Enzo Baccarelli

List of Publications by Year
in descending order

116 papers	2,504 citations	236833 25 h-index	233338 45 g-index
116 all docs	116 docs citations	116 times ranked	2430 citing authors

#	Article	IF	Citations
1	Fog of Everything: Energy-Efficient Networked Computing Architectures, Research Challenges, and a Case Study. IEEE Access, 2017, 5, 9882-9910.	2.6	263
2	P-SEP: a prolong stable election routing algorithm for energy-limited heterogeneous fog-supported wireless sensor networks. Journal of Supercomputing, 2017, 73, 733-755.	2.4	236
3	Energy-Efficient Adaptive Resource Management for Real-Time Vehicular Cloud Services. IEEE Transactions on Cloud Computing, 2019, 7, 196-209.	3.1	220
4	Energy-efficient dynamic traffic offloading and reconfiguration of networked data centers for big data stream mobile computing: review, challenges, and a case study. IEEE Network, 2016, 30, 54-61.	4.9	161
5	Distributed and adaptive resource management in Cloud-assisted Cognitive Radio Vehicular Networks with hard reliability guarantees. Vehicular Communications, 2015, 2, 1-12.	2.7	87
6	Energy-saving self-configuring networked data centers. Computer Networks, 2013, 57, 3479-3491.	3.2	62
7	Design and energy-efficient resource management of virtualized networked Fog architectures for the real-time support of IoT applications. Journal of Supercomputing, 2018, 74, 2470-2507.	2.4	58
8	Novel efficient bit-loading algorithms for peak-energy-limited ADSL-type multicarrier systems. IEEE Transactions on Signal Processing, 2002, 50, 1237-1247.	3.2	56
9	Why Should We Add Early Exits to Neural Networks?. Cognitive Computation, 2020, 12, 954-966.	3.6	54
10	Reliable Adaptive Resource Management for Cognitive Cloud Vehicular Networks. IEEE Transactions on Vehicular Technology, 2015, 64, 2528-2537.	3.9	53
11	FLAPS: bandwidth and delay-efficient distributed data searching in Fog-supported P2P content delivery networks. Journal of Supercomputing, 2017, 73, 5239-5260.	2.4	41
12	Some simple bounds on the symmetric capacity and outage probability for QAM wireless channels with Rice and Nakagami fadings. IEEE Journal on Selected Areas in Communications, 2000, 18, 361-368.	9.7	39
13	Energy-saving adaptive computing and traffic engineering for real-time-service data centers. , 2015, , .		39
14	Stochastic traffic engineering for real-time applications over wireless networks. Journal of Network and Computer Applications, 2012, 35, 681-694.	5.8	37
15	Optimal integer bit-loading for multicarrier ADSL systems subject to spectral-compatibility limits. Signal Processing, 2004, 84, 729-741.	2.1	33
16	Q *: Energy and delay-efficient dynamic queue management in TCP/IP virtualized data centers. Computer Communications, 2017, 102, 89-106.	3.1	33
17	Recursive Kalman-type optimal estimation and detection of hidden Markov chains. Signal Processing, 1996, 51, 55-64.	2.1	32
18	New results about analysis and design of TCM for ISI channels and combined equalization/decoding. IEEE Transactions on Communications, 1998, 46, 417-420.	4.9	32

