Christophe Guyeux

List of Publications by Year
in descending order

148 papers	2,004 citations	361413 20 h-index	315739 38 g-index
166 all docs	166 docs citations	166 times ranked	2480 citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical Design and FPGA-Based Implementation of Higher-Dimensional Digital Chaotic Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 401-412.	5.4	190
2	Wastewater Treatment Plants Release Large Amounts of Extended-Spectrum β-Lactamaseâ€"Producing Escherichia coli Into the Environment. Clinical Infectious Diseases, 2014, 58, 1658-1665.	5.8	143
3	Global emergence of the widespread Pseudomonas aeruginosa ST235 clone. Clinical Microbiology and Infection, 2018, 24, 258-266.	6.0	138
4	Using an Epidemiological Approach to Maximize Data Survival in the Internet of Things. ACM Transactions on Internet Technology, 2016, 16, 1-15.	4.4	111
5	What It Takes to Be a Pseudomonas aeruginosa? The Core Genome of the Opportunistic Pathogen Updated. PLoS ONE, 2015, 10, e0126468.	2.5	91
6	Survey on hardware implementation of random number generators on FPGA: Theory and experimental analyses. Computer Science Review, 2018, 27, 135-153.	15.3	67
7	Molecular epidemiology of OXA-48-producing Klebsiella pneumoniae in France. Clinical Microbiology and Infection, 2014, 20, O1121-O1123.	6.0	51
8	Population structure and antimicrobial susceptibility of Pseudomonas aeruginosa from animal infections in France. BMC Veterinary Research, 2015, 11, 9.	1.9	50
9	A Hardware and Secure Pseudorandom Generator for Constrained Devices. IEEE Transactions on Industrial Informatics, 2018, 14, 3754-3765.	11.3	45
10	Dependability of wireless sensor networks for industrial prognostics and health management. Computers in Industry, 2015, 68, 1-15.	9.9	43
11	Hash Functions Using Chaotic Iterations. Journal of Algorithms and Computational Technology, 2010, 4, 167-181.	0.7	36
12	Dendrochemical assessment of mercury releases from a pond and dredged-sediment landfill impacted by a chlor-alkali plant. Environmental Research, 2016, 148, 122-126.	7.5	33
13	Fluoroquinolone Resistance Mechanisms and population structure of Enterobacter cloacae non-susceptible to Ertapenem in North-Eastern France. Frontiers in Microbiology, 2015, 6, 1186.	3.5	32
14	Evaluation of chloroplast genome annotation tools and application to analysis of the evolution of coffee species. PLoS ONE, 2019, 14, e0216347.	2.5	31
15	<i>panISa: ab initio</i> detection of insertion sequences in bacterial genomes from short read sequence data. Bioinformatics, 2018, 34, 3795-3800.	4.1	29
16	Noise and Chaos Contributions in Fast Random Bit Sequence Generated From Broadband Optoelectronic Entropy Sources. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 888-901.	5.4	26
17	IS PROTEIN FOLDING PROBLEM REALLY A NP-COMPLETE ONE? FIRST INVESTIGATIONS. Journal of Bioinformatics and Computational Biology, 2014, 12, 1350017.	0.8	25
18	Topological chaos and chaotic iterations application to hash functions. , 2010, , .		23

