Andrei Gurtov

List of Publications by Year
in descending order

172 papers	4,264 citations	236925 25 h-index	155660 55 g-index
186 all docs	186 docs citations	186 times ranked	3297 citing authors

#	ARTICLE	IF	CITATIONS
1	Security in Software Defined Networks: A Survey. IEEE Communications Surveys and Tutorials, 2015, 17, 2317-2346.	39.4	363
2	Overview of 5G Security Challenges and Solutions. IEEE Communications Standards Magazine, 2018, 2, 36-43.	4.9	293
3	Security for 5G and Beyond. IEEE Communications Surveys and Tutorials, 2019, 21, 3682-3722.	39.4	227
4	The Quest for Privacy in the Internet of Things. IEEE Cloud Computing, 2016, 3, 36-45.	3.9	147
5	Two-phase authentication protocol for wireless sensor networks in distributed IoT applications. , 2014, , .		142
6	The Roadmap to 6G Security and Privacy. IEEE Open Journal of the Communications Society, 2021, 2, 1094-1122.	6.9	141
7	Lightweight and Secure Session-Key Establishment Scheme in Smart Home Environments. IEEE Sensors Journal, 2016, 16, 254-264.	4.7	139
8	Host Identity Protocol (HIP): Connectivity, Mobility, Multi-Homing, Security, and Privacy over IPv4 and IPv6 Networks. IEEE Communications Surveys and Tutorials, 2010, 12, 186-204.	39.4	129
9	Anonymous Secure Framework in Connected Smart Home Environments. IEEE Transactions on Information Forensics and Security, 2017, 12, 968-979.	6.9	120
10	Lightweight Authentication and Key Agreement for Smart Metering in Smart Energy Networks. IEEE Transactions on Smart Grid, 2019, 10, 4349-4359.	9.0	102
11	PAuthKey: A Pervasive Authentication Protocol and Key Establishment Scheme for Wireless Sensor Networks in Distributed IoT Applications. International Journal of Distributed Sensor Networks, 2014, 10, 357430.	2.2	101
12	5G security: Analysis of threats and solutions. , 2017, , .		97
13	Group Key Establishment for Enabling Secure Multicast Communication in Wireless Sensor Networks Deployed for IoT Applications. IEEE Access, 2015, 3, 1503-1511.	4.2	96
14	Methodology and Mobile Application for Driver Behavior Analysis and Accident Prevention. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 2427-2436.	8.0	92
15	Modeling wireless links for transport protocols. Computer Communication Review, 2004, 34, 85-96.	1.8	84
16	Effect of vertical handovers on performance of TCP-friendly rate control. Mobile Computing and Communications Review, 2004, 8, 73-87.	1.7	70
17	Opportunities and Challenges of Software-Defined Mobile Networks in Network Security. IEEE Security and Privacy, 2016, 14, 34-44.	1.2	70
18	Deployment of Smart Spaces in Internet of Things: Overview of the Design Challenges. Lecture Notes in Computer Science, 2013, , 48-59.	1.3	69

#	Article	IF	Citations
19	Cloud-Based Driver Monitoring System Using a Smartphone. IEEE Sensors Journal, 2020, 20, 6701-6715.	4.7	59
20	Machine Learning Meets Communication Networks: Current Trends and Future Challenges. IEEE Access, 2020, 8, 223418-223460.	4.2	58
21	A Joint Transmission Power Control and Duty-Cycle Approach for Smart Healthcare System. IEEE Sensors Journal, 2019, 19, 8479-8486.	4.7	55
22	Towards 6G-Enabled Internet of Vehicles: Security and Privacy. IEEE Open Journal of the Communications Society, 2022, 3, 82-105.	6.9	45
23	Effect of Delays on TCP Performance. , 2002, , 87-105.		43
24	SDN Based Inter-Technology Load Balancing Leveraged by Flow Admission Control. , 2013, , .		43
25	Multi-layer protocol tracing in a GPRS network. , 0, , .		39
26	A lightweight portable intrusion detection communication system for auditing applications. International Journal of Communication Systems, 2020, 33, e4327.	2.5	38
27	On the Resiliency of Static Forwarding Tables. IEEE/ACM Transactions on Networking, 2017, 25, 1133-1146.	3.8	36
28	Securing the control channel of software-defined mobile networks. , 2014, , .		33
29	Secured VPN Models for LTE Backhaul Networks. , 2012, , .		32
30	Secure end-to-end communication for constrained devices in IoT-enabled Ambient Assisted Living systems. , 2015, , .		30
31	A Strong Authentication Scheme with User Privacy for Wireless Sensor Networks. ETRI Journal, 2013, 35, 889-899.	2.0	29
32	Secure communication channel architecture for Software Defined Mobile Networks. Computer Networks, 2017, 114, 32-50.	5.1	27
33	Intelligent intrusion detection system in smart grid using computational intelligence and machine learning. Transactions on Emerging Telecommunications Technologies, 2021, 32, e4062.	3.9	26
34	Hi3: An efficient and secure networking architecture for mobile hosts. Computer Communications, 2008, 31, 2457-2467.	5.1	24
35	The quest for resilient (static) forwarding tables. , 2016, , .		24
36	Controller–Pilot Data Link Communication Security. Sensors, 2018, 18, 1636.	3.8	24

