

Tilman Wolf

List of Publications by Year in descending order

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Version: 2024-02-01

162
papers

1,816
citations

394286

19
h-index

454834

30
g-index

166
all docs

166
docs citations

166
times ranked

1087
citing authors

#	ARTICLE	IF	CITATIONS
1	Assessing Student Learning in a Virtual Laboratory Environment. IEEE Transactions on Education, 2010, 53, 216-222.	2.0	86
2	Adaptive Service-Chain Routing for Virtual Network Functions in Software-Defined Networks. , 2016, , .		70
3	Reconfigurable Hardware for High-Security/ High-Performance Embedded Systems: The SAFES Perspective. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2008, 16, 144-155.	2.1	65
4	Design issues for high-performance active routers. IEEE Journal on Selected Areas in Communications, 2001, 19, 404-409.	9.7	62
5	ChoiceNet. Computer Communication Review, 2014, 44, 58-65.	1.5	57
6	Hardware Support for Secure Processing in Embedded Systems. IEEE Transactions on Computers, 2010, 59, 847-854.	2.4	56
7	Configuring sessions in programmable networks. Computer Networks, 2003, 41, 269-284.	3.2	49
8	Service-Centric End-to-End Abstractions in Next-Generation Networks. Computer Communications and Networks (IC3N), Proceedings of the IEEE International Conference on, 2006, , .	0.0	42
9	Embedded systems securityâ€™an overview. Design Automation for Embedded Systems, 2008, 12, 173-183.	0.7	42
10	Accurate anomaly detection through parallelism. IEEE Network, 2009, 23, 22-28.	4.9	34
11	Choice as a principle in network architecture. , 2012, , .		30
12	Automated Sensor Verification Using Outlier Detection in the Internet of Things. , 2012, , .		29
13	A Cournotâ€™Nashâ€™Bertrand game theory model of a service-oriented Internet with price and quality competition among network transport providers. Computational Management Science, 2014, 11, 475-502.	0.8	29
14	Challenges and Applications for Network-Processor-Based Programmable Routers. , 2006, , .		27
15	A network economic game theory model of a service-oriented internet with choices and quality competition. NETNOMICS: Economic Research and Electronic Networking, 2013, 14, 1-25.	0.9	27
16	Hardware support for secure processing in embedded systems. Proceedings - Design Automation Conference, 2007, , .	0.0	26
17	Design of a Network Service Architecture. , 2007, , .		26
18	Performance models for network processor design. IEEE Transactions on Parallel and Distributed Systems, 2006, 17, 548-561.	4.0	25

#	ARTICLE	IF	CITATIONS
19	On runtime management in multi-core packet processing systems. , 2008, , .		25
20	In-network services for customization in next-generation networks. IEEE Network, 2010, 24, 6-12.	4.9	25
21	Efficient conflict detection in flow-based virtualized networks. , 2012, , .		24
22	Attacks and Defenses in the Data Plane of Networks. IEEE Transactions on Dependable and Secure Computing, 2012, 9, 798-810.	3.7	23
23	Design Tradeoffs for Embedded Network Processors. Lecture Notes in Computer Science, 2002, , 149-164.	1.0	23
24	Predictive scheduling of network processors. Computer Networks, 2003, 41, 601-621.	3.2	22
25	Design considerations for network processor operating systems. , 2005, , .		22
26	Profiling and mapping of parallel workloads on network processors. , 2005, , .		22
27	Analysis of network processing workloads. Journal of Systems Architecture, 2009, 55, 421-433.	2.5	22
28	Runtime Support for Multicore Packet Processing Systems. IEEE Network, 2007, 21, 29-37.	4.9	21
29	VHub: Single-stage virtual network mapping through hub location. Computer Networks, 2015, 77, 169-180.	3.2	21
30	Attacks on Network Infrastructure. , 2011, , .		18
31	A Lightweight Payment Verification Protocol for Blockchain Transactions on IoT Devices. , 2019, , .		18
32	Teaching experiences with a virtual network laboratory. , 2007, , .		17
33	Choice as a principle in network architecture. Computer Communication Review, 2012, 42, 105-106.	1.5	17
34	A Credential-Based Data Path Architecture for Assurable Global Networking. , 2007, , .		16
35	High-Speed Prefix-Preserving IP Address Anonymization for Passive Measurement Systems. IEEE/ACM Transactions on Networking, 2007, 15, 26-39.	2.6	16
36	Analysis of Network Processing Workloads. , 2005, , .		15

