Holger Boche

List of Publications by Year
in descending order

89 papers	1,417 citations	430874 18 h-index	377865 34 g-index
90 all docs	90 docs citations	90 times ranked	608 citing authors

#	Article	IF	Citations
1	Deterministic Identification Over Channels With Power Constraints. IEEE Transactions on Information Theory, 2022, 68, 1-24.	2.4	13
2	Mosaics of combinatorial designs for information-theoretic security. Designs, Codes, and Cryptography, 2022, 90, 593-632.	1.6	5
3	Turing Meets Shannon: On the Algorithmic Construction of Channel-Aware Codes. IEEE Transactions on Communications, 2022, 70, 2256-2267.	7.8	0
4	The Quantum Multiple-Access Channel With Cribbing Encoders. IEEE Transactions on Information Theory, 2022, 68, 3965-3988.	2.4	0
5	Classical state masking over a quantum channel. Physical Review A, 2022, 105, .	2.5	3
6	On Non-Detectability of Non-Computability and the Degree of Non-Computability of Solutions of Circuit and Wave Equations on Digital Computers. IEEE Transactions on Information Theory, 2022, 68, 5561-5578.	2.4	3
7	Integrating Quantum Simulation for Quantum-Enhanced Classical Network Emulation. IEEE Communications Letters, 2021, 25, 3922-3926.	4.1	1
8	On the Solvability of the Peak Value Problem for Bandlimited Signals With Applications. IEEE Transactions on Signal Processing, 2021, 69, 103-118.	5.3	4
9	Uncertainty in Identification Systems. IEEE Transactions on Information Theory, 2021, 67, 1400-1414.	2.4	3
10	Deterministic Identification Over Fading Channels. , 2021, , .		12
11	Quantum Channel State Masking. IEEE Transactions on Information Theory, 2021, 67, 2245-2268.	2.4	12
12	Algorithmic Computability of the Signal Bandwidth. IEEE Transactions on Information Theory, 2021, 67, 2450-2471.	2.4	7
13	On the Effectiveness of Feketeâ€™s Lemma in Information Theory. , 2021, , .		1
14	Time-Domain Concentration and Approximation of Computable Bandlimited Signals. , 2021, , .		0
15	On the Algorithmic Solvability of Channel Dependent Classification Problems in Communication Systems. IEEE/ACM Transactions on Networking, 2021, 29, 1155-1168.	3.8	10
16	Quantum broadcast channels with cooperating decoders: An information-theoretic perspective on quantum repeaters. Journal of Mathematical Physics, 2021, 62, .	1.1	7
17	Algorithmic Detection of Adversarial Attacks on Message Transmission and ACK/NACK Feedback. , 2021, , .		2
18	Real Number Signal Processing can Detect Denial-of-Service Attacks. , 2021, , .		2

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19	Communication Over Block Fading Channels – An Algorithmic Perspective On Optimal Transmission Schemes. , 2021, , .		1
20	The Computational and Latency Advantage of Quantum Communication Networks. IEEE Communications Magazine, 2021, 59, 132-137.	6.1	6
21	Turing Meets Shannon: Algorithmic Constructability of Capacity-Achieving Codes. , 2021, , .		2
22	Mosaics of combinatorial designs for privacy amplification. , 2021, , .		0
23	Identification over the Gaussian Channel in the Presence of Feedback. , 2021, , .		10
24	Quantum Communication Networks. Human Ontogenetics, 2021, , .	0.3	19
25	Semantic Security via Seeded Modular Coding Schemes and Ramanujan Graphs. IEEE Transactions on Information Theory, 2021, 67, 52-80.	2.4	16
26	Computable Time Concentration of Bandlimited Signals and Systems. IEEE Transactions on Signal Processing, 2021, , 1-1.	5.3	1
27	Complexity Blowup in Simulating Analog Linear Time-Invariant Systems on Digital Computers. IEEE Transactions on Signal Processing, 2021, 69, 5005-5020.	5.3	4
28	6G: The Personal Tactile Internet—And Open Questions for Information Theory. IEEE BITS the Information Theory Magazine, 2021, 1, 71-82.	1.6	65
29	Coordinated Online Learning for Multiagent Systems With Coupled Constraints and Perturbed Utility Observations. IEEE Transactions on Automatic Control, 2021, 66, 5080-5095.	5.7	1
30	Experimental Evaluation of a Modular Coding Scheme for Physical Layer Security. , 2021, , .		5
31	Complexity Blowup if Continuous-Time LTI Systems are Implemented on Digital Hardware. , 2021, , .		0
32	Secure Communication and Identification Systems – Effective Performance Evaluation on Turing Machines. IEEE Transactions on Information Forensics and Security, 2020, 15, 1013-1025.	6.9	14
33	Turing Computability of Fourier Transforms of Bandlimited and Discrete Signals. IEEE Transactions on Signal Processing, 2020, 68, 532-547.	5.3	12
34	Turing Meets Circuit Theory: Not Every Continuous-Time LTI System Can be Simulated on a Digital Computer. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 5051-5064.	5.4	4
35	Semantic Security for Quantum Wiretap Channels. , 2020, , .		3
36	On the Algorithmic Solvability of Spectral Factorization and Applications. IEEE Transactions on Information Theory, 2020, 66, 4574-4592.	2.4	19