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19	Efficient and cryptographically secure generation of chaotic pseudorandom numbers on GPU. Journal of Supercomputing, 2015, 71, 3877-3903.	3.6	23
20	Anomalyâ€based intrusion detection systems: The requirements, methods, measurements, and datasets. Transactions on Emerging Telecommunications Technologies, 2021, 32, e4240.	3.9	23
21	Population Structure of Clinical Pseudomonas aeruginosa from West and Central African Countries. PLoS ONE, 2014, 9, e107008.	2.5	23
22	Major earthquake event prediction using various machine learning algorithms. , 2019, , .		21
23	Epidemiological approach for data survivability in unattended wireless sensor networks. Journal of Network and Computer Applications, 2014, 46, 374-383.	9.1	20
24	Theoretical Design and Circuit Implementation of Integer Domain Chaotic Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2014, 24, 1450128.	1.7	19
25	Chloroplast genomes of Rubiaceae: Comparative genomics and molecular phylogeny in subfamily Ixoroideae. PLoS ONE, 2020, 15, e0232295.	2.5	18
26	Forecasting the number of firefighter interventions per region with local-differential-privacy-based data. Computers and Security, 2020, 96, 101888.	6.0	18
27	FPGA Design for Pseudorandom Number Generator Based on Chaotic Iteration used in Information Hiding Application. Applied Mathematics and Information Sciences, 2013, 7, 2175-2188.	0.5	18
28	FPGA acceleration of a pseudorandom number generator based on chaotic iterations. Journal of Information Security and Applications, 2014, 19, 78-87.	2.5	17
29	CIPRNG: A VLSI Family of Chaotic Iterations Post-Processings for $\mathbb{F}_{2}$ -Linear Pseudorandom Number Generation Based on Zynq MPSoC. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1628-1641.	5.4	17
30	Random forests for industrial device functioning diagnostics using wireless sensor networks. , 2015, , .		16
31	Streptomyces Dominate the Soil Under Betula Trees That Have Naturally Colonized a Red Gypsum Landfill. Frontiers in Microbiology, 2018, 9, 1772.	3.5	16
32	Unexpected diversity of CRISPR unveils some evolutionary patterns of repeated sequences in Mycobacterium tuberculosis. BMC Genomics, 2020, 21, 841.	2.8	15
33	Efficient and Robust Secure Aggregation of Encrypted Data in Sensor Networks. , 2010, , .		14
34	Study on a new chaotic bitwise dynamical system and its FPGA implementation. Chinese Physics B, 2015, 24, 060503.	1.4	14
35	Reliable diagnostics using wireless sensor networks. Computers in Industry, 2019, 104, 103-115.	9.9	14
36	Predicting Fire Brigades Operational Breakdowns: A Real Case Study. Mathematics, 2020, 8, 1383.	2.2	14

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37	Introducing and Comparing Recent Clustering Methods for Massive Data Management in the Internet of Things. Journal of Sensor and Actuator Networks, 2019, 8, 56.	3.9	13
38	On the use of chaotic iterations to design keyed hash function. Cluster Computing, 2019, 22, 905-919.	5.0	13
39	Complex evolutionary history of coffees revealed by full plastid genomes and 28,800 nuclear SNP analyses, with particular emphasis on Coffea canephora (Robusta coffee). Molecular Phylogenetics and Evolution, 2020, 151, 106906.	2.7	13
40	A Pseudo Random Numbers Generator Based on Chaotic Iterations: Application to Watermarking. Lecture Notes in Computer Science, 2010, , 202-211.	1.3	12
41	Chaotic Iterations versus Spread-Spectrum: Chaos and Stego Security. , 2010, , .		12
42	CRISPRbuilder-TB: â€œCRISPR-builder for tuberculosisâ€• Exhaustive reconstruction of the CRISPR locus in mycobacterium tuberculosis complex using SRA. PLoS Computational Biology, 2021, 17, e1008500.	3.2	12
43	Efficient and accurate monitoring of the depth information in a Wireless Multimedia Sensor Network based surveillance. , 2017, , .		11
44	Impacts of wireless sensor networks strategies and topologies on prognostics and health management. Journal of Intelligent Manufacturing, 2019, 30, 2129-2155.	7.3	11
45	Efficient distributed average consensus in wireless sensor networks. Computer Communications, 2020, 150, 115-121.	5.1	11
46	Machine learning-based forecasting of firemen ambulancesâ€™ turnaround time in hospitals, considering the COVID-19 impact. Applied Soft Computing Journal, 2021, 109, 107561.	7.2	11
47	STABYLO: steganography with adaptive, Bbs, and binary embedding at low cost. Annales Des Telecommunications/Annals of Telecommunications, 2015, 70, 441-449.	2.5	10
48	Investigating low level protocols for Wireless Body Sensor Networks. , 2016, , .		10
49	A clustering package for nucleotide sequences using Laplacian Eigenmaps and Gaussian Mixture Model. Computers in Biology and Medicine, 2018, 93, 66-74.	7.0	10
50	Anonymously forecasting the number and nature of firefighting operations. , 2019, , .		10
51	Steganography: A Class of Secure and Robust Algorithms. Computer Journal, 2012, 55, 653-666.	2.4	9
52	Random Walk in a N-Cube Without Hamiltonian Cycle to Chaotic Pseudorandom Number Generation: Theoretical and Practical Considerations. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1750014.	1.7	9
53	Efficient Hybrid Emergency Aware MAC Protocol for Wireless Body Sensor Networks. Sensors, 2018, 18, 3572.	3.8	9
54	Efficient Chaotic Encryption Scheme with OFB Mode. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1950059.	1.7	9

