Alex Biryukov

List of Publications by Year
in descending order

91	4,407	159525 30	138417 58
papers	citations	h-index	g-index

97	97	97	1564
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cryptanalysis of Skipjack Reduced to 31 Rounds Using Impossible Differentials. Lecture Notes in Computer Science, 1999, , 12-23.	1.0	331
2	Deanonymisation of Clients in Bitcoin P2P Network. , 2014, , .		318
3	Real Time Cryptanalysis of A5/1 on a PC. Lecture Notes in Computer Science, 2001, , 1-18.	1.0	239
4	Related-Key Cryptanalysis of the Full AES-192 and AES-256. Lecture Notes in Computer Science, 2009, , 1-18.	1.0	239
5	Cryptanalytic Time/Memory/Data Tradeoffs for Stream Ciphers. Lecture Notes in Computer Science, 2000, , 1-13.	1.0	201
6	Distinguisher and Related-Key Attack on the Full AES-256. Lecture Notes in Computer Science, 2009, , 231-249.	1.0	185
7	Advanced Slide Attacks. Lecture Notes in Computer Science, 2000, , 589-606.	1.0	141
8	Data Encryption Standard (DES). , 2011, , 295-301.		117
9	Bitcoin over Tor isn't a Good Idea. , 2015, , .		105
10	Miss in the Middle Attacks on IDEA and Khufu. Lecture Notes in Computer Science, 1999, , 124-138.	1.0	103
11	Argon2: New Generation of Memory-Hard Functions for Password Hashing and Other Applications. , 2016, , .		100
12	Cryptanalysis of Skipjack Reduced to 31 Rounds Using Impossible Differentials. Journal of Cryptology, 2005, 18, 291-311.	2.1	95
13	Content and Popularity Analysis of Tor Hidden Services. , 2014, , .		88
14	A Toolbox for Cryptanalysis: Linear and Affine Equivalence Algorithms. Lecture Notes in Computer Science, 2003, , 33-50.	1.0	87
15	Key Recovery Attacks of Practical Complexity on AES-256 Variants with up to 10 Rounds. Lecture Notes in Computer Science, 2010, , 299-319.	1.0	85
16	Differential Analysis of Block Ciphers SIMON and SPECK. Lecture Notes in Computer Science, 2015, , 546-570.	1.0	83
17	Structural Cryptanalysis of SASAS. Lecture Notes in Computer Science, 2001, , 395-405.	1.0	77
18	Design Strategies for ARX with Provable Bounds: Sparx and LAX. Lecture Notes in Computer Science, 2016, , 484-513.	1.0	74

#	Article	IF	Citations
19	Automatic Search for Related-Key Differential Characteristics in Byte-Oriented Block Ciphers: Application to AES, Camellia, Khazad and Others. Lecture Notes in Computer Science, 2010, , 322-344.	1.0	64
20	On the Security of HMAC and NMAC Based on HAVAL, MD4, MD5, SHA-0 and SHA-1 (Extended Abstract). Lecture Notes in Computer Science, 2006, , 242-256.	1.0	63
21	Cryptographic Schemes Based on the ASASA Structure:ÂBlack-Box,ÂWhite-Box, andÂPublic-Key (Extended) Tj ETQq1 1 0.784314 rgBT	1.0	63
22	Triathlon of lightweight block ciphers for the Internet of things. Journal of Cryptographic Engineering, 2019, 9, 283-302.	1.5	60
23	Automatic Search for Differential Trails in ARX Ciphers. Lecture Notes in Computer Science, 2014, , 227-250.	1.0	57
24	Improved cryptanalysis of RC5. Lecture Notes in Computer Science, 1998, , 85-99.	1.0	51
25	Deanonymization and Linkability of Cryptocurrency Transactions Based on Network Analysis. , 2019, , .		51
26	Two Trivial Attacks on Trivium. , 2007, , 36-55.		51
27	Structural Cryptanalysis of SASAS. Journal of Cryptology, 2010, 23, 505-518.	2.1	41
28	Second-Order Differential Collisions for Reduced SHA-256. Lecture Notes in Computer Science, 2011, , 270-287.	1.0	41
29	New Weak-Key Classes of IDEA. Lecture Notes in Computer Science, 2002, , 315-326.	1.0	40
30	Security and privacy of mobile wallet users in Bitcoin, Dash, Monero, and Zcash. Pervasive and Mobile Computing, 2019, 59, 101030.	2.1	37
31	Automatic Search for the Best Trails in ARX: Application to Block Cipher Speck. Lecture Notes in Computer Science, 2016, , 289-310.	1.0	37
32	Initial Observations on Skipjack: Cryptanalysis of Skipjack-3XOR. Lecture Notes in Computer Science, 1999, , 362-375.	1.0	34
33	Findel: Secure Derivative Contracts for Ethereum. Lecture Notes in Computer Science, 2017, , 453-467.	1.0	32
34	Reverse-Engineering the S-Box of Streebog, Kuznyechik and STRIBOBr1. Lecture Notes in Computer Science, 2016, , 372-402.	1.0	32
35	An improvement of Daviesâ€™ attack on DES. Journal of Cryptology, 1997, 10, 195-205.	2.1	31
36	Cryptanalysis of Safer++. Lecture Notes in Computer Science, 2003, , 195-211.	1.0	30

