Madhusanka Liyanage

List of Publications by Year
in descending order

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124 papers	5,922 citations	147801 31 h-index	118850 62 g-index
154 all docs	154 docs citations	154 times ranked	3539 citing authors

#	Article	IF	Citations
1	Survey on Multi-Access Edge Computing for Internet of Things Realization. IEEE Communications Surveys and Tutorials, 2018, 20, 2961-2991.	39.4	535
2	Industry 5.0: A survey on enabling technologies and potential applications. Journal of Industrial Information Integration, 2022, 26, 100257.	6.4	411
3	A Survey on Security and Privacy of 5G Technologies: Potential Solutions, Recent Advancements, and Future Directions. IEEE Communications Surveys and Tutorials, 2020, 22, 196-248.	39.4	315
4	Survey on 6G Frontiers: Trends, Applications, Requirements, Technologies and Future Research. IEEE Open Journal of the Communications Society, 2021, 2, 836-886.	6.9	294
5	Overview of 5G Security Challenges and Solutions. IEEE Communications Standards Magazine, 2018, 2, 36-43.	4.9	293
6	A Survey on Mobile Augmented Reality With 5G Mobile Edge Computing: Architectures, Applications, and Technical Aspects. IEEE Communications Surveys and Tutorials, 2021, 23, 1160-1192.	39.4	279
7	Survey on Network Slicing for Internet of Things Realization in 5G Networks. IEEE Communications Surveys and Tutorials, 2021, 23, 957-994.	39.4	216
8	Survey on blockchain based smart contracts: Applications, opportunities and challenges. Journal of Network and Computer Applications, 2021, 177, 102857.	9.1	207
9	Survey on Multi-Access Edge Computing Security and Privacy. IEEE Communications Surveys and Tutorials, 2021, 23, 1078-1124.	39.4	156
10	The Roadmap to 6G Security and Privacy. IEEE Open Journal of the Communications Society, 2021, 2, 1094-1122.	6.9	141
11	The Role of Blockchain to Fight Against COVID-19. IEEE Engineering Management Review, 2020, 48, 85-96.	1.3	139
12	The Fight Against the COVID-19 Pandemic With 5G Technologies. IEEE Engineering Management Review, 2020, 48, 72-84.	1.3	124
13	The Role of Blockchain in 6G: Challenges, Opportunities and Research Directions. , 2020, , .		123
14	The role of 5G for digital healthcare against COVID-19 pandemic: Opportunities and challenges. ICT Express, 2021, 7, 244-252.	4.8	116
15	5G security: Analysis of threats and solutions. , 2017, , .		97
16	A Survey on the Convergence of Edge Computing and AI for UAVs: Opportunities and Challenges. IEEE Internet of Things Journal, 2022, 9, 15435-15459.	8.7	92
17	AI and 6G Security: Opportunities and Challenges. , 2021, , .		78
18	Secure and Efficient Data Accessibility in Blockchain Based Healthcare Systems. , 2018, , .		71

