Benoît Champagne

List of Publications by Year in Descending Order

135 papers	**1,415** citations	**19** h-index	**31** g-index
177 ext. papers	**1,799** ext. citations	**4.5** avg, IF	**5.44** L-index

#	Paper	IF	Citations
135	Channel Estimation for Hybrid Massive MIMO Systems with Adaptive-Resolution ADCs. *IEEE Transactions on Communications*, **2022**, 1-1	6.9	1
134	Joint Parameter and Time-Delay Estimation for a Class of Nonlinear Time-Series Models. *IEEE Signal Processing Letters*, **2022**, 1-1	3.2	4
133	Uncertainty Estimation via Monte Carlo Dropout in CNN-based mmWave MIMO Localization. *IEEE Signal Processing Letters*, **2021**, 1-1	3.2	3
132	PACDNN: A phase-aware composite deep neural network for speech enhancement. *Speech Communication*, **2021**,	2.8	3
131	Secure Beamforming for Cognitive Satellite Terrestrial Networks With Unknown Eavesdroppers. *IEEE Systems Journal*, **2021**, 15, 2186-2189	4.3	45
130	Secure and Energy Efficient Transmission for RSMA-Based Cognitive Satellite-Terrestrial Networks. *IEEE Wireless Communications Letters*, **2021**, 10, 251-255	5.9	72
129	Speech Enhancement With Phase Sensitive Mask Estimation Using a Novel Hybrid Neural Network. *IEEE Open Journal of Signal Processing*, **2021**, 2, 136-150	1.2	1
128	A Green Downlink Power Allocation Scheme for Cell-Free Massive MIMO Systems. *IEEE Access*, **2021**, 9, 6498-6512	3.5	3
127	A Distributed Pulse-Based Synchronization Protocol for Half-Duplex D2D Communications. *IEEE Open Journal of the Communications Society*, **2021**, 2, 245-261	6.7	1
126	Secrecy-Energy Efficient Hybrid Beamforming for Satellite-Terrestrial Integrated Networks. *IEEE Transactions on Communications*, **2021**, 69, 6345-6360	6.9	27
125	DNN-Based Calibrated-Filter Models for Speech Enhancement. *Circuits, Systems, and Signal Processing*, **2021**, 40, 2926-2949	2.2	1
124	Energy-Efficient User Clustering and Downlink Beamforming for MIMO-SCMA in C-RAN. *IEEE Access*, **2021**, 9, 115175-115191	3.5	1
123	Robust Hybrid Beamforming for Satellite-Terrestrial Integrated Networks **2020**,		2
122	Achieving Fully-Digital Performance by Hybrid Analog/Digital Beamforming in Wide-Band Massive-Mimo Systems **2020**,		1
121	. *IEEE Journal on Selected Areas in Communications*, **2020**, 38, 2086-2103	14.2	18
120	Energy-Efficient Group-Sparse Transceiver Design for Multiuser MIMO Relaying in C-RAN. *IEEE Transactions on Green Communications and Networking*, **2020**, 4, 703-716	4	0
119	A Novel Cooperative HARQ Protocol for Free-Space Optical Broadcasting Systems. *Journal of Lightwave Technology*, **2020**, 38, 1789-1799	4	7