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37	Secure Communication and Data Processing Challenges in the Industrial Internet. Baltic Journal of Modern Computing, 2016, 4, .	0.4	23
38	Enabling Secure Mobility with OpenFlow. , 2013, , .		22
39	An Efficient and Adaptive Mutual Authentication Framework for Heterogeneous Wireless Sensor Network-Based Applications. Sensors, 2014, 14, 2732-2755.	3.8	22
40	Certificate-Based Pairwise Key Establishment Protocol for Wireless Sensor Networks. , 2013, , .		21
41	Performance analysis of HIP diet exchange for WSN security establishment. , 2011, , .		20
42	Implementation of OpenFlow based cognitive radio network architecture: SDN&R. Wireless Networks, 2016, 22, 663-677.	3.0	20
43	Smart Spaces-Based Application Development. International Journal of Embedded and Real-Time Communication Systems, 2017, 8, 66-100.	0.5	20
44	Leveraging LTE security with SDN and NFV. , 2015, , .		19
45	Securing virtual private LAN service by efficient key management. Security and Communication Networks, 2014, 7, 1-13.	1.5	18
46	Service Intelligence and Communication Security for Ambient Assisted Living. International Journal of Embedded and Real-Time Communication Systems, 2015, 6, 76-100.	0.5	18
47	Trust and Reputation Mechanisms for Multi-agent Robotic Systems. Lecture Notes in Computer Science, 2014, , 106-120.	1.3	18
48	Performance of host identity protocol on lightweight hardware. , 2007, , .		17
49	A layered encryption mechanism for networked critical infrastructures. IEEE Network, 2013, 27, 12-18.	6.9	17
50	Cooperative security in distributed networks. Computer Communications, 2013, 36, 1284-1297.	5.1	17
51	Proxy-based end-to-end key establishment protocol for the Internet of Things. , 2015, , .		17
52	Lifetime packet discard for efficient real-time transport over cellular links. Mobile Computing and Communications Review, 2003, 7, 32-45.	1.7	17
53	A scalable and secure VPLS architecture for provider provisioned networks. , 2013, , .		16
54	Survey on Congestion Control Mechanisms for Wireless Sensor Networks. Lecture Notes in Computer Science, 2012, , 75-85.	1.3	16