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37	Analysis of Involutional Ciphers: Khazad and Anubis. Lecture Notes in Computer Science, 2003, , 45-53.	1.0	30
38	Boomerang Attacks on BLAKE-32. Lecture Notes in Computer Science, 2011, , 218-237.	1.0	30
39	A Distinguishing Attack of SNOWÂ2.0 with Linear Masking Method. Lecture Notes in Computer Science, 2004, , 222-233.	1.0	29
40	Cryptanalysis of a Theorem: Decomposing the Only Known Solution to the Big APN Problem. Lecture Notes in Computer Science, 2016, , 93-122.	1.0	25
41	Differential Analysis and Meet-in-the-Middle Attack Against Round-Reduced TWINE. Lecture Notes in Computer Science, 2015, , 3-27.	1.0	24
42	How to strengthen DES using existing hardware. Lecture Notes in Computer Science, 1995, , 398-412.	1.0	23
43	On Reverse-Engineering S-Boxes with Hidden Design Criteria or Structure. Lecture Notes in Computer Science, 2015, , 116-140.	1.0	23
44	From differential cryptanalysis to ciphertext-only attacks. Lecture Notes in Computer Science, 1998, , 72-88.	1.0	22
45	Alzette: A 64-Bit ARX-box. Lecture Notes in Computer Science, 2020, , 419-448.	1.0	22
46	Collisions for Step-Reduced SHA-256. Lecture Notes in Computer Science, 2008, , 1-15.	1.0	22
47	The Design of a Stream Cipher LEX. Lecture Notes in Computer Science, 2006, , 67-75.	1.0	21
48	Two New Techniques of Side-Channel Cryptanalysis. Lecture Notes in Computer Science, 2007, , 195-208.	1.0	21
49	ReCon: Sybil-resistant consensus from reputation. Pervasive and Mobile Computing, 2020, 61, 101109.	2.1	20
50	PAEQ: Parallelizable Permutation-Based Authenticated Encryption. Lecture Notes in Computer Science, 2014, , 72-89.	1.0	19
51	Cryptanalysis of 3-Pass HAVAL. Lecture Notes in Computer Science, 2003, , 228-245.	1.0	19
52	Analysis of a SHA-256 Variant. Lecture Notes in Computer Science, 2006, , 245-260.	1.0	18
53	Speeding up Collision Search for Byte-Oriented Hash Functions. Lecture Notes in Computer Science, 2009, , 164-181.	1.0	18
54	Equihash: Asymmetric Proof-of-Work Based on the Generalized Birthday Problem. , 2016, , .		18