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55	Toward fast and accurate emergency cases detection in BSNs. IET Wireless Sensor Systems, 2020, 10, 47-60.	1.7	9
56	A Novel Pseudo-random Number Generator Based on Discrete Chaotic Iterations. , 2009, , .		8
57	Protein Folding in the 2D Hydrophobicâ€"Hydrophilic (HP) Square Lattice Model is Chaotic. Cognitive Computation, 2012, 4, 98-114.	5.2	8
58	Computational investigations of folded self-avoiding walks related to protein folding. Computational Biology and Chemistry, 2013, 47, 246-256.	2.3	8
59	Long Short-Term Memory for Predicting Firemen Interventions. , 2019, , .		8
60	Constructing Higher-Dimensional Digital Chaotic Systems via Loop-State Contraction Algorithm. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 3794-3807.	5.4	8
61	A Topological Study of Chaotic Iterations Application to Hash Functions. Studies in Computational Intelligence, 2012, , 51-73.	0.9	8
62	Improving random number generators by chaotic iterations application in data hiding. , 2010, , .		7
63	Randomness Quality of CI Chaotic Generators: Applications to Internet Security. , 2010, , .		7
64	Resiliency in Distributed Sensor Networks for Prognostics and Health Management of the Monitoring Targets. Computer Journal, 2016, 59, 275-284.	2.4	7
65	Novel order preserving encryption scheme for wireless sensor networks. , 2018, , .		7
66	Connection between two historical tuberculosis outbreak sites in Japan, Honshu, by a new <i>ancestral Mycobacterium tuberculosis</i> L2 sublineage. Epidemiology and Infection, 2022, 150, 1-25.	2.1	7
67	Steganography: A Class of Algorithms having Secure Properties. , 2011, , .		6
68	Neural networks and chaos: Construction, evaluation of chaotic networks, and prediction of chaos with multilayer feedforward networks. Chaos, 2012, 22, 013122.	2.5	6
69	Suitability of chaotic iterations schemes using XORshift for security applications. Journal of Network and Computer Applications, 2014, 37, 282-292.	9.1	6
70	On the coverage effects in wireless sensor networks based prognostic and health management. International Journal of Sensor Networks, 2018, 28, 125.	0.4	6
71	Efficient cluster-based routing algorithm for body sensor networks. , 2018, , .		6
72	Preserving Geo-Indistinguishability of the Emergency Scene to Predict Ambulance Response Time. Mathematical and Computational Applications, 2021, 26, 56.	1.3	6

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73	Firemen Prediction by Using Neural Networks: A Real Case Study. Advances in Intelligent Systems and Computing, 2020, , 541-552.	0.6	6
74	Low-Cost Monitoring and Intruders Detection Using Wireless Video Sensor Networks. International Journal of Distributed Sensor Networks, 2012, 8, 929542.	2.2	6
75	An Improved Watermarking Scheme for Internet Applications. , 2010, , .		5
76	Gene similarity-based approaches for determining core-genes of chloroplasts. , 2014, , .		5
77	Chaos in DNA evolution. International Journal of Biomathematics, 2016, 09, 1650076.	2.9	5
78	Efficient high degree polynomial root finding using GPU. Journal of Computational Science, 2017, 18, 46-56.	2.9	5
79	On the reconstruction of the ancestral bacterial genomes in genus Mycobacterium and Brucella. BMC Systems Biology, 2018, 12, 100.	3.0	5
80	SpCLUST: Towards a fast and reliable clustering for potentially divergent biological sequences. Computers in Biology and Medicine, 2019, 114, 103439.	7.0	5
81	Hybrid Genetic Algorithm and Lasso Test Approach for Inferring Well Supported Phylogenetic Trees Based on Subsets of Chloroplastic Core Genes. Lecture Notes in Computer Science, 2015, , 83-96.	1.3	5
82	A Complete Security Framework for Wireless Sensor Networks. International Journal of Information Technology and Web Engineering, 2015, 10, 47-74.	1.6	5
83	Privacy-Preserving Prediction of Victimâ€™s Mortality and Their Need for Transportation to Health Facilities. IEEE Transactions on Industrial Informatics, 2022, 18, 5592-5599.	11.3	5
84	The study of unfoldable self-avoiding walks â€" Application to protein structure prediction software. Journal of Bioinformatics and Computational Biology, 2015, 13, 1550009.	0.8	4
85	Energy-efficiency and coverage quality management for reliable diagnostics in wireless sensor networks. International Journal of Sensor Networks, 2020, 32, 127.	0.4	4
86	Fault tolerant data transmission reduction method for wireless sensor networks. World Wide Web, 2020, 23, 1197-1216.	4.0	4
87	On the Evaluation of the Privacy Breach in Disassociated Set-valued Datasets. , 2016, , .		4
88	A Critical Review on the Implementation of Static Data Sampling Techniques to Detect Network Attacks. IEEE Access, 2021, 9, 138903-138938.	4.2	4
89	Predicting the Evolution of two Genes in the Yeast Saccharomyces Cerevisiae. Procedia Computer Science, 2012, 11, 4-16.	2.0	3
90	Lyapunov Exponent Evaluation of a Digital Watermarking Scheme Proven to be Secure. , 2012, , .		3

