Rafael Felix Schaefer

List of Publications by Year
in descending order

133	1,573	394421	395702
papers	citations	19 h-index	33 g-index

135	135	135	980
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Wireless physical layer security. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 19-26.	7.1	218
2	Wiretap Channels: Nonasymptotic Fundamental Limits. IEEE Transactions on Information Theory, 2019, 65, 4069-4093.	2.4	81
3	Physical Layer Service Integration in Wireless Networks : Signal processing challenges. IEEE Signal Processing Magazine, 2014, 31, 147-156.	5.6	58
4	An Overview of Information-Theoretic Security and Privacy: Metrics, Limits and Applications. IEEE Journal on Selected Areas in Information Theory, 2021, 2, 5-22.	2.5	56
5	Secure Communication Under Channel Uncertainty and Adversarial Attacks. Proceedings of the IEEE, 2015, 103, 1796-1813.	21.3	49
6	Capacity results and super-activation for wiretap channels with active wiretappers. IEEE Transactions on Information Forensics and Security, 2013, 8, 1482-1496.	6.9	48
7	Optimal Transmit Antenna Selection for Massive MIMO Wiretap Channels. IEEE Journal on Selected Areas in Communications, 2018, 36, 817-828.	14.0	41
8	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
9	On the Optimality of D2D Coded Caching With Uncoded Cache Placement and One-Shot Delivery. IEEE Transactions on Communications, 2019, 67, 8179-8192.	7.8	37
10	Deep Learning for the Gaussian Wiretap Channel. , 2019, , .		36
11	The Secrecy Capacity of Compound Gaussian MIMO Wiretap Channels. IEEE Transactions on Information Theory, 2015, 61, 5535-5552.	2.4	35
12	Denial-of-Service Attacks on Communication Systems: Detectability and Jammer Knowledge. IEEE Transactions on Signal Processing, 2020, 68, 3754-3768.	5.3	33
13	Optimal Transmit Strategy for MISO Channels With Joint Sum and Per-Antenna Power Constraints. IEEE Transactions on Signal Processing, 2016, 64, 4296-4306.	5.3	30
14	Secure and Reliable Key Agreement with Physical Unclonable Functions. Entropy, 2018, 20, 340.	2.2	30
15	Secure Communication in Spectrum-Sharing Massive MIMO Systems With Active Eavesdropping. IEEE Transactions on Cognitive Communications and Networking, 2018, 4, 390-405.	7.9	30
16	Deep Learning for Channel Coding via Neural Mutual Information Estimation. , 2019, , .		29
17	Polar Coding for Bidirectional Broadcast Channels with Common and Confidential Messages. IEEE Journal on Selected Areas in Communications, 2013, 31, 1901-1908.	14.0	28
18	Secure Broadcasting Using Independent Secret Keys. IEEE Transactions on Communications, 2018, 66, 644-661.	7.8	25

#	Article	IF	Citations
19	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
20	Robust Broadcasting of Common and Confidential Messages Over Compound Channels: Strong Secrecy and Decoding Performance. IEEE Transactions on Information Forensics and Security, 2014, 9, 1720-1732.	6.9	21
21	Controllable Identifier Measurements for Private Authentication With Secret Keys. IEEE Transactions on Information Forensics and Security, 2018, 13, 1945-1959.	6.9	21
22	Full-Duplex Relaying With Improper Gaussian Signaling Over Nakagami- m Fading Channels. IEEE Transactions on Communications, 2018, 66, 64-78.	7.8	20
23	Secure Transmission in IRS-Assisted MIMO Systems with Active Eavesdroppers. , 2020, , .		18
24	Differential privacy for eye tracking with temporal correlations. PLoS ONE, 2021, 16, e0255979.	2.5	17
25	Wiretap Channels With Side Informationâ€"Strong Secrecy Capacity and Optimal Transceiver Design. IEEE Transactions on Information Forensics and Security, 2013, 8, 1397-1408.	6.9	16
26	The secrecy capacity of a compound MIMO Gaussian channel. , 2013, , .		16
27	Secrecy-reliability tradeoff for semi-deterministic wiretap channels at finite Blocklength. , 2017, , .		16
28	Physical layer security in massive MIMO systems. , 2017, , .		15
29	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
30	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
31	Secure Active and Passive Beamforming in IRS-Aided MIMO Systems. IEEE Transactions on Information Forensics and Security, 2022, 17, 1300-1315.	6.9	14
32	Secrecy measures for broadcast channels with receiver side information: Joint vs individual. , 2014, , .		13
33	Secure communication in massive MIMO relay networks. , 2016, , .		12
34	Artificial Noise-Aided Physical Layer Security in Underlay Cognitive Massive MIMO Systems with Pilot Contamination. Entropy, 2017, 19, 349.	2.2	12
35	On the Individual Secrecy Capacity Regions of the General, Degraded, and Gaussian Multi-Receiver Wiretap Broadcast Channel. IEEE Transactions on Information Forensics and Security, 2016, 11, 2107-2122.	6.9	11
36	On Robustness of Massive MIMO Systems against Passive Eavesdropping under Antenna Selection. , 2018, , .		11