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55	Attacks and Countermeasures for White-box Designs. Lecture Notes in Computer Science, 2018, , 373-402.	1.0	18
56	Cryptanalysis of Feistel Networks with Secret Round Functions. Lecture Notes in Computer Science, 2016, , 102-121.	1.0	17
57	Correlation Power Analysis of Lightweight Block Ciphers: From Theory to Practice. Lecture Notes in Computer Science, 2016, , 537-557.	1.0	17
58	Tradeoff Cryptanalysis of Memory-Hard Functions. Lecture Notes in Computer Science, 2015, , 633-657.	1.0	15
59	Cryptanalysis of the Full AES Using GPU-Like Special-Purpose Hardware. Fundamenta Informaticae, 2012, 114, 221-237.	0.3	14
60	Privacy Aspects and Subliminal Channels in Zcash. , 2019, , .		14
61	Slid Pairs in Salsa20 and Trivium. Lecture Notes in Computer Science, 2008, , 1-14.	1.0	14
62	Proof-of-Work as Anonymous Micropayment: Rewarding a Tor Relay. Lecture Notes in Computer Science, 2015, , 445-455.	1.0	14
63	Transaction Clustering Using Network Traffic Analysis for Bitcoin and Derived Blockchains. , 2019, , .		13
64	Multiset Collision Attacks on Reduced-Round SNOW 3G and SNOW 3Gâ€‰âŠ•. Lecture Notes in Computer Science, 2010, , 139-153.	1.0	13
65	Search for Related-Key Differential Characteristics in DES-Like Ciphers. Lecture Notes in Computer Science, 2011, , 18-34.	1.0	13
66	Optimal First-Order Boolean Masking for Embedded IoT Devices. Lecture Notes in Computer Science, 2018, , 22-41.	1.0	9
67	Recent attacks on alleged SecurID and their practical implications. Computers and Security, 2005, 24, 364-370.	4.0	8
68	Privacy and Linkability of Mining in Zcash. , 2019, , .		8
69	Complementing Feistel Ciphers. Lecture Notes in Computer Science, 2014, , 3-18.	1.0	8
70	Impossible Differential Attack. , 2011, , 597-597.		8
71	FELICS-AEAD: Benchmarking of Lightweight Authenticated Encryption Algorithms. Lecture Notes in Computer Science, 2020, , 216-233.	1.0	8
72	Design of a New Stream Cipherâ€”LEX. Lecture Notes in Computer Science, 2008, , 48-56.	1.0	7

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73	Side-Channel Attacks Meet Secure Network Protocols. Lecture Notes in Computer Science, 2017, , 435-454.	1.0	7
74	Non-randomness of the Full 4 and 5-Pass HAVAL. Lecture Notes in Computer Science, 2005, , 324-336.	1.0	7
75	Cryptanalysis of the Atmel Cipher in SecureMemory, CryptoMemory and CryptoRF. Lecture Notes in Computer Science, 2011, , 91-109.	1.0	7
76	TorScan: Tracing Long-Lived Connections and Differential Scanning Attacks. Lecture Notes in Computer Science, 2012, , 469-486.	1.0	7
77	Multiset-Algebraic Cryptanalysis of Reduced Kuznyechik, Khazad, and secret SPNs. IACR Transactions on Symmetric Cryptology, 0, , 226-247.	0.0	7
78	Differential entropy analysis of the IDEA block cipher. Journal of Computational and Applied Mathematics, 2014, 259, 561-570.	1.1	6
79	Symmetrically and Asymmetrically Hard Cryptography. Lecture Notes in Computer Science, 2017, , 417-445.	1.0	6
80	Analysis of the Non-linear Part of Mugi. Lecture Notes in Computer Science, 2005, , 320-329.	1.0	5
81	Dummy Shuffling Against Algebraic Attacks in White-Box Implementations. Lecture Notes in Computer Science, 2021, , 219-248.	1.0	5
82	Differential Resynchronization Attacks on Reduced Round SNOW 3Gâ€‰âŠ•. Communications in Computer and Information Science, 2012, , 147-157.	0.4	4
83	Chosen Plaintext Attack. , 2011, , 205-206.		3
84	Portrait of a Miner in a Landscape. , 2019, , .		3
85	Ciphertext-Only Attack. , 2011, , 207-207.		2
86	On degree-d zero-sum sets of full rank. Cryptography and Communications, 2020, 12, 685-710.	0.9	2
87	Related Key Attack. , 2011, , 1040-1041.		0
88	Slide Attack. , 2011, , 1221-1222.		0
89	Miss-in-the-Middle Attack. , 2011, , 786-786.		0
90	Skipjack. , 2011, , 1220-1221.		0

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91	Colliding Keys for SC2000-256. Lecture Notes in Computer Science, 2014, , 77-91.	1.0	0