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37	Transparent TCP acceleration. Computer Communications, 2009, 32, 691-702.	3.1	15
38	Analytic modeling of network processors for parallel workload mapping. Transactions on Embedded Computing Systems, 2009, 8, 1-29.	2.1	15
39	Design of a secure packet processor. , 2010, , .		15
40	A Network Economic Game Theory Model of a Service-Oriented Internet with Price and Quality Competition in Both Content and Network Provision. Service Science, 2014, 6, 229-250.	0.9	15
41	Picking Pesky Parameters: Optimizing Regular Expression Matching in Practice. IEEE Transactions on Parallel and Distributed Systems, 2016, 27, 1430-1442.	4.0	15
42	Practical Packet Pacing in Small-Buffer Networks. , 2009, , .		14
43	Virtual network mapping with traffic matrices. , 2012, , .		14
44	Runtime Task Allocation in Multicore Packet Processing Systems. IEEE Transactions on Parallel and Distributed Systems, 2012, 23, 1934-1943.	4.0	14
45	Poster Abstract: Privacy in Blockchain-Enabled IoT Devices. , 2018, , .		14
46	Implementation of end-to-end abstractions in a network service architecture. , 2008, , .		13
47	Source authentication and path validation with orthogonal network capabilities. , 2015, , .		13
48	Multi-criteria Routing in Networks with Path Choices. , 2015, , .		13
49	A scalable distributed routing protocol for networks with data-path services. Network Protocols (ICNP), Proceedings of the IEEE International Conference on, 2008, , .	0.0	12
50	Automated Service Composition and Routing in Networks with Data-Path Services. , 2010, , .		12
51	Virtual Network Mapping with Traffic Matrices. , 2011, , .		12
52	Automated composition of data-path functionality in the future internet. IEEE Network, 2011, 25, 8-14.	4.9	12
53	Security issues in network virtualization for the future Internet. , 2012, , .		12
54	RuleTailor: Optimizing Flow Table Updates in OpenFlow Switches With Rule Transformations. IEEE Transactions on Network and Service Management, 2019, 16, 1581-1594.	3.2	12

#	ARTICLE	IF	CITATIONS
55	Efficient and Consistent TCAM Updates. , 2020, , .		12
56	Source Authentication and Path Validation in Networks Using Orthogonal Sequences. , 2016, , .		11
57	Reconfigurable Security Support for Embedded Systems. , 2006, , .		10
58	Teaching experiences with a virtual network laboratory. SIGCSE Bulletin, 2007, 39, 481-485.	0.1	10
59	Saving energy and improving TCP throughput with rate adaptation in Ethernet. , 2012, , .		10
60	GitFlow. , 2015, , .		10
61	Evaluating Algorithms for Composable Service Placement in Computer Networks. , 2009, , .		9
62	Delaying Transmissions in Data Communication Networks to Improve Transport-Layer Performance. IEEE Journal on Selected Areas in Communications, 2011, 29, 916-927.	9.7	9
63	The Cyber-Physical Marketplace: A Framework for Large-Scale Horizontal Integration in Distributed Cyber-Physical Systems. , 2013, , .		9
64	High-performance hardware monitors to protect network processors from data plane attacks. , 2013, , .		9
65	Design of a protocol to enable economic transactions for network services. , 2015, , .		9
66	Self-Adapting Quorum-Based Neighbor Discovery in Wireless Sensor Networks. , 2018, , .		9
67	Considering processing cost in network simulations. , 2003, , .		9
68	Aggregated hierarchical multicast-a many-to-many communication paradigm using programmable networks. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2003, 33, 358-369.	3.3	8
69	Application analysis and resource mapping for heterogeneous network processor architectures. , 2005, , 279-308.		8
70	Automated Service Composition in Next-Generation Networks. , 2009, , .		8
71	A Practical On-line Pacing Scheme at Edges of Small Buffer Networks. , 2010, , .		8
72	Packet forwarding misbehavior detection in next-generation networks. , 2012, , .		8

