

# Nael B Abu-Ghazaleh

## List of Publications by Year in descending order

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126  
papers

3,541  
citations

516710

16  
h-index

265206

42  
g-index

132  
all docs

132  
docs citations

132  
times ranked

2034  
citing authors

#	ARTICLE	IF	CITATIONS
1	Microarchitectural Attacks in Heterogeneous Systems: A Survey. ACM Computing Surveys, 2023, 55, 1-40.	23.0	1
2	DNS Poisoning of Operating System Caches: Attacks and Mitigations. IEEE Transactions on Dependable and Secure Computing, 2022, 19, 2851-2863.	5.4	3
3	BlockMaestro: Enabling Programmer-Transparent Task-based Execution in GPU Systems. , 2021, , .		8
4	Leaky Buddies: Cross-Component Covert Channels on Integrated CPU-GPU Systems. , 2021, , .		9
5	Beyond the CPU: Side-Channel Attacks on GPUs. IEEE Design and Test, 2021, 38, 15-21.	1.2	0
6	JetStream: Graph Analytics on Streaming Data with Event-Driven Hardware Accelerator. , 2021, , .		10
7	EnsembleHMD: Accurate Hardware Malware Detectors with Specialized Ensemble Classifiers. IEEE Transactions on Dependable and Secure Computing, 2020, 17, 620-633.	5.4	27
8	Side Channel Attacks on GPUs. IEEE Transactions on Dependable and Secure Computing, 2020, , 1-1.	5.4	4
9	SpecCFI: Mitigating Spectre Attacks using CFI Informed Speculation. , 2020, , .		32
10	GraphPulse: An Event-Driven Hardware Accelerator for Asynchronous Graph Processing. , 2020, , .		29
11	BOW: Breathing Operand Windows to Exploit Bypassing in GPUs. , 2020, , .		7
12	Securing Machine Learning Architectures and Systems. , 2020, , .		1
13	PerSpectron: Detecting Invariant Footprints of Microarchitectural Attacks with Perceptron. , 2020, , .		10
14	GPUGuard. , 2019, , .		20
15	PAPP. , 2019, , .		9
16	SafeSpec. , 2019, , .		89
17	Collaborative Client-Side DNS Cache Poisoning Attack. , 2019, , .		28
18	CORF. , 2019, , .		15

#	ARTICLE	IF	CITATIONS
19	How the spectre and meltdown hacks really worked. IEEE Spectrum, 2019, 56, 42-49.	0.7	21
20	Locality-Aware GPU Register File. IEEE Computer Architecture Letters, 2019, 18, 153-156.	1.5	6
21	SDSense: An Agile and Flexible SDN-Based Framework for Wireless Sensor Networks. IEEE Transactions on Vehicular Technology, 2019, 68, 1866-1876.	6.3	28
22	LATCH. , 2019, , .		4
23	PDES-A. ACM Transactions on Modeling and Computer Simulation, 2019, 29, 1-25.	0.8	4
24	Performance Implications of Global Virtual Time Algorithms on a Knights Landing Processor. , 2018, , .		1
25	In-Register Parameter Caching for Dynamic Neural Nets with Virtual Persistent Processor Specialization. , 2018, , .		12
26	Rendered Insecure. , 2018, , .		92
27	RIC. , 2017, , .		47
28	RHMD. , 2017, , .		48
29	Covert Channels on GPGPUs. IEEE Computer Architecture Letters, 2017, 16, 22-25.	1.5	6
30	Hardening extended memory access control schemes with self-verified address spaces. , 2017, , .		0
31	Constructing and characterizing covert channels on GPGPUs. , 2017, , .		35
32	Performance Characterization of Parallel Discrete Event Simulation on Knights Landing Processor. , 2017, , .		14
33	PDES-A. , 2017, , .		8
34	Jump over ASLR: Attacking branch predictors to bypass ASLR. , 2016, , .		121
35	CTCV: A protocol for Coordinated Transport of Correlated Video in Smart Camera Networks. , 2016, , .		2
36	Hardware-Based Malware Detection Using Low-Level Architectural Features. IEEE Transactions on Computers, 2016, 65, 3332-3344.	3.4	74