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55	How penalty leads to improvement: A measurement study of wireless backoff in IEEE 802.11 networks. Computer Networks, 2014, 75, 37-57.	5.1	15
56	Hierarchical architectures in structured peer-to-peer overlay networks. Peer-to-Peer Networking and Applications, 2014, 7, 359-395.	3.9	15
57	Towards software defined cognitive networking. , 2015, , .		15
58	Improving the tunnel management performance of secure VPLS architectures with SDN. , 2016, , .		15
59	Collaborative Reputation-based Voice Spam Filtering. , 2009, , .		14
60	isBF: Scalable in-packet bloom filter based multicast. Computer Communications, 2015, 70, 79-85.	5.1	14
61	Access Control Protocol With Node Privacy in Wireless Sensor Networks. IEEE Sensors Journal, 2016, 16, 8142-8150.	4.7	14
62	DEMO: Mobile Relay Architecture for Low-Power IoT Devices. , 2018, , .		13
63	Dew-Cloud-Based Hierarchical Federated Learning for Intrusion Detection in IoMT. IEEE Journal of Biomedical and Health Informatics, 2023, 27, 722-731.	6.3	13
64	Distributed user authentication in wireless LANs. , 2009, , .		12
65	Secure Multipath Transport For Legacy Internet Applications. , 2009, , .		12
66	Security for medical sensor networks in mobile health systems. , 2014, , .		12
67	Secure and Efficient Reactive Video Surveillance for Patient Monitoring. Sensors, 2016, 16, 32.	3.8	12
68	Secure and Resilient Communications in the Industrial Internet. Computer Communications and Networks, 2020, , 219-242.	0.8	12
69	Computing the Retransmission Timeout in CoAP. Lecture Notes in Computer Science, 2013, , 352-362.	1.3	12
70	Secure Hierarchical VPLS Architecture for Provider Provisioned Networks. IEEE Access, 2015, 3, 967-984.	4.2	11
71	Survey on hierarchical routing schemes inÂâ€œflatâ€•distributed hash tables. Peer-to-Peer Networking and Applications, 2011, 4, 346-375.	3.9	10
72	Secure hierarchical Virtual Private LAN Services for provider provisioned networks. , 2013, , .		10

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73	NFV security considerations for cloud-based mobile virtual network operators. , 2016, , .		10
74	CHIP: Collaborative Host Identity Protocol with Efficient Key Establishment for Constrained Devices in Internet of Things. Wireless Personal Communications, 2017, 96, 421-440.	2.7	10
75	IP-Based Virtual Private Network Implementations in Future Cellular Networks. Advances in Wireless Technologies and Telecommunication Book Series, 2014, , 44-66.	0.4	10
76	Novel secure VPN architectures for LTE backhaul networks. Security and Communication Networks, 2016, 9, 1198-1215.	1.5	9
77	Applying a cryptographic namespace to applications. , 2005, , .		8
78	Lightweight authentication and key management on 802.11 with Elliptic Curve Cryptography. , 2013, , .		8
79	Group key establishment for secure multicasting in IoT-enabled Wireless Sensor Networks. , 2015, , .		8
80	Secure Virtual Private LAN Services: An overview with performance evaluation. , 2015, , .		8
81	Analysis of deployment challenges of Host Identity Protocol. , 2017, , .		8
82	Trends and Detection Avoidance of Internet-Connected Industrial Control Systems. IEEE Access, 2019, 7, 155504-155512.	4.2	8
83	Enabling End-to-End Secure Connectivity for Low-Power IoT Devices with UAVs. , 2019, , .		8
84	A Survey of Virtual Private LAN Services (VPLS): Past, Present and Future. Computer Networks, 2021, 196, 108245.	5.1	8
85	On scalability properties of the Hi3 control plane. Computer Communications, 2006, 29, 3591-3601.	5.1	7
86	An Adaptive Backoff Protocol with Markovian Contention Window Control. Communications in Statistics Part B: Simulation and Computation, 2012, 41, 1093-1106.	1.2	7
87	Realization of Mobile Femtocells: Operational and Protocol Requirements. Wireless Personal Communications, 2013, 71, 339-364.	2.7	7
88	Performance evaluation of current and emerging authentication schemes for future 3GPP network architectures. Computer Networks, 2014, 60, 60-74.	5.1	7
89	Access Point selection game for mobile wireless users. , 2014, , .		7
90	Software defined VPLS architectures: Opportunities and challenges. , 2017, , .		7