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91	A Bregman-proximal point algorithm for robust non-negative matrix factorization with possible missing values and outliers - application to gene expression analysis. BMC Bioinformatics, 2016, 17, 284.	2.6	3
92	Quantitative evaluation of chaotic CBC mode of operation. , 2016, , .		3
93	Proving Chaotic Behavior of CBC Mode of Operation. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1650113.	1.7	3
94	Design and Evaluation of Chaotic Iterations Based Keyed Hash Function. Lecture Notes in Electrical Engineering, 2017, , 404-414.	0.4	3
95	Boosting Methods for Predicting Firemen Interventions. , 2020, , .		3
96	OSIP1 is a selfâ€assembling DUF3129 protein required to protect fungal cells from toxins and stressors. Environmental Microbiology, 2021, 23, 1594-1607.	3.8	3
97	On the coverage effects in wireless sensor networks based prognostic and health management. International Journal of Sensor Networks, 2018, 28, 125.	0.4	3
98	One Random Jump and One Permutation: Sufficient Conditions to Chaotic, Statistically Faultless, and Large Throughput PRNG for FPGA. , 2017, , .		3
99	Machine Learning for Predicting Firefightersâ€™ Interventions Per Type of Mission. , 2022, , .		3
100	Chaos of protein folding. , 2011, , .		2
101	Two security layers for hierarchical data aggregation in sensor networks. International Journal of Autonomous and Adaptive Communications Systems, 2014, 7, 239.	0.3	2
102	TSIRM: A two-stage iteration with least-squares residual minimization algorithm to solve large sparse linear and nonlinear systems. Journal of Computational Science, 2016, 17, 535-546.	2.9	2
103	Collaborative body sensor networks: Taxonomy and open challenges. , 2018, , .		2
104	Binary Particle Swarm Optimization Versus Hybrid Genetic Algorithm for Inferring Well Supported Phylogenetic Trees. Lecture Notes in Computer Science, 2016, , 165-179.	1.3	2
105	Finding the Core-Genes of Chloroplasts. International Journal of Bioscience, Biochemistry, Bioinformatics (IJBBB), 2014, 4, 361-368.	0.2	2
106	How to Predict Patient Arrival in the Emergency Room. Lecture Notes in Networks and Systems, 2022, , 600-610.	0.7	2
107	Quality Studies of an Invisible Chaos-Based Watermarking Scheme with Message Extraction. , 2013, , .		1
108	A Cryptographic Approach for Steganography. , 2013, , .		1