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19	Combined channel estimation and data detection using soft statistics for frequency-selective fast-fading digital links. IEEE Transactions on Communications, 1998, 46, 424-427.	4.9	32
20	Bandwidth Management VMs Live Migration in Wireless Fog Computing for 5G Networks. , 2016, , .		32
21	EcoMobiFogâ€"Design and Dynamic Optimization of a 5G Mobile-Fog-Cloud Multi-Tier Ecosystem for the Real-Time Distributed Execution of Stream Applications. IEEE Access, 2019, 7, 55565-55608.	2.6	32
22	Energy-efficient adaptive networked datacenters for the QoS support of real-time applications. Journal of Supercomputing, 2015, 71, 448-478.	2.4	31
23	Evaluation of the reliable data rates supported by multiple-antenna coded wireless links for QAM transmissions. IEEE Journal on Selected Areas in Communications, 2001, 19, 295-304.	9.7	30
24	Power-Allocation Policy and Optimized Design of Multiple-Antenna Systems With Imperfect Channel Estimation. IEEE Transactions on Vehicular Technology, 2004, 53, 136-145.	3.9	30
25	Optimized Power Allocation for Multiantenna Systems Impaired by Multiple Access Interference and Imperfect Channel Estimation. IEEE Transactions on Vehicular Technology, 2007, 56, 3089-3105.	3.9	30
26	Optimized Power Allocation and Signal Shaping for Interference-Limited Multi-antenna â€œAd Hocâ€• Networks. Lecture Notes in Computer Science, 2003, , 138-152.	1.0	29
27	Performance and Optimized Design of Space-Time Codes for MIMO Wireless Systems With Imperfect Channel Estimates. IEEE Transactions on Signal Processing, 2004, 52, 2911-2923.	3.2	29
28	A Novel Multi-Antenna Impulse Radio UWB Transceiver for Broadband High-Throughput 4G WLANs. IEEE Communications Letters, 2004, 8, 419-421.	2.5	29
29	A novel adaptive receiver with enhanced channel tracking capability for TDMA-based mobile radio communications. IEEE Journal on Selected Areas in Communications, 1998, 16, 1630-1639.	9.7	28
30	On the information throughput and optimized power allocation for MIMO wireless systems with imperfect channel estimation. IEEE Transactions on Signal Processing, 2005, 53, 2335-2347.	3.2	28
31	Optimal Self-Adaptive QoS Resource Management in Interference-Affected Multicast Wireless Networks. IEEE/ACM Transactions on Networking, 2013, 21, 1750-1759.	2.6	27
32	Learning-in-the-Fog (LiFo): Deep Learning Meets Fog Computing for the Minimum-Energy Distributed Early-Exit of Inference in Delay-Critical IoT Realms. IEEE Access, 2021, 9, 25716-25757.	2.6	27
33	Broadband Wireless Access Networks: A Roadmap on Emerging Trends and Standards. , 2005, , 215-240.		26
34	A novel unsupervised approach based on the hidden features of Deep Denoising Autoencoders for COVID-19 disease detection. Expert Systems With Applications, 2022, 192, 116366.	4.4	23
35	Recursive filtering and smoothing for reciprocal Gaussian processes with Dirichlet boundary conditions. IEEE Transactions on Signal Processing, 1998, 46, 790-795.	3.2	21
36	Optimized training and scalable implementation of Conditional Deep Neural Networks with early exits for Fog-supported IoT applications. Information Sciences, 2020, 521, 107-143.	4.0	21

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37	An Accuracy vs. Complexity Comparison of Deep Learning Architectures for the Detection of COVID-19 Disease. Computation, 2021, 9, 3.	1.0	21
38	Optimal MIMO UWB-IR Transceiver for Nakagami-fading and Poisson-Arrivals. Journal of Communications, 2008, 3, .	1.3	20
39	Minimum-energy bandwidth management for QoS live migration of virtual machines. Computer Networks, 2015, 93, 1-22.	3.2	19
40	A new Stable Election-based routing algorithm to preserve aliveness and energy in fog-supported wireless sensor networks. , 2016, , .		19
41	Fog of Social IoT: When the Fog Becomes Social. IEEE Network, 2018, 32, 68-80.	4.9	19
42	Fog-Supported Delay-Constrained Energy-Saving Live Migration of VMs Over MultiPath TCP/IP 5G Connections. IEEE Access, 2018, 6, 42327-42354.	2.6	19
43	Asymptotically tight bounds on the capacity and outage probability for QAM transmissions over Rayleigh-faded data channels with CSI. IEEE Transactions on Communications, 1999, 47, 1273-1277.	4.9	16
44	QoS Stochastic Traffic Engineering for the wireless support of real-time streaming applications. Computer Networks, 2012, 56, 287-302.	3.2	15
45	Adaptive Energy-Efficient QoS-Aware Scheduling Algorithm for TCP/IP Mobile Cloud. , 2015, , .		14
46	Energy performance of heuristics and meta-heuristics for real-time joint resource scaling and consolidation in virtualized networked data centers. Journal of Supercomputing, 2018, 74, 2161-2198.	2.4	13
47	VirtFogSim: A Parallel Toolbox for Dynamic Energy-Delay Performance Testing and Optimization of 5G Mobile-Fog-Cloud Virtualized Platforms. Applied Sciences (Switzerland), 2019, 9, 1160.	1.3	13
48	Recursive filtering and smoothing for reciprocal Gaussian processes-pinned boundary case. IEEE Transactions on Information Theory, 1995, 41, 334-337.	1.5	12
49	Novel analytical performance bounds for symbol-by-symbol decoding of digital-data impaired by ISI and AWGN. IEEE Transactions on Information Theory, 1997, 43, 744-750.	1.5	12
50	A Novel Self-Pilot-Based Transmit-Receive Architecture for Multipath-Impaired UWB Systems. IEEE Transactions on Communications, 2004, 52, 891-895.	4.9	12
51	A new approach based on "soft statistics" to the nonlinear blind-deconvolution of unknown data channels. IEEE Transactions on Signal Processing, 2001, 49, 1481-1491.	3.2	11
52	Maximum-Rate Node Selection for Power-Limited Multiantenna Relay Backbones. IEEE Transactions on Mobile Computing, 2009, 8, 807-820.	3.9	11
53	Interference Management for Multiple Multicasts with Joint Distributed Source/Channel/Network Coding. IEEE Transactions on Communications, 2013, 61, 5176-5183.	4.9	11
54	Performance evaluation of primary-secondary reliable resource-management in vehicular networks. , 2014, , .		11