118	Improving Caching Efficiency in Content-Aware C-RAN-Based Cooperative Beamforming: A Joint Design Approach. *IEEE Transactions on Wireless Communications*, **2020**, 19, 4125-4140	9.6	6
117	. *IEEE Transactions on Vehicular Technology*, **2020**, 69, 2246-2262	6.8	19
116	. *IEEE Internet of Things Journal*, **2020**, 7, 2452-2468	10.7	24
115	Generalized Framework for Hybrid Analog/Digital Signal Processing in Massive and Ultra-Massive-MIMO Systems. *IEEE Access*, **2020**, 8, 100262-100279	3.5	2
114	Secure Hybrid A/D Beamforming for Hardware-Efficient Large-Scale Multiple-Antenna SWIPT Systems. *IEEE Transactions on Communications*, **2020**, 68, 6141-6156	6.9	3
113	Padded Coprime Arrays for Improved DOA Estimation: Exploiting Hole Representation and Filling Strategies. *IEEE Transactions on Signal Processing*, **2020**, 68, 4597-4611	4.8	23
112	A hybrid speech enhancement system with DNN based speech reconstruction and Kalman filtering. *Multimedia Tools and Applications*, **2020**, 79, 32643-32663	2.5	1
111	Speech Separation Using a Composite Model for Complex Mask Estimation **2020**,		1
110	Robust Joint Hybrid Transceiver Design for Millimeter Wave Full-Duplex MIMO Relay Systems. *IEEE Transactions on Wireless Communications*, **2019**, 18, 1199-1215	9.6	44
109	Design Criteria for Omnidirectional STBC in Massive MIMO Systems. *IEEE Wireless Communications Letters*, **2019**, 8, 1435-1439	5.9	8
108	Self-regularized nonlinear diffusion algorithm based on levenberg gradient descent. *Signal Processing*, **2019**, 163, 107-114	4.4	8
107	A Deep Neural Network Based Kalman Filter for Time Domain Speech Enhancement **2019**,		7
106	A Fully Convolutional Neural Network for Complex Spectrogram Processing in Speech Enhancement **2019**,		11
105	Dynamic Resource Allocation for LTE-Based Vehicle-to-Infrastructure Networks. *IEEE Transactions on Vehicular Technology*, **2019**, 68, 5017-5030	6.8	9
104	Joint Content Placement, RRH Clustering and Beamforming for Cache-Enabled Cloud-RAN **2019**,		4
103	NOMA-based cooperative relaying for secondary transmission in cognitive radio networks. *IET Communications*, **2019**, 13, 1840-1851	1.3	8
102	Recurrent Neural Network-Based Dictionary Learning for Compressive Speech Sensing. *Circuits, Systems, and Signal Processing*, **2019**, 38, 3616-3643	2.2	1
101	Optimizing Transmission Rate in NOMA via Block Diagonalization Beamforming and Power Allocation **2019**,		4

100	Fully Distributed Energy-Efficient Synchronization for Half-duplex D2D Communications **2019**,		3
99	Covariance-free non-homogeneity STAP detector in compound Gaussian clutter based on robust statistics. *IET Radar, Sonar and Navigation*, **2019**, 13, 2107-2119	1.4	2
98	. *IEEE Access*, **2019**, 7, 167639-167652	3.5	1
97	. *IEEE Journal on Selected Areas in Communications*, **2018**, 36, 1410-1425	14.2	19
96	. *IEEE Journal on Selected Topics in Signal Processing*, **2018**, 12, 313-325	7.5	18
95	A novel approach for ellipsoidal outer-approximation of the intersection region of ellipses in the plane. *Computational Optimization and Applications*, **2018**, 69, 383-402	1.4	
94	Tracking Performance and Optimal Adaptation Step-Sizes of Diffusion-LMS Networks. *IEEE Transactions on Control of Network Systems*, **2018**, 5, 67-78	4	12
93	Distributed Nonlinear System Identification in $alpha$ -Stable Noise. *IEEE Signal Processing Letters*, **2018**, 25, 979-983	3.2	15
92	Joint frequency offset, time offset, and channel estimation for OFDM/OQAM systems. *Eurasip Journal on Advances in Signal Processing*, **2018**, 2018, 4	1.9	4
91	. *IEEE Transactions on Aerospace and Electronic Systems*, **2018**, 54, 3160-3168	3.7	4
90	Efficient Group-Sparse Transceiver Design for Multiuser MIMO Relaying in C-RAN **2018**,		1
89	Fast Converging Distributed Pulse-coupled Clock Synchronization for Half-duplex D2D Communications over Multipath Channels **2018**,		3
88	NOISE-ADAPTIVE DEEP NEURAL NETWORK FOR SINGLE-CHANNEL SPEECH ENHANCEMENT **2018**,		2
87	NMF-based speech enhancement using multitaper spectrum estimation **2018**,		1
86	. *IEEE Transactions on Vehicular Technology*, **2017**, 66, 7913-7924	6.8	6
85	Non-linear transceiver design for secure communications with artificial noise-assisted MIMO relay. *IET Communications*, **2017**, 11, 930-935	1.3	2
84	Realizing Fully Digital Precoders in Hybrid A/D Architecture With Minimum Number of RF Chains. *IEEE Communications Letters*, **2017**, 21, 2310-2313	3.8	8
83	Joint Transceiver Design for Secure Downlink Communications Over an Amplify-and-Forward MIMO Relay. *IEEE Transactions on Communications*, **2017**, 65, 3691-3704	6.9	20