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109	A Security Framework for Wireless Sensor Networks: Theory and Practice. , 2014, , .		1
110	Investigating gene expression array with outliers and missing data in bladder cancer. , 2015, , .		1
111	Simulation-based estimation of branching models for LTR retrotransposons. Bioinformatics, 2017, 33, 320-326.	4.1	1
112	On the Ability to Reconstruct Ancestral Genomes from Mycobacterium Genus. Lecture Notes in Computer Science, 2017, , 642-658.	1.3	1
113	Conditions to Have a Well-Disordered Dynamics in the CBC Mode of Operation. , 2017, , .		1
114	Theoretical Study of the One Self-Regulating Gene in the Modified Wagner Model. Mathematics, 2018, 6, 58.	2.2	1
115	Comparison of metaheuristics to measure gene effects on phylogenetic supports and topologies. BMC Bioinformatics, 2018, 19, 218.	2.6	1
116	Wireless multimedia sensor network deployment for disparity map calculation. , 2018, , .		1
117	Ancestral Reconstruction and Investigations of Genomic Recombination on some Pentapetalae Chloroplasts. Journal of Integrative Bioinformatics, 2019, 16, .	1.5	1
118	Performance of low level protocols in high traffic wireless body sensor networks. Peer-to-Peer Networking and Applications, 2020, 13, 850-871.	3.9	1
119	Mobility aware and traffic adaptive hybrid MAC protocol for collaborative body sensor networks. International Journal of Sensor Networks, 2020, 32, 182.	0.4	1
120	An optimal clusterâ€based routing algorithm for UCBSNs. Internet Technology Letters, 2021, 4, e215.	1.9	1
121	Higher-Dimensional Digital Chaotic Systems (HDDCS). SpringerBriefs in Applied Sciences and Technology, 2018, , 59-88.	0.4	1
122	Relation between Gene Content and Taxonomy in Chloroplasts. International Journal of Bioscience, Biochemistry, Bioinformatics (IJBBB), 2017, 7, 41-50.	0.2	1
123	Efficient Cluster based Routing Protocol for Collaborative Body Sensor Networks. , 2019, , .		1
124	Relaxing the Hypotheses of Symmetry and Time-Reversibility in Genome Evolutionary Models. British Journal of Mathematics & Computer Science, 2015, 5, 439-455.	0.3	1
125	On the pinning controllability of complex networks using perturbation theory of extreme singular values. application to synchronisation in power grids. Numerical Algebra, Control and Optimization, 2017, 7, 289-299.	1.6	1
126	Chaotic Bitwise Dynamical Systems (CBDS). SpringerBriefs in Applied Sciences and Technology, 2018, , 35-45.	0.4	1

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127	Statistical Analysis and Security Evaluation of Chaotic RC5-CBC Symmetric Key Block Cipher Algorithm. International Journal of Advanced Computer Science and Applications, 2019, 10, .	0.7	1
128	Average Performance Analysis of the Stochastic Gradient Method for Online PCA. Lecture Notes in Computer Science, 2019, , 231-242.	1.3	1
129	The usefulness of NLP techniques for predicting peaks in firefighter interventions due to rare events. Neural Computing and Applications, 2022, , 1-16.	5.6	1
130	On the Design of a Family of Ci Pseudo-Random Number Generators. , 2011, , .		0
131	Taenia biomolecular phylogeny and the impact of mitochondrial genes on this latter. , 2015, , .		0
132	Steganalyzer Performances in Operational Contexts. , 2015, , .		0
133	TSIRM: A Two-Stage Iteration with Least-Squares Residual Minimization Algorithm to Solve Large Sparse Linear Systems. , 2015, , .		0
134	Performance Study of Steganalysis Techniques. , 2015, , .		0
135	On the Topology Effects in Wireless Sensor Networks Based Prognostics and Health Management. , 2016, , .		0
136	Summary of Topological Study of Chaotic CBC Mode of Operation. , 2016, , .		0
137	Systematic investigations of gene effects on both topologies and supports: An Echinococcus illustration. Journal of Bioinformatics and Computational Biology, 2017, 15, 1750019.	0.8	0
138	Finding optimal finite biological sequences over finite alphabets: The OptiFin toolbox. , 2017, , .		0
139	Online Shortest Paths With Confidence Intervals for Routing in a Time Varying Random Network. , 2018, , .		0
140	On the collision property of chaotic iterations based post-treatments over cryptographic pseudorandom number generators. , 2018, , .		0
141	Advances in the enumeration of foldable self-avoiding walks. International Journal of Computational Science and Engineering, 2020, 22, 365.	0.5	0
142	Convergence versus Divergence Behaviors of Asynchronous Iterations, and Their Applications in Concrete Situations. Mathematical and Computational Applications, 2020, 25, 69.	1.3	0
143	A Second Order Derivatives based Approach for Steganography. , 2016, , .		0
144	FPGA Implementation of F2-Linear Pseudorandom Number Generators based on Zynq MPSoC: A Chaotic Iterations Post Processing Case Study. , 2016, , .		0

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145	An Introduction to Digital Chaotic Systems Updated by Random Iterations. SpringerBriefs in Applied Sciences and Technology, 2018, , 1-10.	0.4	0
146	Efficient Online Laplacian Eigenmap Computation for Dimensionality Reduction in Molecular Phylogeny via Optimisation on the Sphere. Lecture Notes in Computer Science, 2019, , 441-452.	1.3	0
147	Impact of Insertion Sequences and RNAs on Genomic Inversions in Pseudomonas aeruginosa. Journal of King Saud University - Computer and Information Sciences, 2021, , .	3.9	0
148	Impact of Eigensolvers on Spectral Clustering. , 2021, , .		0