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37	Wireless Software Defined Networking: A Survey and Taxonomy. IEEE Communications Surveys and Tutorials, 2016, 18, 2713-2737.	39.4	179
38	A high-resolution side-channel attack on last-level cache. , 2016, , .		72
39	Efficient and Consistent Path Loss Model for Mobile Network Simulation. IEEE/ACM Transactions on Networking, 2016, 24, 1774-1786.	3.8	18
40	Understanding and Mitigating Covert Channels Through Branch Predictors. Transactions on Architecture and Code Optimization, 2016, 13, 1-23.	2.0	54
41	Rethinking Memory Permissions for Protection Against Cross-Layer Attacks. Transactions on Architecture and Code Optimization, 2016, 12, 1-27.	2.0	2
42	Covert channels through branch predictors. , 2015, , .		34
43	Malware-aware processors: A framework for efficient online malware detection. , 2015, , .		103
44	Controlled Contention: Balancing Contention and Reservation in Multicore Application Scheduling. , 2015, , .		3
45	Ensemble Learning for Low-Level Hardware-Supported Malware Detection. Lecture Notes in Computer Science, 2015, , 3-25.	1.3	56
46	Interaction Engineering: Achieving Perfect CSMA Handshakes in Wireless Networks. IEEE Transactions on Mobile Computing, 2014, 13, 2552-2565.	5.8	4
47	Exploring many-core architecture design space for parallel discrete event simulation. , 2014, , .		1
48	On the expected size of minimum-energy path-preserving topologies for wireless multi-hop networks. , 2014, , .		3
49	Coverage in visual sensor networks with Pan-Tilt-Zoom cameras: The MaxFoV problem. , 2014, , .		15
50	SIFT: Low-Complexity Energy-Efficient Information Flow Tracking on SMT Processors. IEEE Transactions on Computers, 2014, 63, 484-496.	3.4	3
51	A Non-Inclusive Memory Permissions architecture for protection against cross-layer attacks. , 2014, , .		4
52	Parallel Discrete Event Simulation for Multi-Core Systems: Analysis and Optimization. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 1574-1584.	5.6	42
53	Coverage algorithms for visual sensor networks. ACM Transactions on Sensor Networks, 2013, 9, 1-36.	3.6	62
54	Interference resilient PDES on multi-core systems. , 2013, , .		4

#	ARTICLE	IF	CITATIONS
55	Can PDES scale in environments with heterogeneous delays?. , 2013, , .		5
56	SCRAP: Architecture for signature-based protection from Code Reuse Attacks. , 2013, , .		50
57	Double Regression: Efficient spatially correlated path loss model for wireless network simulation. , 2013, , .		2
58	Non-monopolizable caches. Transactions on Architecture and Code Optimization, 2012, 8, 1-21.	2.0	134
59	Coverage management for mobile targets in visual sensor networks. , 2012, , .		6
60	Branch regulation. Computer Architecture News, 2012, 40, 94-105.	2.5	37
61	Packet aggregation in multi-rate wireless LANs. , 2012, , .		9
62	Optimization of Parallel Discrete Event Simulator for Multi-core Systems. , 2012, , .		36
63	Performance Analysis of a Multithreaded PDES Simulator on Multicore Clusters. , 2012, , .		7
64	Partitioning on Dynamic Behavior for Parallel Discrete Event Simulation. , 2012, , .		11
65	Branch regulation: Low-overhead protection from code reuse attacks. , 2012, , .		15
66	Characterizing and Understanding PDES Behavior on Tiler Architecture. , 2012, , .		18
67	Analysis of TCP performance on multi-hop wireless networks: A cross layer approach. Ad Hoc Networks, 2012, 10, 586-603.	5.5	13
68	The effect of contention in CSMA networks: Model and fairness protocol. Performance Evaluation, 2011, 68, 782-805.	1.2	3
69	Link quality analysis and measurement in wireless mesh networks. Ad Hoc Networks, 2011, 9, 1430-1447.	5.5	12
70	TPM-SIM. , 2011, , .		6
71	Getting CS undergraduates to communicate effectively. , 2011, , .		4
72	Target-oriented coverage maximization in visual sensor networks. , 2011, , .		6

#	ARTICLE	IF	CITATIONS
73	SIFT. , 2011, , .		23
74	Is there a need for multiple APs in home networks?. , 2011, , .		0
75	Modeling and analysis of two-flow interactions in wireless networks. Ad Hoc Networks, 2010, 8, 564-581.	5.5	12
76	Exploiting slack time for just-in-time scheduling in wireless sensor networks. Real-Time Systems, 2010, 45, 1-25.	1.3	1
77	A realistic model of co-located interference for wireless network packet simulation. , 2010, , .		5
78	Scalable target coverage in smart camera networks. , 2010, , .		22
79	Performance Evaluation of PDES on Multi-core Clusters. , 2010, , .		4
80	Measurement and Analysis of Link Quality in Wireless Networks: An Application Perspective. , 2010, , .		16
81	Anomalies in optimal rate-control and scheduling protocols for Cognitive Radio Networks. , 2010, , .		0
82	A Predictive Model for Cache-Based Side Channels in Multicore and Multithreaded Microprocessors. Lecture Notes in Computer Science, 2010, , 70-85.	1.3	6
83	Interaction engineering. , 2010, , .		2
84	A MAC interaction aware routing metric in wireless network. , 2010, , .		1
85	On the accuracy of RFID-based localization in a mobile wireless network testbed. , 2009, , .		8
86	Estimated Measurement-Based Markov Models: Towards Flexible and Accurate Modeling of Wireless Channels. , 2009, , .		1
87	Testbed design and localization in MiNT-2: A miniaturized robotic platform for wireless protocol development and emulation. , 2009, , .		9
88	How do wireless chains behave?. , 2009, , .		11
89	TARP: Timing Analysis Resilient Protocol for Wireless Sensor Networks. , 2009, , .		5
90	RFID based localization for a miniaturized robotic platform for wireless protocols evaluation. , 2009, , .		9