82	Joint Transceiver Designs for Full-Duplex K -Pair MIMO Interference Channel With SWIPT. *IEEE Transactions on Communications*, **2017**, 65, 890-905	6.9	22
81	SIC aided physical-layer network coding for multi-way relay channels **2017**,		1
80	On the use of distributed synchronization in 5G device-to-device networks **2017**,		4
79	Nonlinear MIMO Transceivers Improve Wireless-Powered and Self-Interference-Aided Relaying. *IEEE Transactions on Wireless Communications*, **2017**, 16, 6953-6966	9.6	9
78	. *IEEE Journal on Selected Areas in Communications*, **2017**, 35, 2085-2096	14.2	32
77	A Weighted Combining Algorithm for Spatial Multiplexing MIMO DF Relaying Systems. *IEEE Transactions on Communications*, **2017**, 65, 4751-4764	6.9	0
76	Joint design of beam selection and precoding for mmWave MU-MIMO systems with lens antenna array **2017**,		3
75	Steady-state analysis of the maximum correntropy Volterra filter with application to nonlinear channel equalization **2017**,		1
74	UFMC-based wideband spectrum sensing for cognitive radio systems in non-Gaussian noise **2017**,		1
73	Security–Reliability Tradeoff Analysis of Multirelay-Aided Decode-and-Forward Cooperation Systems. *IEEE Transactions on Vehicular Technology*, **2016**, 65, 5825-5831	6.8	36
72	Joint transceiver designs for secure communications over MIMO relay **2016**,		2
71	Basis compensation in non-negative matrix factorization model for speech enhancement **2016**,		1
70	Low-complexity factor-graph-based MAP detector for filter bank multicarrier systems. *Journal of Communications and Information Networks*, **2016**, 1, 10-22		0
69	Discriminative Training of NMF Model Based on Class Probabilities for Speech Enhancement. *IEEE Signal Processing Letters*, **2016**, 23, 502-506	3.2	10
68	Diffusion LMS Strategies in Sensor Networks With Noisy Input Data. *IEEE/ACM Transactions on Networking*, **2016**, 24, 3-14	3.8	38
67	Tight Two-Dimensional Outer-Approximations of Feasible Sets in Wireless Sensor Networks. *IEEE Communications Letters*, **2016**, 20, 570-573	3.8	3
66	Diffusion Adaptation over Multi-Agent Networks with Wireless Link Impairments. *IEEE Transactions on Mobile Computing*, **2016**, 15, 1362-1376	4.6	18
65	Intercept probability-constrained secure MIMO AF relaying with arbitrarily distributed ECSI errors **2016**,		1