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55	Minimizing computing-plus-communication energy consumptions in virtualized networked data centers. , 2016, , .		11
56	A reduced-state soft-statistics-based MAP/DF equalizer for data transmission over long ISI channels. IEEE Transactions on Communications, 2000, 48, 1441-1446.	4.9	10
57	A Distributed Power-Allocation and Signal-Shaping Game for the Competitively Optimal Throughput-Maximization of Multiple-Antenna â€œad hocâ€•Networks. IEEE Transactions on Vehicular Technology, 2006, 55, 1862-1876.	3.9	10
58	A simple polarization-recovery algorithm for dual-polarized cellular mobile-radio systems in time-variant faded environments. IEEE Transactions on Vehicular Technology, 2000, 49, 220-228.	3.9	9
59	Resource-Management for Vehicular Real-Time Application under Hard Reliability Constraints. , 2014, , .		8
60	Memory and memoryless optimal time-window controllers for secondary users in vehicular networks. , 2015, , .		7
61	Differentiable Branching In Deep Networks for Fast Inference. , 2020, , .		6
62	A Histogram-Based Low-Complexity Approach for the Effective Detection of COVID-19 Disease from CT and X-ray Images. Applied Sciences (Switzerland), 2021, 11, 8867.	1.3	6
63	Exploiting probability density function of deep convolutional autoencodersâ€™ latent space for reliable COVID-19 detection on CT scans. Journal of Supercomputing, 2022, 78, 12024-12045.	2.4	6
64	A simple multiple-antenna ultra wide band transceiver scheme for 4th generation WLAN. , 2003, , .		5
65	A simple multiantenna transceiver for ultra wide band based 4GWLANs. , 0, , .		5
66	A Simple Adaptive Coding Scheme for Multiuser Interference Suppression in Ultra-Wideband Radio Transmissions. IEEE Transactions on Communications, 2005, 53, 1283-1287.	4.9	5
67	Jointly Optimal Source-Flow, Transmit-Power, and Sending-Rate Control for Maximum-Throughput Delivery of VBR Traffic over Faded Links. IEEE Transactions on Mobile Computing, 2012, 11, 390-401.	3.9	5
68	Hard and soft optimal resource allocation for primary and secondary users in infrastructure Vehicular Networks. , 2015, , .		5
69	Linear feedback communication systems with Markov sources: optimal system design and performance evaluation. IEEE Transactions on Information Theory, 1995, 41, 1868-1876.	1.5	4
70	Identification of 2-D noncausal Gauss-Markov random fields. IEEE Transactions on Signal Processing, 1996, 44, 759-764.	3.2	4
71	An application of the HMM theory to optimal nonlinear equalisation of quantised-output digital ISI channels. Signal Processing, 1997, 58, 95-105.	2.1	4
72	Multi-antenna noncoherent ML synchronization for UWB-IR faded channels. Journal of Communications and Networks, 2006, 8, 194-204.	1.8	4

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73	Multi-antenna cognitive radio for broadband access in 4G-WLANs. , 2007, , .		4
74	Traffic Engineering for wireless connectionless access networks supporting QoS-demanding media applications. Computer Networks, 2012, 56, 186-197.	3.2	4
75	Energy-Saving QoS Resource Management of Virtualized Networked Data Centers for Big Data Stream Computing. Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series, 2015, , 122-155.	0.5	4
76	Resource Scheduling for Energy-Aware Reconfigurable Internet Data Centers. Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series, 2016, , 21-46.	0.5	4
77	Model parameter estimation for reciprocal Gaussian random processes. IEEE Transactions on Signal Processing, 1995, 43, 792-795.	3.2	3
78	Recursive carrier phase tracking for synchronous multilevel 4QAM receivers. Journal of Lightwave Technology, 1995, 13, 1655-1662.	2.7	3
79	Performance bounds and cutoff rates for data channels affected by correlated randomly time-variant multipath fading. IEEE Transactions on Communications, 1998, 46, 1258-1261.	4.9	3
80	Performance of a nonlinear adaptive SBS-MAP detector using soft-statistics for digital transmissions over HF channels. IEEE Transactions on Vehicular Technology, 2000, 49, 1191-1195.	3.9	3
81	Multipath-Resistant Incoherent Space-Time Codes for IR-UWB MIMO Systems. , 2007, , .		3
82	Minimization of Download Times for Large Files over Wireless Channels. IEEE Transactions on Mobile Computing, 2007, 6, 1105-1115.	3.9	3
83	Routing for multi-antenna Wireless Mesh Network backhaul. , 2007, , .		3
84	Physical-layer goodput maximization for Power Line Communications. , 2009, , .		3
85	SmartFog: Training the Fog for the Energy-Saving Analytics of Smart-Meter Data. Applied Sciences (Switzerland), 2019, 9, 4193.	1.3	3
86	DeepFogSim: A Toolbox for Execution and Performance Evaluation of the Inference Phase of Conditional Deep Neural Networks with Early Exits Atop Distributed Fog Platforms. Applied Sciences (Switzerland), 2021, 11, 377.	1.3	3
87	Performance bound and trellis-code design criterion for discrete memoryless channels and finite-delay symbol-by-symbol decoding. IEEE Transactions on Communications, 1997, 45, 1192-1199.	4.9	2
88	Equalization of twisted-pair channels via optimum filtering and noise prediction. Signal Processing, 1998, 66, 79-93.	2.1	2
89	Bounds on the symmetric cutoff rate for QAM transmissions over time-correlated flat-faded channels. IEEE Communications Letters, 1998, 2, 279-281.	2.5	2
90	Parameter identification of quasi-stationary Rayleigh-faded time-varying digital channels. Signal Processing, 1999, 79, 1-13.	2.1	2