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19	Opportunities and Challenges of Software-Defined Mobile Networks in Network Security. IEEE Security and Privacy, 2016, 14, 34-44.	1.2	70
20	A Delay-Tolerant Payment Scheme Based on the Ethereum Blockchain. IEEE Access, 2019, 7, 33159-33172.	4.2	65
21	Survey on Blockchain-Based Smart Contracts: Technical Aspects and Future Research. IEEE Access, 2021, 9, 87643-87662.	4.2	65
22	Proxy re-encryption enabled secure and anonymous IoT data sharing platform based on blockchain. Journal of Network and Computer Applications, 2021, 176, 102917.	9.1	64
23	Novel 5G Authentication Protocol to Improve the Resistance Against Active Attacks and Malicious Serving Networks. IEEE Access, 2019, 7, 64040-64052.	4.2	62
24	BlockEdge: Blockchain-Edge Framework for Industrial IoT Networks. IEEE Access, 2020, 8, 154166-154185.	4.2	61
25	Driving forces for Multi-Access Edge Computing (MEC) IoT integration in 5G. ICT Express, 2021, 7, 127-137.	4.8	61
26	Survey on blockchain for future smart grids: Technical aspects, applications, integration challenges and future research. Energy Reports, 2021, 7, 6530-6564.	5.1	58
27	SDN and NFV integration in generalized mobile network architecture. , 2015, , .		52
28	A survey on Zero touch network and Service Management (ZSM) for 5G and beyond networks. Journal of Network and Computer Applications, 2022, 203, 103362.	9.1	47
29	Privacy Protected Blockchain Based Architecture and Implementation for Sharing of Studentsâ€™ Credentials. Information Processing and Management, 2021, 58, 102512.	8.6	46
30	Hand gesture recognition based on a Harris Hawks optimized Convolution Neural Network. Computers and Electrical Engineering, 2022, 100, 107836.	4.8	41
31	5G Privacy: Scenarios and Solutions. , 2018, , .		40
32	Enhancing Security of Software Defined Mobile Networks. IEEE Access, 2017, 5, 9422-9438.	4.2	35
33	Robust and Lightweight Key Exchange (LKE) Protocol for Industry 4.0. IEEE Access, 2020, 8, 132808-132824.	4.2	35
34	Decentralized Iot Edge Nanoservice Architecture for Future Gadget-Free Computing. IEEE Access, 2019, 7, 119856-119872.	4.2	34
35	Fog Computing and Blockchain-Based Security Service Architecture for 5G Industrial IoT-Enabled Cloud Manufacturing. IEEE Transactions on Industrial Informatics, 2022, 18, 7174-7185.	11.3	34
36	Securing the control channel of software-defined mobile networks. , 2014, , .		33

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37	Identity privacy preserving biometric based authentication scheme for Naked healthcare environment. , 2017, , .		33
38	MEC-enabled 5G Use Cases: A Survey on Security Vulnerabilities and Countermeasures. ACM Computing Surveys, 2022, 54, 1-37.	23.0	33
39	Secured VPN Models for LTE Backhaul Networks. , 2012, , .		32
40	Performance Analysis of Local 5G Operator Architectures for Industrial Internet. IEEE Internet of Things Journal, 2020, 7, 11559-11575.	8.7	32
41	Security for Future Software Defined Mobile Networks. , 2015, , .		31
42	Roadmap for edge AI. Computer Communication Review, 2022, 52, 28-33.	1.8	29
43	Towards gadget-free internet services: A roadmap of the Naked world. Telematics and Informatics, 2018, 35, 82-92.	5.8	28
44	Realizing Multi-Access Edge Computing Feasibility: Security Perspective. , 2019, , .		28
45	Novel MEC Based Approaches for Smart Hospitals to Combat COVID-19 Pandemic. IEEE Consumer Electronics Magazine, 2021, 10, 80-91.	2.3	28
46	Zero knowledge proofs based authenticated key agreement protocol for sustainable healthcare. Sustainable Cities and Society, 2022, 80, 103766.	10.4	28
47	Secure communication channel architecture for Software Defined Mobile Networks. Computer Networks, 2017, 114, 32-50.	5.1	27
48	Securing Gadget-Free Digital Services. Computer, 2018, 51, 66-77.	1.1	25
49	Micro-Operator driven Local 5G Network Architecture for Industrial Internet. , 2019, , .		25
50	A Novel Blockchain-as-a-Service (BaaS) Platform for Local 5G Operators. IEEE Open Journal of the Communications Society, 2021, 2, 575-601.	6.9	25
51	Secure Communication and Data Processing Challenges in the Industrial Internet. Baltic Journal of Modern Computing, 2016, 4, .	0.4	23
52	Multi-Access Edge Computing and Blockchain-based Secure Telehealth System Connected with 5G and IoT. , 2020, , .		21
53	Leveraging LTE security with SDN and NFV. , 2015, , .		19
54	Securing virtual private LAN service by efficient key management. Security and Communication Networks, 2014, 7, 1-13.	1.5	18