64	Joint Secure AF Relaying and Artificial Noise Optimization: A Penalized Difference-of-Convex Programming Framework. *IEEE Access*, **2016**, 4, 10076-10095	3.5	5
63	Enhanced autonomous resource selection for LTE-based V2V communication **2016**,		32
62	. *IEEE Circuits and Systems Magazine*, **2016**, 16, 45-77	3.2	37
61	Joint Transceiver Design Algorithms for Multiuser MISO Relay Systems With Energy Harvesting. *IEEE Transactions on Communications*, **2016**, 1-1	6.9	18
60	Single channel speech enhancement using subband iterative Kalman filter **2016**,		9
59	Speech dereverberation using linear prediction with estimation of early speech spectral variance **2016**,		1
58	Relay-Selection Improves the Security-Reliability Trade-Off in Cognitive Radio Systems. *IEEE Transactions on Communications*, **2015**, 63, 215-228	6.9	185
57	Centralized Adaptation for Parameter Estimation Over Wireless Sensor Networks. *IEEE Communications Letters*, **2015**, 19, 1624-1627	3.8	8
56	Tomlinson-Harashima precoding design in MIMO wiretap channels based on the MMSE criterion **2015**,		6
55	Adaptive blind widely linear CCM reduced-rank beamforming for large-scale antenna arrays **2015**,		2
54	Adaptive Reduced-Rank Receive Processing Based on Minimum Symbol-Error-Rate Criterion for Large-Scale Multiple-Antenna Systems. *IEEE Transactions on Communications*, **2015**, 63, 4185-4201	6.9	16
53	Sensor localization in NLOS environments with anchor uncertainty and unknown clock parameters **2015**,		5
52	Robust Transceiver Design for MISO Interference Channel with Energy Harvesting **2015**,		3
51	Joint Carrier Frequency Offset, Sampling Time Offset and Channel Estimation for OFDM-OQAM Systems **2015**,		3
50	MIMO AF relaying security: Robust transceiver design in the presence of multiple eavesdroppers **2015**,		4
49	Semiblind Channel Estimation for OFDM/OQAM Systems. *IEEE Signal Processing Letters*, **2015**, 22, 400-403	3.2	18
48	Estimation of Space-Time Varying Parameters Using a Diffusion LMS Algorithm. *IEEE Transactions on Signal Processing*, **2014**, 62, 403-418	4.8	39
47	Distributed cooperative localization in wireless sensor networks without NLOS identification **2014**,		10

46	. *IEEE Transactions on Wireless Communications*, **2014**, 13, 5305-5318	9.6	11
45	Min-max MSE transceiver with switched preprocessing for MIMO interference channels **2014**,		3
44	Cooperative localization of mobile nodes in NLOS **2014**,		3
43	Complexity reduction techniques for blind adaptive beamforming in OFDM antenna arrays **2014**,		1
42	Noise power spectral density matrix estimation based on modified IMCRA **2014**,		2
41	A Low-Complexity Hybrid Framework for Combining-Type Non-regenerative MIMO Relaying. *Wireless Personal Communications*, **2013**, 72, 635-652	1.9	1
40	Joint Design of Multiple Non-Regenerative MIMO Relaying Matrices With Power Constraints. *IEEE Transactions on Signal Processing*, **2013**, 61, 4861-4873	4.8	12
39	Low-complexity variable forgetting factor constant modulus RLS-based algorithm for blind adaptive beamforming **2013**,		2
38	Cooperative spectrum sensing based on the rao test in non-Gaussian noise environments **2013**,		1
37	A General Framework for Mixed-Domain Echo Cancellation in Discrete Multitone Systems. *IEEE Transactions on Communications*, **2013**, 61, 769-780	6.9	6
36	A joint localization and synchronization technique using time of arrival at multiple antenna receivers **2013**,		1
35	Diffusion LMS localization and tracking algorithm for wireless cellular networks **2013**,		8
34	Blind Recursive Subspace-Based Identification of Time-Varying Wideband MIMO Channels. *IEEE Transactions on Vehicular Technology*, **2012**, 61, 662-674	6.8	7
33	Diffusion LMS for source and process estimation in sensor networks **2012**,		9
32	On the robustness of oversampled filter bank multi carrier systems against frequency offset **2012**,		3
31	EM-based joint estimation and detection for multiple antenna cognitive radios **2012**,		1
30	Cooperative Multiband Joint Detection With Correlated Spectral Occupancy in Cognitive Radio Networks. *IEEE Transactions on Signal Processing*, **2012**, 60, 2682-2687	4.8	12
29	Diffusion LMS algorithms for sensor networks over non-ideal inter-sensor wireless channels **2011**,		23