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37	Deep learning based wiretap coding via mutual information estimation. , 2020, , .		11
38	Strong Secrecy for Interference Channels Based on Channel Resolvability. IEEE Transactions on Information Theory, 2018, 64, 5110-5130.	2.4	10
39	On the Computability of the Secret Key Capacity under Rate Constraints. , 2019, , .		10
40	Coding for Non-IID Sources and Channels: Entropic Approximations and a Question of Ahlswede. , 2019, , .		10
41	On the Algorithmic Solvability of Channel Dependent Classification Problems in Communication Systems. IEEE/ACM Transactions on Networking, 2021, 29, 1155-1168.	3.8	10
42	Secret-Key Generation Using Compound Sources and One-Way Public Communication. IEEE Transactions on Information Forensics and Security, 2016, , 1-1.	6.9	9
43	On Stochastic Orders and Fading Gaussian Multi-User Channels with Statistical CSIT. , 2019, , .		9
44	Identification Capacity of Channels With Feedback: Discontinuity Behavior, Super-Activation, and Turing Computability. IEEE Transactions on Information Theory, 2020, 66, 6184-6199.	2.4	9
45	On arbitrarily varying wiretap channels for different classes of secrecy measures. , 2014, , .		8
46	Arbitrarily varying wiretap channels with finite coordination resources. , 2014, , .		8
47	Secure Communication in Underlay Cognitive Massive MIMO Systems with Pilot Contamination. , 2017, , .		8
48	Detectability of Denial-of-service Attacks on Communication Systems. , 2019, , .		8
49	New Capacity Results for Fading Gaussian Multiuser Channels With Statistical CSIT. IEEE Transactions on Communications, 2020, 68, 6761-6774.	7.8	8
50	Super-Activation as a Unique Feature of Secure Communication in Malicious Environments. Information (Switzerland), 2016, 7, 24.	2.9	7
51	Super-activation as a unique feature of arbitrarily varying wiretap channels. , 2016, , .		7
52	Identification Capacity of Correlation-Assisted Discrete Memoryless Channels: Analytical Properties and Representations. , 2019, , .		7
53	The compound secrecy capacity of a class of non-degraded MIMO Gaussian channels. , 2014, , .		6
54	Secure broadcasting of a common message with independent secret keys. , 2014, , .		6

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55	The multiple-access channel with an external eavesdropper: Trusted vs. untrusted users. , 2015, , .		6
56	On the SNR-Evolution of the MMSE Function of Codes for the Gaussian Broadcast and Wiretap Channels. IEEE Transactions on Information Theory, 2016, 62, 2070-2091.	2.4	6
57	Optimal Number of Transmit Antennas for Secrecy Enhancement in Massive MIMOME Channels. , 2017, , .		6
58	Robust Biometric Authentication from an Information Theoretic Perspective. Entropy, 2017, 19, 480.	2.2	6
59	Communication Under Channel Uncertainty: An Algorithmic Perspective and Effective Construction. IEEE Transactions on Signal Processing, 2020, 68, 6224-6239.	5.3	6
60	An Optimality Summary: Secret Key Agreement with Physical Unclonable Functions. Entropy, 2021, 23, 16.	2.2	6
61	List decoding for arbitrarily varying multiple access channels with conferencing encoders. , 2014, , .		5
62	Joint and individual secrecy in broadcast channels with receiver side information. , 2014, , .		5
63	How to use independent secret keys for secure broadcasting of common messages. , 2015, , .		5
64	Iterative Antenna Selection for Secrecy Enhancement in Massive MIMO Wiretap Channels. , 2018, , .		5
65	Secure Regularized Zero Forcing for Multiuser MIMOME Channels. , 2019, , .		5
66	Stealthy Secret Key Generation. Entropy, 2020, 22, 679.	2.2	5
67	Code Constructions and Bounds for Identification via Channels. IEEE Transactions on Communications, 2022, 70, 1486-1496.	7.8	5
68	On secure communication over multiple access wiretap channels under channel uncertainty. , 2014, , .		4
69	The individual secrecy capacity of the Gaussian SISO and degraded Gaussian MIMO multi-receiver wiretap channel. , 2015, , .		4
70	Robust PUF based authentication. , 2015, , .		4
71	Optimal transmission rate for MISO channels with joint sum and per-antenna power constraints. , 2015, , .		4
72	Characterization of super-additivity and discontinuity behavior of the capacity of arbitrarily varying channels under list decoding. , 2017, , .		4

