Provisioning for Revenue Maximization in Telecom Mesh Networks 2008 ,		3
38	Virtualized controller placement for multi-domain optical transport networks using machine learning. <i>Photonic Network Communications</i> , 2020 , 40, 126-136	1-7	3
37	Slice-Aware Service Restoration with Recovery Trucks for Optical Metro-Access Networks 2019 ,		3
36	. <i>IEEE Transactions on Network and Service Management</i> , 2018 , 15, 1615-1629	4-8	3
35	Content Fragmentation: A Redundancy Scheme to Save Energy in Cloud Networks. <i>IEEE Transactions on Green Communications and Networking</i> , 2018 , 2, 1186-1196	4	3
34	Application-Aware Service Degradation in Elastic Optical Networks. <i>IEEE Transactions on Network and Service Management</i> , 2022 , 1-1	4-8	3
33	Priority-aware scheduling for packet-switched optical networks in datacenter 2017 ,		2
32	Green and Low-Risk Content Placement in optical content delivery networks 2016 ,		2
31	Progressive datacenter recovery over optical core networks after a large-scale disaster 2016 ,		2
30	The network user and its growing influence. <i>Computer Communications</i> , 2018 , 131, 43-45	5-1	2
29	On downstream transmissions in EPON Protocol over Coax (EPoC): An analysis of Coax framing approaches and other relevant considerations. <i>Photonic Network Communications</i> , 2014 , 23, 178-189	1-7	2
28	Analysis of inter-domain collaborative routing: provider competition for clients. <i>Journal of Communications and Networks</i> , 2011 , 13, 499-510	4-1	2
27	Efficient VoD Streaming for Broadband Access Networks 2008 ,		2

26	On Provisioning in Dual-Node Interconnected SONET/SDH Rings. <i>IEEE Journal on Selected Areas in Communications</i> , 2008 , 26, 36-46	14.2	2
25	Event-Triggered Reprovisioning with Resource Preemption in WDM Mesh Networks: A Traffic Engineering Approach 2008 ,		2
24	OPN04-6: Concentric Two-Ring Network for the African Continent: A Proposal. <i>IEEE Global Telecommunications Conference (GLOBECOM)</i> , 2006 ,		2
23	A Protocol for Efficient Tunable Laser Utilization to Support Incremental Upgrade in a WDM-PON 2007 ,		2
22	Simple Scheduling Algorithms for Use with a Waveguide Grating Multiplexer Based Local Optical Network. <i>Photonic Network Communications</i> , 1999 , 1, 35-48	1.7	2
21	The Advantages of Partitioning Multicast Transmissions in a Single-Hop Optical WDM Network*. <i>Photonic Network Communications</i> , 1999 , 1, 111-124	1.7	2
20	Algorithms for Optimized Node Arrangements in ShuffleNet Based Multihop Lightwave Networks. <i>Journal of High Speed Networks</i> , 1995 , 4, 361-383	0.4	2
19	ABNO-driven content distribution in the telecom cloud. <i>Optical Switching and Networking</i> , 2017 , 26, 25-386		1
18	Optimal Network Function Virtualization Realizing End-to-End Requests 2014 ,		1
17	On downstream coax framing in EPON protocol over coax (EPoC) 2013 ,		1
16	Adaptive time- and location-aware routing in telecom mesh networks. <i>IET Networks</i> , 2013 , 2, 19-29	2.8	1
15	Mathematical formulation of provisioning of connections with advance reservation in metro WDM ring networks using reconfigurable OADMs (ROADMs) with tuning constraint. <i>Photonic Network Communications</i> , 2007 , 14, 273-285	1.7	1
14	Concentric Two-Ring Network (CTRN): RWA Algorithms and Protection Schemes 2006 ,		1
13	Time-Zone-Aware Traffic Grooming in IP-over-WDM Networks 2007 ,		1
12	A new node architecture employing waveband-selective switching for optical burst-switched networks. <i>IEEE Communications Letters</i> , 2007 , 11, 756-758	3.8	1
11	OPN03-4: Efficient Shared-Segment Protection Exploiting the Knowledge of Connection Holding Time. <i>IEEE Global Telecommunications Conference (GLOBECOM)</i> , 2006 ,		1
10	MultiS-Net: A high-capacity, packet-switched, multichannel, single-hop architecture and protocol for a local lightwave network. <i>Journal of High Speed Networks</i> , 1996 , 5, 221-241	0.4	1
9	Virtualized Controller Placement for Multi-domain Optical Transport Networks. <i>Lecture Notes in Computer Science</i> , 2020 , 39-50	0.9	1

8	Energy-Efficient Baseband Processing via vBBU Migration in Virtualized Cloud-Fog RAN 2019 ,		1
7	. <i>IEEE Transactions on Green Communications and Networking</i> , 2021 , 5, 18-28	4	1
6	Dynamic Controller Deployment for Mixed-Grid Optical Networks 2018 ,		1
5	Light-Trail Design for 5G Backhaul: Architecture, SDN Impact and Coordinated Multipoint. <i>Journal of Lightwave Technology</i> , 2021 , 39, 5383-5396	4	1
4	A hop-constraint timing assembly algorithm for facilitating iBUS in IP-over-WDM networks. <i>IEEE Communications Letters</i> , 2009 , 13, 703-705	3.8	0
3	Guest Editorial on the Optical Fiber Communication Conference and Exposition (OFC) and the National Fiber Optic Engineers Conference (NFOEC). <i>Journal of Lightwave Technology</i> , 2012 , 30, 381-383 ⁴		
2	Guest Editorial on Converged Optical Network Infrastructures in Support of Future Internet and Grid Services Special Issue. <i>Journal of Lightwave Technology</i> , 2009 , 27, 1749-1753	4	
1	Design and Performance Evaluation of a Separated Control Signaling Protocol for WDM Optical Networks. <i>Photonic Network Communications</i> , 2003 , 6, 105-117	1.7	