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91	Decentralized Firmware Attestation for In-Vehicle Networks. , 2019, , .		7
92	Demonstrating ADS-B AND CPDLC Attacks with Software-Defined Radio. , 2020, , .		7
93	Elliptic Curve Cryptography (ECC) for Host Identity Protocol (HIP). , 2010, , .		6
94	Analyzing Internet-connected industrial equipment. , 2018, , .		6
95	Managing Mobile Relays for Secure E2E Connectivity of Low-Power IoT Devices. , 2019, , .		6
96	Traversing Middleboxes with the Host Identity Protocol. Lecture Notes in Computer Science, 2005, , 17-28.	1.3	5
97	On application of Host Identity Protocol in wireless sensor networks. , 2010, , .		5
98	Delegation-based robust authentication model for wireless roaming using portable communication devices. IEEE Transactions on Consumer Electronics, 2014, 60, 668-674.	3.6	5
99	Efficient Key Establishment for Constrained IoT Devices with Collaborative HIP-Based Approach. , 2015, , .		5
100	Fast Transmission Mechanism for Secure VPLS Architectures. , 2017, , .		5
101	Transparent CoAP Services to IoT Endpoints through ICN Operator Networks. Sensors, 2019, 19, 1339.	3.8	5
102	Towards Wearable Sensing Enabled Healthcare Framework for Elderly Patients. , 2020, , .		5
103	Context-Oriented Competence Management in Expert Networks. SPIIRAS Proceedings, 2018, 4, 164.	0.8	5
104	Secure and Efficient IPv4/IPv6 Handovers Using Host-Based Identifier-Locator Split. Journal of Communications Software and Systems, 2017, 6, 1.	0.8	5
105	Demand-aware flow allocation in data center networks. , 2012, , .		4
106	Secure and Multihomed Vehicular Femtocells. , 2012, , .		4
107	Lightweight host and user authentication protocol for All-IP telecom networks. , 2012, , .		4
108	SDN Core for Mobility between Cognitive Radio and 802.11 Networks. , 2014, , .		4

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109	A novel distributed spanning tree protocol for provider provisioned VPLS networks. , 2014, , .		4
110	Securing swarm intellect robots with a police office model. , 2014, , .		4
111	STEM+: Allocating bandwidth fairly to tasks. , 2015, , .		4
112	Controller Pilot Data Link Communication Security: A Practical Study. , 2021, , .		4
113	Securing Medical Sensor Network with HIP. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2012, , 150-157.	0.3	4
114	A Diophantine model of routes in structured P2P overlays. Performance Evaluation Review, 2008, 35, 52-61.	0.6	4
115	Performance of Host Identity Protocol on Symbian OS. , 2009, , .		3
116	Cyclic routing: Generalizing look-ahead in peer-to-peer networks. , 2009, , .		3
117	Usable security management with host identity protocol. , 2009, , .		3
118	CR-Chord: Improving lookup availability in the presence of malicious DHT nodes. Computer Networks, 2011, 55, 2914-2928.	5.1	3
119	Suitability analysis of existing and new authentication methods for future 3GPP Evolved Packet Core. Computer Networks, 2013, 57, 3370-3388.	5.1	3
120	A Simulation Study of the Stochastic Compensation Effect for Packet Reordering in Multipath Data Streaming. , 2015, , .		3
121	CIDOR: Content distribution and retrieval in disaster networks for public protection. , 2017, , .		3
122	IoT and HIP's Opportunistic Mode. IEEE Transactions on Mobile Computing, 2021, 20, 1434-1448.	5.8	3
123	Reliable Control and Data Planes forÂSoftwarized Networks. Computer Communications and Networks, 2020, , 243-270.	0.8	3
124	Performance analysis of general backoff protocols. Journal of Communications Software and Systems, 2017, 4, 13.	0.8	3
125	Filtering SPAM in P2PSIP Communities with Web of Trust. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2009, , 110-121.	0.3	3
126	Aviation Scenarios for 5G and Beyond. , 2020, , .		3