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73	Mapping of delay-sensitive virtual networks. , 2014, , .		8
74	A Coin-Operated Software-Defined Exchange. , 2016, , .		8
75	A Dynamic Network Economic Model of a Service-Oriented Internet with Price and Quality Competition. Springer Optimization and Its Applications, 2014, , 239-264.	0.6	8
76	Evaluating Dynamic Task Mapping in Network Processor Runtime Systems. IEEE Transactions on Parallel and Distributed Systems, 2008, 19, 1086-1098.	4.0	7
77	Massively Parallel Anomaly Detection in Online Network Measurement. , 2008, , .		7
78	Dynamic workload profiling and task allocation in packet processing systems. , 2008, , .		7
79	Transparent TCP acceleration through network processing. , 2005, , .		6
80	Design of a network architecture with inherent data path security. , 2007, , .		6
81	Data path credentials for high-performance capabilities-based networks. , 2008, , .		6
82	Operational experience with a virtual networking laboratory. SIGCSE Bulletin, 2008, 40, 427-431.	0.1	6
83	Runtime resource allocation in multi-core packet processing systems. , 2009, , .		6
84	Implementation of a simplified network processor. , 2010, , .		6
85	VNMBench: A Benchmark for Virtual Network Mapping Algorithms. , 2012, , .		6
86	A Layered Protocol Architecture for Scalable Innovation and Identification of Network Economic Synergies in the Internet of Things. , 2016, , .		6
87	Denial-of-Service Prevention for Software-Defined Network Controllers. , 2016, , .		6
88	Dynamic Hardware Monitors for Network Processor Protection. IEEE Transactions on Computers, 2016, 65, 860-872.	2.4	6
89	Traffic Engineering in Information-Centric Networking: Opportunities, Solutions and Challenges. IEEE Communications Magazine, 2018, 56, 124-130.	4.9	6
90	Benchmarking BGP Routers. , 2007, , .		5

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91	Evaluation of an Online Parallel Anomaly Detection System. , 2008, , .		5
92	Impact of arrival burstiness on queue length: An infinitesimal perturbation analysis. , 2009, , .		5
93	High-Performance Capabilities for 1-Hop Containment of Network Attacks. IEEE/ACM Transactions on Networking, 2013, 21, 1931-1946.	2.6	5
94	A One-Way Proof-of-Work Protocol to Protect Controllers in Software-Defined Networks. , 2016, , .		5
95	Hardware support for embedded operating system security. , 2017, , .		5
96	Design of a network service processing platform for data path customization. , 2009, , .		5
97	Stochastic Sampling for Internet Traffic Measurement. , 2007, , .		4
98	A Framework for Network State Management in the Next-Generation Internet Architecture. , 2008, , .		4
99	A high-performance capabilities-based network protocol. , 2009, , .		4
100	Fair multithreading on packet processors for scalable network virtualization. , 2010, , .		4
101	Fast regular expression matching in hardware using NFA-BDD combination. , 2010, , .		4
102	Securing the data path of next-generation router systems. Computer Communications, 2011, 34, 598-606.	3.1	4
103	External monitoring of highly parallel network processors. , 2013, , .		4
104	OrthCredential: A New Network Capability Design for High-Performance Access Control. , 2014, , .		4
105	A Characterization of High-Performance Network Monitoring Systems and Workloads. , 2007, , .		3
106	Simplifying data path processing in next-generation routers. , 2009, , .		3
107	Design of a Secure Router System for Next-Generation Networks. , 2009, , .		3
108	Distributed runtime load-balancing for software routers on homogeneous many-core processors. , 2010, , .		3