#	ARTICLE	IF	CITATIONS
91	Interference across Multi-hop Wireless Chains. , 2009, , .		4
92	Contention in multi-hop wireless networks. , 2009, , .		6
93	TCP over Multi-Hop Wireless Networks: The Impact of MAC Level Interactions. Lecture Notes in Computer Science, 2009, , 1-15.	1.3	4
94	Congestion Control in Wireless Ad Hoc Networks. Computer Communications and Networks, 2009, , 355-389.	0.8	0
95	An application-driven approach to designing secure wireless sensor networks. Wireless Communications and Mobile Computing, 2008, 8, 369-384.	1.2	6
96	Modeling and Analysis of Two-Flow Interactions in Wireless Networks. , 2008, , .		5
97	Stateless and guaranteed geometric routing on virtual coordinate systems. , 2008, , .		5
98	Modeling of two-flow interactions under SINR model in Multi-hop Wireless Networks. , 2008, , .		13
99	GLOBALLY AWARE ROUTING IN MULTI-HOP WIRELESS NETWORKS: A FORMULATION AND ANALYSIS. Journal of Interconnection Networks, 2008, 09, 205-230.	1.0	1
100	Scheduling aware network flow models for multi-hop wireless networks. , 2008, , .		6
101	Self-interference in Multi-hop Wireless Chains: Geometric Analysis and Performance Study. Lecture Notes in Computer Science, 2008, , 58-71.	1.3	11
102	Towards Interference-Aware Routing for Real-time Traffic in Multi-hop Wireless Networks. , 2007, , .		7
103	Proxy-based Grid Information Dissemination. , 2007, , .		6
104	Location verification and trust management for resilient geographic routing. Journal of Parallel and Distributed Computing, 2007, 67, 215-228.	4.1	91
105	Automatic Clustering for Self-Organizing Grids. , 2006, , .		4
106	An Adaptive Algorithm for Information Dissemination in Self-Organizing Grids. , 2006, , .		5
107	Aligned Virtual Coordinates for Greedy Routing in WSNs. , 2006, , .		38
108	Storage Management in Wireless Sensor Networks. , 2006, , 257-281.		5

#	ARTICLE	IF	CITATIONS
109	An application-driven perspective on wireless sensor network security. , 2006, , .		32
110	Limiting Optimism: Time or Event Count?. , 2006, , .		1
111	Virtual Coordinates with Backtracking for Void Traversal in Geographic Routing. Lecture Notes in Computer Science, 2006, , 46-59.	1.3	37
112	Towards resilient geographic routing in WSNs. , 2005, , .		38
113	Dynamic Resource Discovery for Sensor Networks. Lecture Notes in Computer Science, 2005, , 785-796.	1.3	13
114	Preemptive routing in ad hoc networks. Journal of Parallel and Distributed Computing, 2003, 63, 123-140.	4.1	98
115	Infrastructure tradeoffs for sensor networks. , 2002, , .		182
116	A taxonomy of wireless micro-sensor network models. Mobile Computing and Communications Review, 2002, 6, 28-36.	1.7	776
117	A performance and scalability analysis framework for parallel discrete event simulators. Simulation Modelling Practice and Theory, 2001, 8, 529-553.	0.3	6
118	The Shared Control Parallel Architecture Model. Journal of Parallel and Distributed Computing, 2001, 61, 767-783.	4.1	0
119	Preemptive routing in Ad Hoc networks. , 2001, , .		114
120	Managing Control Asynchrony on SIMD Machinesâ€”a Survey. Advances in Computers, 1999, , 239-302.	1.6	1
121	Models for Control Unit Synchronization on Shared Control Architectures. Journal of Parallel and Distributed Computing, 1998, 52, 69-81.	4.1	3
122	Shared control â€” Supporting control parallelism using a SIMD-like architecture. Lecture Notes in Computer Science, 1998, , 1089-1099.	1.3	5
123	An active layer extension to MPI. Lecture Notes in Computer Science, 1998, , 97-104.	1.3	2
124	A framework for performance analysis of parallel discrete event simulators. , 1997, , .		8
125	Variable instruction scheduling for MIMD interpretation on pipelined SIMD machines and for compositional instruction sets. Concurrency and Computation: Practice and Experience, 1997, 9, 21-39.	0.5	3
126	Composing functional unit blocks for efficient Interpretation of MIMD code sequences on SIMD processors. Lecture Notes in Computer Science, 1994, , 616-627.	1.3	6