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91	A novel tunable-complexity turbo-soft detector for high-throughput HDSL applications over ISI channels with crosstalk. IEEE Journal on Selected Areas in Communications, 2002, 20, 372-383.	9.7	2
92	Bit-Transport Capability of Broadband Multicarrier Power Line Channels Constrained by Radiated Emission. , 2007, , .		2
93	PPM-based Orthogonal Space-Time Coding for IR-UWB MIMO channels affected by Poisson-distributed Multipaths. , 2007, , .		2
94	A new family of optimized orthogonal Space-Times codes for PPM-based MIMO systems with imperfect channel estimates. Wireless Personal Communications, 2007, 43, 1071-1091.	1.8	2
95	Turbo-like synchronization for UWB-IR links. , 2008, , .		2
96	Collision erasure and generalized access in MIMO cognitive ad-hoc networks. , 2008, , .		2
97	Primary-secondary resource-management on vehicular networks under soft and hard collision constraints. , 2014, , .		2
98	Minimum-error-probability single-user detection for ISI-impaired narrow-band multiuser systems. IEEE Transactions on Communications, 2001, 49, 1055-1062.	4.9	1
99	Optimized multi-antenna power allocation for spatial signal shaping in ad-hoc networks with multiple access interference. , 2003, , .		1
100	Multi-Antenna IR-UWB Noncoherent ML Synchronization for Multipath Wideband Channels. , 2007, , .		1
101	On the Information Rate of Multiantenna Systems With Isotropic Unitary Input Signals in the Presence of Channel Estimation Errors. IEEE Transactions on Signal Processing, 2007, 55, 1962-1966.	3.2	1
102	Space division competitive access for infrastructured wireless mesh networks. , 2007, , .		1
103	Generalized Access for MIMO Cognitive Radios. , 2008, , .		1
104	UWB Pulse Shaping under Spectral and Synchronization Issues. , 2008, , .		1
105	Optimal Energy Scheduling for Rate-Guaranteed Download Over Faded Multichannel Networks. IEEE Transactions on Vehicular Technology, 2009, 58, 1695-1710.	3.9	1
106	Cognitive Constrained Pulse Shaping for UWB Systems. , 2010, , .		1
107	SDMA with secrecy constraints. , 2010, , .		1
108	Fairness-constrained optimized time-window controllers for secondary-users with primary-user reliability guarantees. Computer Communications, 2018, 116, 63-76.	3.1	1

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109	Optimal Cross-Layer Flow-Control for Wireless Maximum-Throughput Delivery of VBR Media Contents. , 2010, , 79-88.		1
110	Energy-Saving QoS Resource Management of Virtualized Networked Data Centers for Big Data Stream Computing. , 2016, , 848-886.		1
111	A novel procedure for jones' parameters estimation for Mâ€4QAM optical systems. European Transactions on Telecommunications, 1997, 8, 191-199.	1.2	0
112	On the performance limits of TCM in fast-fading multipath channels with combined equalization/decoding. IEEE Transactions on Communications, 2000, 48, 1957-1964.	4.9	0
113	Minimum-delay optimal scheduling for delay-sensitive bursty-traffic connections. , 2008, , .		0
114	Conditionally Optimal Minimum-Delay Scheduling for Bursty Traffic Over Fading Channels. IEEE Transactions on Vehicular Technology, 2010, 59, 3294-3310.	3.9	0
115	Joint control of bandwidth and playout-delay for streaming traffic over faded links. , 2010, , .		0
116	QoS Traffic Engineering for Self-Adaptive Resource Allocation in MAI-Affected Wireless Networks. , 2011, , .		0