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109	A Taxonomy and Comparative Evaluation of Algorithms for Parallel Anomaly Detection. , 2010, , .		3
110	High-performance implementation of in-network traffic pacing. , 2011, , .		3
111	Inferring Packet Processing Behavior Using Input/Output Monitors. , 2011, , .		3
112	A Study of the Impact of Network Traffic Pacing from Network and End-User Perspectives. , 2011, , .		3
113	Encrypted Packet Forwarding in Virtualized Networks. , 2011, , .		3
114	Scalable hardware monitors to protect network processors from data plane attacks. , 2013, , .		3
115	Service Instantiation in an Internet with Choices. , 2013, , .		3
116	Picking pesky parameters: Optimizing regular expression matching in practice. , 2013, , .		3
117	Adaptive wireless mesh networks: Surviving weather without sensing it. Computer Communications, 2014, 54, 120-130.	3.1	3
118	System-level security for network processors with hardware monitors. , 2014, , .		3
119	Topology reconstruction via path recording in secure MANET. , 2008, , .		2
120	AnomBench: A Benchmark for Volume-Based Internet Anomaly Detection. , 2009, , .		2
121	Multiple object tracking in sensor networks using distributed clique finding. , 2013, , .		2
122	Network-level privacy for hosted cloud services. , 2014, , .		2
123	Overcoming economic challenges of internet operators in low income regions through a delay tolerant architecture with mechanic backhauls. NETNOMICS: Economic Research and Electronic Networking, 2014, 15, 183-213.	0.9	2
124	Securing Network Processors with High-Performance Hardware Monitors. IEEE Transactions on Dependable and Secure Computing, 2015, 12, 652-664.	3.7	2
125	A Vision for a Spot Market for Interdomain Connectivity. , 2019, , .		2
126	Enabling Virtual Network Functions in Named Data Networking. , 2021, , .		2

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127	Network processors. Computer Communication Review, 2002, 32, 65-65.	1.5	1
128	A methodology for evaluating runtime support in network processors. , 2006, , .		1
129	Specification of Network Services and Mapping Algorithms. , 2006, , .		1
130	A next generation internet state management framework. , 2007, , .		1
131	Support for Dynamic Adaptation in Next Generation Packet Processing Systems. , 2009, , .		1
132	Evaluation of Path Recording Techniques in Secure MANET. , 2009, , .		1
133	Burstiness as traffic metric in next-generation optical core networks. , 2009, , .		1
134	Data Path Management in Mesh-Based Programmable Routers. , 2010, , .		1
135	Specification and composition of network services in future internet architectures. , 2012, , .		1
136	Stack protection in packet processing systems. , 2014, , .		1
137	Exploring economic dynamics in an Internet with service choices. , 2015, , .		1
138	Multi-task support for security-enabled embedded processors. , 2015, , .		1
139	A Hardware Monitor to Protect Linux System Calls. , 2018, , .		1
140	Enhancing Interdomain Transport via Economic Software-Defined Exchange Points. , 2019, , .		1
141	Using Natural Language Constructs and Concepts to Aid Network Management. , 2019, , .		1
142	Automated Event Identification from System Logs Using Natural Language Processing. , 2020, , .		1
143	Synchronous Cohort-Based International Education. , 0, , .		1
144	Assessing the impact of inking technology in a large digital design course. SIGCSE Bulletin, 2007, 39, 79-83.	0.1	0

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145	Guest editorial for special issue on embedded system security. Design Automation for Embedded Systems, 2008, 12, 171-172.	0.7	0
146	A Distributed Routing Algorithm for Networks with Data-Path Services. , 2008, , .		0
147	Techniques for policy enforcement on encrypted network traffic. , 2009, , .		0
148	Interfacing to a virtualized network infrastructure through network service abstractions. , 2009, , .		0
149	ICCCN 2009 Message from the Technical Program Chairs. , 2009, , .		0
150	ICCCN 2010 Message from the General Chairs. , 2010, , .		0
151	Enforcement of Data-Plane Policies in Next-Generation Networks. , 2010, , .		0
152	Convergence of Communication and Processing in Next-Generation Networks. , 2010, , .		0
153	Extensible hierarchical simulation of network systems. , 2012, , .		0
154	High-performance implementation of in-network traffic pacing for small-buffer networks. Computer Communications, 2013, 36, 1450-1459.	3.1	0
155	Design of credentials for high-speed access control in service-oriented networks. , 2013, , .		0
156	Fast shortest-path queries on large-scale graphs. , 2016, , .		0
157	Economic incentives in virtualized access networks. , 2017, , .		0
158	The Future of CISE Distributed Research Infrastructure. Computer Communication Review, 2018, 48, 46-51.	1.5	0
159	Securing IoT Protocol Implementations Through Hardware Monitoring. , 2019, , .		0
160	Implementation of Network Source Authentication and Path Validation Using Orthogonal Sequences. , 2020, , .		0
161	Towards Pricing Mechanisms for Delay Tolerant Services. International Journal of Computers, Communications and Control, 2015, 11, 77.	1.2	0
162	Scalable Synchronous Cohort-based International Education. , 0, , .		0