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55	Anonymous Lightweight Proxy Based Key Agreement for IoT (ALPKA). Wireless Personal Communications, 2019, 106, 345-364.	2.7	18
56	Secure Keying Scheme for Network Slicing in 5G Architecture. , 2019, , .		18
57	AGE: authentication in gadget-free healthcare environments. Information Technology and Management, 2020, 21, 95-114.	2.4	18
58	Convergence of ICN and MEC for 5G: Opportunities and Challenges. IEEE Communications Standards Magazine, 2020, 4, 64-71.	4.9	18
59	Performance Analysis of Blockchain based Smart Grids with Ethereum and Hyperledger Implementations. , 2019, , .		17
60	A scalable and secure VPLS architecture for provider provisioned networks. , 2013, , .		16
61	Implementation and Analysis of Blockchain Based DApp for Secure Sharing of Students' Credentials. , 2020, , .		16
62	Improving the tunnel management performance of secure VPLS architectures with SDN. , 2016, , .		15
63	Blockchain-based Automated Certificate Revocation for 5G IoT. , 2020, , .		15
64	Blockchain for 5G and IoT: Opportunities and Challenges. , 2020, , .		15
65	Blockchain and Cyberphysical Systems. Computer, 2020, 53, 31-35.	1.1	15
66	DEMO: Mobile Relay Architecture for Low-Power IoT Devices. , 2018, , .		13
67	Can Blockchain Strengthen the Energy Internet?. Network, 2021, 1, 95-115.	2.4	13
68	Realizing Internet of Things with Network Slicing: Opportunities and Challenges. , 2021, , .		12
69	Secure and Resilient Communications in the Industrial Internet. Computer Communications and Networks, 2020, , 219-242.	0.8	12
70	Secure Hierarchical VPLS Architecture for Provider Provisioned Networks. IEEE Access, 2015, 3, 967-984.	4.2	11
71	From gadget to gadget-free hyperconnected world: Conceptual analysis of user privacy challenges. , 2017, , .		11
72	Secure hierarchical Virtual Private LAN Services for provider provisioned networks. , 2013, , .		10

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73	IP-Based Virtual Private Network Implementations in Future Cellular Networks. Advances in Wireless Technologies and Telecommunication Book Series, 2014, , 44-66.	0.4	10
74	Proof of Sense: A Novel Consensus Mechanism for Spectrum Misuse Detection. IEEE Transactions on Industrial Informatics, 2022, 18, 9206-9216.	11.3	10
75	Federated Learning based Anomaly Detection as an Enabler for Securing Network and Service Management Automation in Beyond 5G Networks. , 2022, , .		10
76	Novel secure VPN architectures for LTE backhaul networks. Security and Communication Networks, 2016, 9, 1198-1215.	1.5	9
77	Design and Analysis of Independent, Open-Access Wi-Fi Monitoring Infrastructures in Live Environments. , 2014, , 134-147.		9
78	Secure Virtual Private LAN Services: An overview with performance evaluation. , 2015, , .		8
79	Analysis of deployment challenges of Host Identity Protocol. , 2017, , .		8
80	Enabling End-to-End Secure Connectivity for Low-Power IoT Devices with UAVs. , 2019, , .		8
81	An Emergency Situation Detection System for Ambient Assisted Living. , 2020, , .		8
82	Dynamic Orchestration of Security Services at Fog Nodes for 5G IoT. , 2020, , .		8
83	Highly efficient key agreement for remote patient monitoring in MEC-enabled 5G networks. Journal of Supercomputing, 2021, 77, 5562-5585.	3.6	8
84	Security Enhanced Emergency Situation Detection System for Ambient Assisted Living. IEEE Open Journal of the Computer Society, 2021, 2, 241-259.	7.8	8
85	A Survey of Virtual Private LAN Services (VPLS): Past, Present and Future. Computer Networks, 2021, 196, 108245.	5.1	8
86	Realization of Mobile Femtocells: Operational and Protocol Requirements. Wireless Personal Communications, 2013, 71, 339-364.	2.7	7
87	Access Point selection game for mobile wireless users. , 2014, , .		7
88	Software Defined Monitoring (SDM) for 5G mobile backhaul networks. , 2017, , .		7
89	Software defined VPLS architectures: Opportunities and challenges. , 2017, , .		7
90	An efficient anonymous authentication protocol in multiple server communication networks (EAAM). Journal of Supercomputing, 2018, 74, 1695-1714.	3.6	7