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73	Secret-Key Generation and Convexity of the Rate Region Using Infinite Compound Sources. IEEE Transactions on Information Forensics and Security, 2018, 13, 2075-2086.	6.9	4
74	Performance Evaluation of Secure Communication Systems on Turing Machines. , 2018, , .		4
75	Copulas and Multi-User Channel Orders. , 2019, , .		4
76	Resource Allocation for Secure Communication Systems: Algorithmic Solvability. , 2019, , .		4
77	Low-Complexity and Reliable Transforms for Physical Unclonable Functions. , 2020, , .		4
78	Hybrid Precoding for Secure Transmission in Reflect-Array-Assisted Massive MIMO Systems. , 2020, , .		4
79	Controllable Key Agreement With Correlated Noise. IEEE Journal on Selected Areas in Information Theory, 2021, 2, 82-94.	2.5	4
80	Doubly-Exponential Identification via Channels: Code Constructions and Bounds. , 2021, , .		4
81	Robust transmission over wiretap channels with secret keys. , 2014, , .		3
82	List Decoding for Arbitrarily Varying Broadcast Channels With Receiver Side Information. IEEE Transactions on Information Theory, 2014, 60, 4472-4487.	2.4	3
83	On MMSE properties of optimal codes for the Gaussian wiretap channel. , 2015, , .		3
84	On the continuity of the secrecy capacity of wiretap channels under channel uncertainty. , 2015, , .		3
85	Secure transmission in cognitive massive MIMO systems with underlay spectrum sharing. , 2016, , .		3
86	On ergodic fading Gaussian interference channels with statistical CSIT. , 2016, , .		3
87	Stabilizing the secrecy capacity of the arbitrarily varying wiretap channel and transceiver synchronization using list decoding. , 2017, , .		3
88	Identification over Channels with Feedback: Discontinuity Behavior and Super-Activation. , 2018, , .		3
89	Private Authentication with Physical Identifiers Through Broadcast Channel Measurements. , 2019, , .		3
90	Linear Precoder Design for Physical Layer Security via Reconfigurable Intelligent Surfaces. , 2020, , .		3

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91	Robust Transmission Over Channels with Channel Uncertainty: an Algorithmic Perspective. , 2020, , .		3
92	Detectability of Denial-of-Service Attacks on Arbitrarily Varying Classical-Quantum Channels. , 2021, , .		3
93	Securing Massive MIMO Systems: Secrecy for Free With Low-Complexity Architectures. IEEE Transactions on Wireless Communications, 2021, 20, 5831-5845.	9.2	3
94	Privacy, Secrecy, and Storage With Nested Randomized Polar Subcode Constructions. IEEE Transactions on Communications, 2022, 70, 514-525.	7.8	3
95	A Reverse Jensen Inequality Result with Application to Mutual Information Estimation. , 2021, , .		3
96	Strong secrecy and decoding performance analysis for robust broadcasting under channel uncertainty. , 2014, , .		2
97	On MMSE properties of “good” and “bad” codes for the Gaussian broadcast channel. , 2015, , .		2
98	On the Secrecy Capacity of Rank-Deficient Compound Wiretap Channels. , 2015, , .		2
99	An I-MMSE based graphical representation of rate and equivocation for the Gaussian broadcast channel. , 2015, , .		2
100	Secrecy Rate Maximization in Gaussian MIMO Wiretap Channels. , 0, , 109-139.		2
101	Multiple Secret Key Generation: Information Theoretic Models and Key Capacity Regions. , 2017, , 333-361.		2
102	Secrecy Capacity Under List Decoding For A Channel with A Passive Eavesdropper and an Active Jammer. , 2018, , .		2
103	Turing Meets Shannon: On the Algorithmic Computability of the Capacities of Secure Communication Systems (Invited Paper). , 2019, , .		2
104	Secure Storage Capacity Under Rate Constraintsâ€"Continuity and Super Activation. IEEE Transactions on Information Forensics and Security, 2020, 15, 959-970.	6.9	2
105	Algorithmic Detection of Adversarial Attacks on Message Transmission and ACK/NACK Feedback. , 2021, , .		2
106	Real Number Signal Processing can Detect Denial-of-Service Attacks. , 2021, , .		2
107	Turing Meets Shannon: Algorithmic Constructability of Capacity-Achieving Codes. , 2021, , .		2
108	Secure Multi-Function Computation with Private Remote Sources. , 2021, , .		2