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37	Secure Identification for Gaussian Channels. , 2020, , .		13
38	Communication Under Channel Uncertainty: An Algorithmic Perspective and Effective Construction. IEEE Transactions on Signal Processing, 2020, 68, 6224-6239.	5.3	6
39	Computability of the Zero-Error Capacity with Kolmogorov Oracle. , 2020, , .		5
40	Turing Meets Shannon: Computable Sampling Type Reconstruction With Error Control. IEEE Transactions on Signal Processing, 2020, 68, 6350-6365.	5.3	5
41	Extending Quantum Links: Modules for Fiber–and Memory–Based Quantum Repeaters. Advanced Quantum Technologies, 2020, 3, 1900141.	3.9	43
42	Effective Approximation of Bandlimited Signals and Their Samples. , 2020, , .		7
43	Can every analog system be simulated on a digital computer?. , 2020, , .		4
44	Denial-of-Service Attacks on Communication Systems: Detectability and Jammer Knowledge. IEEE Transactions on Signal Processing, 2020, 68, 3754-3768.	5.3	33
45	Universal superposition codes: Capacity regions of compound quantum broadcast channel with confidential messages. Journal of Mathematical Physics, 2020, 61, .	1.1	7
46	Optimal Sampling Rate and Bandwidth of Bandlimited Signals—an Algorithmic Perspective. , 2020, , .		7
47	Computability of the Peak Value of Bandlimited Signals. , 2020, , .		3
48	Common Randomness Generation and Identification over Gaussian Channels. , 2020, , .		9
49	Shannon meets Turing: Non-computability and non-approximability of the finite state channel capacity. Communications in Information and Systems, 2020, 20, 81-116.	0.5	15
50	Secure Identification Under Passive Eavesdroppers and Active Jamming Attacks. IEEE Transactions on Information Forensics and Security, 2019, 14, 472-485.	6.9	25
51	On the Fourier Representation of Computable Continuous Signals. , 2019, , .		9
52	Secret message transmission over quantum channels under adversarial quantum noise: Secrecy capacity and super-activation. Journal of Mathematical Physics, 2019, 60, 062202.	1.1	5
53	On the Algorithmic Solvability of the Spectral Factorization and the Calculation of the Wiener Filter on Turing Machines. , 2019, , .		10
54	On the Algorithmic Computability of the Secret Key and Authentication Capacity Under Channel, Storage, and Privacy Leakage Constraints. IEEE Transactions on Signal Processing, 2019, 67, 4636-4648.	5.3	25