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91	Demo: A Delay-Tolerant Payment Scheme on the Ethereum Blockchain. , 2018, , .		7
92	Blockchain-based Decentralized Service Provisioning in Local 6G Mobile Networks. , 2021, , .		7
93	How DoS attacks can be mounted on Network Slice Broker and can they be mitigated using blockchain?. , 2021, , .		7
94	Energy efficient contact tracing and social interaction based patient prediction system for COVID-19 pandemic. Journal of Communications and Networks, 2021, 23, 390-407.	2.6	7
95	Emerging Directions for Blockchainized 6G. IEEE Consumer Electronics Magazine, 2024, 13, 42-51.	2.3	7
96	B-VNF: Blockchain-enhanced Architecture for VNF Orchestration in MEC-5G Networks. , 2020, , .		6
97	Millimeter-Wave Channel Modeling in a Vehicular Ad-Hoc Network Using Boseâ€“Chaudhuriâ€“Hocquenghem (BCH) Code. Electronics (Switzerland), 2021, 10, 992.	3.1	6
98	Realizing contact-less applications with Multi-Access Edge Computing. ICT Express, 2022, 8, 575-587.	4.8	6
99	Performance analysis of open-source Linux-based HIP implementations. , 2015, , .		5
100	Fast Transmission Mechanism for Secure VPLS Architectures. , 2017, , .		5
101	QoESoft: QoE Management Architecture for Softwarized 5G Networks. , 2020, , .		5
102	Local 5G Operator Architecture for Delay Critical Telehealth Applications. , 2020, , .		5
103	Blockchain-based Roaming and Offload Service Platform for Local 5G Operators. , 2021, , .		5
104	A novel distributed spanning tree protocol for provider provisioned VPLS networks. , 2014, , .		4
105	On the security verification of a short message service protocol. , 2018, , .		4
106	Blockchain-Based Wi-Fi Offloading Platform for 5G. , 2020, , .		4
107	A Comprehensive Analysis on Network Slicing for Smart Hospital Applications. , 2022, , .		4
108	Blockchain-Based Network Slice Broker to Facilitate Factory-As-a-Service. IEEE Transactions on Industrial Informatics, 2023, 19, 519-530.	11.3	4

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109	Scalable Storage Scheme for Blockchain-Enabled IoT Equipped Food Supply Chains. , 2021, , .		3
110	Reliable Control and Data Planes forÂSoftwarized Networks. Computer Communications and Networks, 2020, , 243-270.	0.8	3
111	Secure and User Efficient EAP-based Authentication Protocol for IEEE 802.11 Wireless LANs. , 2020, , .		3
112	Performance and security evaluation of intra-vehicular communication architecture. , 2016, , .		2
113	Enhancing Security, Scalability and Flexibility of Virtual Private LAN Services. , 2017, , .		2
114	SDN based operator assisted offloading platform for multi-controller 5G networks. , 2017, , .		2
115	Regulatory Impact on 5G Security and Privacy. , 2018, , 399-419.		2
116	Deployment Options of 5G Network Slicing for Smart Healthcare. , 2022, , .		2
117	A Novel Request Handler Algorithm for Multi-access Edge Computing Platforms in 5G. , 2022, , .		2
118	Network Slicing Strategies for Smart Industry Applications. , 2021, , .		2
119	ESSMAR: Edge Supportive Secure Mobile Augmented Reality Architecture for Healthcare. , 2020, , .		1
120	EISIC 2019 Keynotes. , 2019, , .		0
121	Performance Analysis of Softwarized Local Mobile Networks. , 2021, , .		0
122	The Bitcoin-Network Protocol from a Forensic Perspective. Studies in Big Data, 2020, , 247-275.	1.1	0
123	MEC-RHA: Demonstration of Novel Service Request Handling Algorithm for MEC. , 2022, , .		0
124	Demo: Blockchain-based Secured and Federated Slice Broker (SFSBroker). , 2022, , .		0