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109	Arbitrarily Varying Channelsâ€"A Model for Robust Communication in the Presence of Unknown Interference. Signals and Communication Technology, 2016, , 259-283.	0.5	2
110	On the Degradedness of Fast Fading Gaussian Multiple-Antenna Wiretap Channels with Statistical Channel State Information at the Transmitter. , 2015, , .		1
111	On MMSE properties of codes for the Gaussian broadcast channel with confidential messages. , 2015, , .		1
112	Improper signaling in two-path relay channels. , 2017, , .		1
113	Secret-key capacity of infinite compound sources with communication rate constraint. , 2017, , .		1
114	Stealthy keyless secret key generation from degraded sources. , 2017, , .		1
115	Privacy Amplification: Recent Developments and Applications. , 2018, , .		1
116	Joint User Selection and Precoding in Multiuser MIMO Systems via Group LASSO. , 2019, , .		1
117	Biometric and Physical Identifiers with Correlated Noise for Controllable Private Authentication. , 2020, , .		1
118	Communication Over Block Fading Channels â€" An Algorithmic Perspective On Optimal Transmission Schemes. , 2021, , .		1
119	Semantic Security for Indoor THz-Wireless Communication. , 2021, , .		1
120	Arbitrarily varying multiple access channels with conferencing encoders: List decoding and finite coordination resources. Advances in Mathematics of Communications, 2016, 10, 333-354.	0.7	1
121	Joint Active and Passive Secure Precoding in IRS-Aided MIMO Systems. , 2021, , .		1
122	Quality of Service Guarantees for Physical Unclonable Functions. , 2021, , .		1
123	Ergodic secrecy sum rate for multiuser MIMO downlink systems using block diagonalization. , 2016, , .		0
124	Degradedness and stochastic orders of fast fading Gaussian broadcast channels with statistical channel state information at the transmitter. , 2016, , .		0
125	Super-Activation as a Unique Feature of Secure Communication over Arbitrarily Varying Channels. , 0, , 313-330.		0
126	The Deterministic and Correlated Random Public-Confidential Capacity Regions of the Arbitrarily Varying Wiretap Channel. , 2018, , .		0

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127	On D2D Caching with Uncoded Cache Placement. , 2019, , .		0
128	On the Ïµ-Capacity of Finite Compound Channels with Applications to the Strong Converse and Second Order Coding Rate. , 2020, , .		0
129	On the Algorithmic Computability of Achievability and Converse: Ïµ-Capacity of Compound Channels and Asymptotic Bounds of Error-Correcting Codes. , 2020, , .		0
130	Broadcast Channels with Confidential Messages: Channel Uncertainty, Robustness, and Continuity. Lecture Notes in Electrical Engineering, 2016, , 69-91.	0.4	0
131	Turing Meets Shannon: On the Algorithmic Construction of Channel-Aware Codes. IEEE Transactions on Communications, 2022, 70, 2256-2267.	7.8	0
132	Multiple Noisy Private Remote Source Observations for Secure Function Computation. , 2021, , .		0
133	Private Remote Sources for Secure Multi-Function Computation. IEEE Transactions on Information Theory, 2022, 68, 6826-6841.	2.4	0