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55	On the Computability of the Secret Key Capacity under Rate Constraints. , 2019, , .		10
56	Detectability of Denial-of-service Attacks on Communication Systems. , 2019, , .		8
57	Turing Computability of the Fourier Transform of Bandlimited Functions. , 2019, , .		11
58	Coding for Non-IID Sources and Channels: Entropic Approximations and a Question of Ahlswede. , 2019, , .		10
59	Computability of the Fourier Transform and ZFC. , 2019, , .		8
60	Resource Allocation for Secure Communication Systems: Algorithmic Solvability. , 2019, , .		4
61	Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability. IEEE Transactions on Signal Processing, 2019, 67, 6424-6439.	5.3	15
62	Secure Identification for Wiretap Channels; Robustness, Super-Additivity and Continuity. IEEE Transactions on Information Forensics and Security, 2018, 13, 1641-1655.	6.9	44
63	Optimal Tone Reservation for CDMA Systems. IEEE Transactions on Signal Processing, 2018, 66, 6216-6227.	5.3	4
64	Peak-to-Average Power Control via Tone Reservation in General Orthonormal Transmission Systems. IEEE Transactions on Signal Processing, 2018, 66, 3520-3528.	5.3	7
65	Entanglement-assisted classical capacities of compound and arbitrarily varying quantum channels. Quantum Information Processing, 2017, 16, 1.	2.2	14
66	Classical-quantum arbitrarily varying wiretap channel: common randomness assisted code and continuity. Quantum Information Processing, 2017, 16, 1.	2.2	10
67	Robust and secure identification. , 2017, , .		8
68	A Two Channel System Approximation for Bandlimited Functions. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	4
69	The Arbitrarily Varying Wiretap Channelâ€"Secret Randomness, Stability, and Super-Activation. IEEE Transactions on Information Theory, 2016, 62, 3504-3531.	2.4	103
70	A Channel Under Simultaneous Jamming and Eavesdropping Attackâ€"Correlated Random Coding Capacities Under Strong Secrecy Criteria. IEEE Transactions on Information Theory, 2016, 62, 3844-3862.	2.4	102
71	The classical-quantum channel with random state parameters known to the sender. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 195302.	2.1	10
72	On the Continuity of the Secrecy Capacity of Compound and Arbitrarily Varying Wiretap Channels. IEEE Transactions on Information Forensics and Security, 2015, 10, 2531-2546.	6.9	40

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73	Secrecy capacities of compound quantum wiretap channels and applications. Physical Review A, 2014, 89, .	2.5	16
74	Quantum Capacity under Adversarial Quantum Noise: Arbitrarily Varying Quantum Channels. Communications in Mathematical Physics, 2013, 317, 103-156.	2.2	41
75	The PAPR Problem in OFDM Transmission: New Directions for a Long-Lasting Problem. IEEE Signal Processing Magazine, 2013, 30, 130-144.	5.6	183
76	Non-equidistant sampling for bounded bandlimited signals. Signal Processing, 2010, 90, 2212-2218.	3.7	15
77	Rate of Convergence in Approximating the Spectral Factor of Regular Stochastic Sequences. IEEE Transactions on Information Theory, 2009, 55, 5674-5681.	2.4	1
78	Stability region of an optimized bidirectional regenerative half-duplex relaying protocol. IEEE Transactions on Communications, 2008, 56, 1519-1529.	7.8	23
79	Robustness of the Inner–Outer Factorization and of the Spectral Factorization for FIR Data. IEEE Transactions on Signal Processing, 2008, 56, 274-283.	5.3	4
80	Performance and Interference Control in Wireless Ad hoc and Mesh Networks— A Generalized Lagrangian Approach. IEEE Transactions on Signal Processing, 2008, 56, 4039-4052.	5.3	4
81	The Stability and Continuity Behavior of the Spectral Factorization in the Wiener Algebra With Applications in Wiener Filtering. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 3063-3076.	5.4	4
82	There Exists No Globally Uniformly Convergent Reconstruction for the Paley–Wiener Space ${{\cal PW}}_{\pi}^{1}$ of Bandlimited Functions Sampled at Nyquist Rate. IEEE Transactions on Signal Processing, 2008, 56, 3170-3179.	5.3	22
83	Fundamentals of Resource Allocation in Wireless Networks. Human Ontogenetics, 2008, , .	0.3	34
84	Optimization-Theoretic Analysis of Stability-Optimal Transmission Policy for Multiple-Antenna Multiple-Access Channel. IEEE Transactions on Signal Processing, 2007, 55, 2688-2702.	5.3	24
85	Distributed Utility-Based Power Control: Objectives and Algorithms. IEEE Transactions on Signal Processing, 2007, 55, 5058-5068.	5.3	51
86	On the Convexity of Feasible QoS Regions. IEEE Transactions on Information Theory, 2007, 53, 779-783.	2.4	18
87	Stability-optimal transmission policy for the multiple antenna multiple access channel in the geometric view. Signal Processing, 2006, 86, 1815-1833.	3.7	25
88	The Infeasible SIR Region Is Not a Convex Set. IEEE Transactions on Communications, 2006, 54, 1905-1907.	7.8	14
89	The Kullback-Leibler Divergence and Nonnegative Matrices. IEEE Transactions on Information Theory, 2006, 52, 5539-5545.	2.4	8