28	Wideband Spectrum Sensing for Cognitive Radios With Correlated Subband Occupancy. *IEEE Signal Processing Letters*, **2011**, 18, 35-38	3.2	27
27	Multidimensional STSA Estimators for Speech Enhancement With Correlated Spectral Components. *IEEE Transactions on Signal Processing*, **2011**, 59, 3013-3024	4.8	15
26	An adaptive energy detection technique applied to cognitive radio networks **2011**,		2
25	MMSE-Based Non-Regenerative Parallel MIMO Relaying with Simplified Receiver **2011**,		2
24	A family of Bayesian STSA estimators for the enhancement of speech with correlated frequency components **2010**,		1
23	Non-regenerative MIMO relaying strategies Ifrom single to multiple cooperative relays **2010**,		4
22	Distributed Blind Adaptive Algorithms Based on Constant Modulus for Wireless Sensor Networks **2010**,		13
21	Subspace-Based Blind Channel Estimation for MIMO-OFDM Systems With Reduced Time Averaging. *IEEE Transactions on Vehicular Technology*, **2010**, 59, 1539-1544	6.8	24
20	Subspace tracking of fast time-varying channels in precoded MIMO-OFDM systems **2009**,		4
19	Collaborative Uplink Transmit Beamforming With Robustness Against Channel Estimation Errors. *IEEE Transactions on Vehicular Technology*, **2009**, 58, 126-139	6.8	16
18	Constrained Adaptive Echo Cancellation for Discrete Multitone Systems. *IEEE Transactions on Signal Processing*, **2009**, 57, 302-312	4.8	5
17	Adaptive Training-Based Collaborative MIMO Beamforming for Multiuser Relay Networks **2009**,		2
16	Bayesian spectral amplitude estimation for speech enhancement with correlated spectral components **2009**,		2
15	A Subspace Method for the Blind Identification of Multiple Time-Varying FIR Channels **2009**,		3
14	Generalized Bayesian Estimators of the Spectral Amplitude for Speech Enhancement. *IEEE Signal Processing Letters*, **2009**, 16, 485-488	3.2	12
13	A Noise-Robust FFT-Based Auditory Spectrum With Application in Audio Classification. *IEEE Transactions on Audio Speech and Language Processing*, **2008**, 16, 137-150		15
12	Auditory-Based Spectral Amplitude Estimators for Speech Enhancement. *IEEE Transactions on Audio Speech and Language Processing*, **2008**, 16, 1614-1623		30
11	Multistage MMSE PIC SpaceIime Receiver With Non-Mutually Exclusive Grouping. *IEEE Transactions on Vehicular Technology*, **2008**, 57, 2070-2080	6.8	1

LIST OF PUBLICATIONS

10	Further studies of a FFT-based auditory spectrum with application in audio classification **2008**,		2
9	Perceptually based speech enhancement using the weighted SA estimator. *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, **2008**,	1.6	2
8	Cooperative MIMO-beamforming for multiuser relay networks. *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, **2008**,	1.6	10
7	Subspace Blind MIMO-OFDM Channel Estimation with Short Averaging Periods: Performance Analysis **2008**,		7
6	Group-Based Space-Time Multiuser Detection with User Sharing. *IEEE Transactions on Wireless Communications*, **2007**, 6, 2034-2039	9.6	7
5	One-Tap Equalizer for Perfect Reconstruction DFT Filter Bank Transceivers **2007**,		1
4	Further Analysis of the Order MMSE STSA Estimator for Speech Enhancement **2007**,		5
3	A simplified early auditory model with application in audio classification. *Canadian Journal of Electrical and Computer Engineering*, **2006**, 31, 185-189	1.4	
2	Group-Based Linear Parallel Interference Cancellation for DS-CDMA Systems **2006**,		1
1	A Simplified Early Auditory Model with Application in Speech/Music Classification **2006**,		3