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127	A local equilibrium model for P2P resource ranking. Performance Evaluation Review, 2009, 37, 27-29.	0.6	2
128	Comparison and Analysis of Secure Mobile Architecture (SMA) and Evolved Packet System. , 2011, , .		2
129	Scalable architecture for multimedia multicast Internet applications. , 2012, , .		2
130	A Mobile Object-Based Secret Key Distribution Scheme for Wireless Sensor Networks. , 2013, , .		2
131	Security of Wi-Fi on-board intra-vehicular communication: Field trials of tunnel scenario. , 2013, , .		2
132	An efficient and simple key distribution scheme for smart environments. , 2014, , .		2
133	Addressing a secure session-key scheme for mobility supported e-Healthcare systems. , 2014, , .		2
134	Energy-aware load monitoring for improving battery life of mobile peer-to-peer nodes. Sustainable Computing: Informatics and Systems, 2016, 12, 43-54.	2.2	2
135	Performance and security evaluation of intra-vehicular communication architecture. , 2016, , .		2
136	Enhancing Security, Scalability and Flexibility of Virtual Private LAN Services. , 2017, , .		2
137	Analysis of the state of information security on the basis of surious emission electronic components. , 2017, , .		2
138	Cyclic ranking in single-resource peer-to-peer exchange. Peer-to-Peer Networking and Applications, 2018, 11, 632-643.	3.9	2
139	QUIC Throughput and Fairness over Dual Connectivity. Lecture Notes in Computer Science, 2021, , 175-190.	1.3	2
140	Decentralized Firmware Attestation for In-Vehicle Networks. ACM Transactions on Cyber-Physical Systems, 2021, 5, 1-23.	2.5	2
141	A Security Model for Controller-Pilot Data Communication Link. , 2021, , .		2
142	Securing web content. , 2009, , .		2
143	On calibrating enterprise switch measurements. , 2009, , .		1
144	Secure and usable P2P VoIP for mobile devices. , 2010, , .		1

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145	Playing Defense by Offense: Equilibrium in the DoS-attack problem. , 2010, , .		1
146	Secure Resolution of End-Host Identifiers for Mobile Clients. , 2011, , .		1
147	Inter Technology Load Balancing Algorithm for Evolved Packet System. , 2012, , .		1
148	Mediating Multimedia Traffic with Strict Delivery Constraints. , 2012, , .		1
149	isBF. , 2013, , .		1
150	A novel demand-aware fairness metric for IEEE 802.11 wireless networks. , 2013, , .		1
151	Secure lightweight protocols for medical device monitoring. , 2014, , .		1
152	Nash Bargaining Solution Allocation is Not Suitable for Datacenter Jobs. International Game Theory Review, 2017, 19, 1750001.	0.5	1
153	Hardening Opportunistic HIP. , 2017, , .		1
154	Watch Your Step! Detecting Stepping Stones in Programmable Networks. , 2019, , .		1
155	Eliminating aborted data delivery over cellular links. Mobile Computing and Communications Review, 2003, 7, 53-54.	1.7	1
156	SAVAH: Source Address Validation with Host Identity Protocol. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2009, , 190-201.	0.3	1
157	Improving TCP-Friendliness for mHIP. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2011, , 3-17.	0.3	1
158	Vendor-Independent Software-Defined Networking. , 2021, , .		1
159	Towards behavioral control in multi-player network games. , 2009, , .		0
160	A secure peer-to-peer web framework. , 2010, , .		0
161	DISPUTE: Distributed puzzle tussle. , 2011, , .		0
162	Hierarchical DHT Architectures. , 2013, , 171-226.		0

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163	Terminology, Problems, and Design Issues. , 2013, , 5-23.		0
164	Efficient Key Establishment for Constrained IoT Devices with Collaborative HIP-Based Approach. , 2014, , .		0
165	Poster Abstract: An Efficient Authentication Model in Smart Grid Networks. , 2016, , .		0
166	Location–Price Competition in Mobile Operator Market. International Game Theory Review, 2019, 21, 1850015.	0.5	0
167	Security and Mobility Aspects of Femtocell Networks. Advances in Wireless Technologies and Telecommunication Book Series, 2012, , 124-156.	0.4	0
168	Local Ranking. , 2013, , 133-166.		0
169	Secure and Efficient Automatic Ruling in Three-Level Network Architecture. Advances in Intelligent Systems and Computing, 2016, , 185-194.	0.6	0
170	Security and Mobility Aspects of Femtocell Networks. , 0, , 1634-1666.		0
171	A Comparative Simulation Study of Deterministic and Stochastic Strategies for Reduction of Packet Reordering in Multipath Data Streaming. International Journal of Simulation: Systems, Science and Technology, 0, , .	0.0	0
172	Implementation and Evaluation of the ACE DTLS Framework over Internet of Things Devices. , 2021, , .		0