

Holger Boche

List of Publications by Year in descending order

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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	The PAPR Problem in OFDM Transmission: New Directions for a Long-Lasting Problem. IEEE Signal Processing Magazine, 2013, 30, 130-144.	5.6	183
2	The Arbitrarily Varying Wiretap Channel—Secret Randomness, Stability, and Super-Activation. IEEE Transactions on Information Theory, 2016, 62, 3504-3531.	2.4	103
3	A Channel Under Simultaneous Jamming and Eavesdropping Attack—Correlated Random Coding Capacities Under Strong Secrecy Criteria. IEEE Transactions on Information Theory, 2016, 62, 3844-3862.	2.4	102
4	6G: The Personal Tactile Internet—And Open Questions for Information Theory. IEEE BITS the Information Theory Magazine, 2021, 1, 71-82.	1.6	65
5	Distributed Utility-Based Power Control: Objectives and Algorithms. IEEE Transactions on Signal Processing, 2007, 55, 5058-5068.	5.3	51
6	Secure Identification for Wiretap Channels; Robustness, Super-Additivity and Continuity. IEEE Transactions on Information Forensics and Security, 2018, 13, 1641-1655.	6.9	44
7	Extending Quantum Links: Modules for Fiber— and Memory—Based Quantum Repeaters. Advanced Quantum Technologies, 2020, 3, 1900141.	3.9	43
8	Quantum Capacity under Adversarial Quantum Noise: Arbitrarily Varying Quantum Channels. Communications in Mathematical Physics, 2013, 317, 103-156.	2.2	41
9	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
10	Fundamentals of Resource Allocation in Wireless Networks. Human Ontogenetics, 2008, , .	0.3	34
11	Denial-of-Service Attacks on Communication Systems: Detectability and Jammer Knowledge. IEEE Transactions on Signal Processing, 2020, 68, 3754-3768.	5.3	33
12	Stability-optimal transmission policy for the multiple antenna multiple access channel in the geometric view. Signal Processing, 2006, 86, 1815-1833.	3.7	25
13	Secure Identification Under Passive Eavesdroppers and Active Jamming Attacks. IEEE Transactions on Information Forensics and Security, 2019, 14, 472-485.	6.9	25
14	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
15	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
16	Stability region of an optimized bidirectional regenerative half-duplex relaying protocol. IEEE Transactions on Communications, 2008, 56, 1519-1529.	7.8	23
17	There Exists No Globally Uniformly Convergent Reconstruction for the Paley—Wiener Space \mathcal{PW}_{π}^1 of Bandlimited Functions Sampled at Nyquist Rate. IEEE Transactions on Signal Processing, 2008, 56, 3170-3179.	5.3	22
18	On the Algorithmic Solvability of Spectral Factorization and Applications. IEEE Transactions on Information Theory, 2020, 66, 4574-4592.	2.4	19

#	ARTICLE	IF	CITATIONS
19	Quantum Communication Networks. Human Ontogenetics, 2021, , .	0.3	19
20	On the Convexity of Feasible QoS Regions. IEEE Transactions on Information Theory, 2007, 53, 779-783.	2.4	18
21	Secrecy capacities of compound quantum wiretap channels and applications. Physical Review A, 2014, 89, .	2.5	16
22	Semantic Security via Seeded Modular Coding Schemes and Ramanujan Graphs. IEEE Transactions on Information Theory, 2021, 67, 52-80.	2.4	16
23	Non-equidistant sampling for bounded bandlimited signals. Signal Processing, 2010, 90, 2212-2218.	3.7	15
24	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
25	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
26	The Infeasible SIR Region Is Not a Convex Set. IEEE Transactions on Communications, 2006, 54, 1905-1907.	7.8	14
27	Entanglement-assisted classical capacities of compound and arbitrarily varying quantum channels. Quantum Information Processing, 2017, 16, 1.	2.2	14
28	Secure Communication and Identification Systems â€™ Effective Performance Evaluation on Turing Machines. IEEE Transactions on Information Forensics and Security, 2020, 15, 1013-1025.	6.9	14
29	Secure Identification for Gaussian Channels. , 2020, , .		13
30	Deterministic Identification Over Channels With Power Constraints. IEEE Transactions on Information Theory, 2022, 68, 1-24.	2.4	13
31	Turing Computability of Fourier Transforms of Bandlimited and Discrete Signals. IEEE Transactions on Signal Processing, 2020, 68, 532-547.	5.3	12
32	Deterministic Identification Over Fading Channels. , 2021, , .		12
33	Quantum Channel State Masking. IEEE Transactions on Information Theory, 2021, 67, 2245-2268.	2.4	12
34	Turing Computability of the Fourier Transform of Bandlimited Functions. , 2019, , .		11
35	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
36	Classical-quantum arbitrarily varying wiretap channel: common randomness assisted code and continuity. Quantum Information Processing, 2017, 16, 1.	2.2	10

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37	On the Algorithmic Solvability of the Spectral Factorization and the Calculation of the Wiener Filter on Turing Machines. , 2019, , .		10
38	On the Computability of the Secret Key Capacity under Rate Constraints. , 2019, , .		10
39	Coding for Non-IID Sources and Channels: Entropic Approximations and a Question of Ahlswede. , 2019, , .		10
40	On the Algorithmic Solvability of Channel Dependent Classification Problems in Communication Systems. IEEE/ACM Transactions on Networking, 2021, 29, 1155-1168.	3.8	10
41	Identification over the Gaussian Channel in the Presence of Feedback. , 2021, , .		10
42	On the Fourier Representation of Computable Continuous Signals. , 2019, , .		9
43	Common Randomness Generation and Identification over Gaussian Channels. , 2020, , .		9
44	The Kullback-Leibler Divergence and Nonnegative Matrices. IEEE Transactions on Information Theory, 2006, 52, 5539-5545.	2.4	8
45	Robust and secure identification. , 2017, , .		8
46	Detectability of Denial-of-service Attacks on Communication Systems. , 2019, , .		8
47	Computability of the Fourier Transform and ZFC. , 2019, , .		8
48	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
49	Effective Approximation of Bandlimited Signals and Their Samples. , 2020, , .		7
50	Universal superposition codes: Capacity regions of compound quantum broadcast channel with confidential messages. Journal of Mathematical Physics, 2020, 61, .	1.1	7
51	Optimal Sampling Rate and Bandwidth of Bandlimited Signals – an Algorithmic Perspective. , 2020, , .		7
52	Algorithmic Computability of the Signal Bandwidth. IEEE Transactions on Information Theory, 2021, 67, 2450-2471.	2.4	7
53	Quantum broadcast channels with cooperating decoders: An information-theoretic perspective on quantum repeaters. Journal of Mathematical Physics, 2021, 62, .	1.1	7
54	Communication Under Channel Uncertainty: An Algorithmic Perspective and Effective Construction. IEEE Transactions on Signal Processing, 2020, 68, 6224-6239.	5.3	6

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55	The Computational and Latency Advantage of Quantum Communication Networks. IEEE Communications Magazine, 2021, 59, 132-137.	6.1	6
56	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
57	Computability of the Zero-Error Capacity with Kolmogorov Oracle. , 2020, , .		5
58	Turing Meets Shannon: Computable Sampling Type Reconstruction With Error Control. IEEE Transactions on Signal Processing, 2020, 68, 6350-6365.	5.3	5
59	Mosaics of combinatorial designs for information-theoretic security. Designs, Codes, and Cryptography, 2022, 90, 593-632.	1.6	5
60	Experimental Evaluation of a Modular Coding Scheme for Physical Layer Security. , 2021, , .		5
61	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
62	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
63	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
64	A Two Channel System Approximation for Bandlimited Functions. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	4
65	Optimal Tone Reservation for CDMA Systems. IEEE Transactions on Signal Processing, 2018, 66, 6216-6227.	5.3	4
66	Resource Allocation for Secure Communication Systems: Algorithmic Solvability. , 2019, , .		4
67	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
68	Can every analog system be simulated on a digital computer?. , 2020, , .		4
69	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
70	Complexity Blowup in Simulating Analog Linear Time-Invariant Systems on Digital Computers. IEEE Transactions on Signal Processing, 2021, 69, 5005-5020.	5.3	4
71	Semantic Security for Quantum Wiretap Channels. , 2020, , .		3
72	Computability of the Peak Value of Bandlimited Signals. , 2020, , .		3

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73	Uncertainty in Identification Systems. IEEE Transactions on Information Theory, 2021, 67, 1400-1414.	2.4	3
74	Classical state masking over a quantum channel. Physical Review A, 2022, 105, .	2.5	3
75	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
76	Algorithmic Detection of Adversarial Attacks on Message Transmission and ACK/NACK Feedback. , 2021, , .		2
77	Real Number Signal Processing can Detect Denial-of-Service Attacks. , 2021, , .		2
78	Turing Meets Shannon: Algorithmic Constructability of Capacity-Achieving Codes. , 2021, , .		2
79	Rate of Convergence in Approximating the Spectral Factor of Regular Stochastic Sequences. IEEE Transactions on Information Theory, 2009, 55, 5674-5681.	2.4	1
80	Integrating Quantum Simulation for Quantum-Enhanced Classical Network Emulation. IEEE Communications Letters, 2021, 25, 3922-3926.	4.1	1
81	On the Effectiveness of Fekete's Lemma in Information Theory. , 2021, , .		1
82	Communication Over Block Fading Channels – An Algorithmic Perspective On Optimal Transmission Schemes. , 2021, , .		1
83	Computable Time Concentration of Bandlimited Signals and Systems. IEEE Transactions on Signal Processing, 2021, , 1-1.	5.3	1
84	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
85	Time-Domain Concentration and Approximation of Computable Bandlimited Signals. , 2021, , .		0
86	Mosaics of combinatorial designs for privacy amplification. , 2021, , .		0
87	Turing Meets Shannon: On the Algorithmic Construction of Channel-Aware Codes. IEEE Transactions on Communications, 2022, 70, 2256-2267.	7.8	0
88	The Quantum Multiple-Access Channel With Cribbing Encoders. IEEE Transactions on Information Theory, 2022, 68, 3965-3988.	2.4	0
89	Complexity Blowup if Continuous-Time LTI Systems are Implemented on Digital Hardware. , 2021, , .		0