Benjamin Audit

List of Publications by Year
in descending order

91 papers	3,834 citations	101543 36 h-index	144013 57 g-index
102 all docs	102 docs citations	102 times ranked	3815 citing authors

#	Article	IF	Citations
1	Are splicing mutations the most frequent cause of hereditary disease?. FEBS Letters, 2005, 579, 1900-1903.	2.8	327
2	Impact of replication timing on non-CpG and CpG substitution rates in mammalian genomes. Genome Research, 2010, 20, 447-457.	5.5	187
3	Modeling the percolation of annotation errors in a database of protein sequences. Bioinformatics, 2002, 18, 1641-1649.	4.1	153
4	Human gene organization driven by the coordination of replication and transcription. Genome Research, 2007, 17, 1278-1285.	5.5	147
5	Replication-associated strand asymmetries in mammalian genomes: Toward detection of replication origins. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 9836-9841.	7.1	133
6	Long-Range Correlations in Genomic DNA: A Signature of the Nucleosomal Structure. Physical Review Letters, 2001, 86, 2471-2474.	7.8	127
7	Evidence for Sequential and Increasing Activation of Replication Origins along Replication Timing Gradients in the Human Genome. PLoS Computational Biology, 2011, 7, e1002322.	3.2	124
8	The Spatiotemporal Program of DNA Replication Is Associated with Specific Combinations of Chromatin Marks in Human Cells. PLoS Genetics, 2014, 10, e1004282.	3.5	123
9	Multi-scale coding of genomic information: From DNA sequence to genome structure and function. Physics Reports, 2011, 498, 45-188.	25.6	108
10	Long-range Correlations between DNA Bending Sites: Relation to the Structure and Dynamics of Nucleosomes. Journal of Molecular Biology, 2002, 316, 903-918.	4.2	99
11	Wavelet-based estimators of scaling behavior. IEEE Transactions on Information Theory, 2002, 48, 2938-2954.	2.4	90
12	What can we learn with wavelets about DNA sequences?. Physica A: Statistical Mechanics and Its Applications, 1998, 249, 439-448.	2.6	81
13	3D chromatin conformation correlates with replication timing and is conserved in resting cells. Nucleic Acids Research, 2012, 40, 9470-9481.	14.5	76
14	Replication Fork Polarity Gradients Revealed by Megabase-Sized U-Shaped Replication Timing Domains in Human Cell Lines. PLoS Computational Biology, 2012, 8, e1002443.	3.2	70
15	Wavelet-based multifractal analysis of dynamic infrared thermograms to assist in early breast cancer diagnosis. Frontiers in Physiology, 2014, 5, 176.	2.8	68
16	Percolation of annotation errors through hierarchically structured protein sequence databases. Mathematical Biosciences, 2005, 193, 223-234.	1.9	67
17	Replication-Associated Mutational Asymmetry in the Human Genome. Molecular Biology and Evolution, 2011, 28, 2327-2337.	8.9	66
18	Wavelet Based Multifractal Formalism: Applications to DNA Sequences, Satellite Images of the Cloud Structure, and Stock Market Data. , 2002, , 26-102.		65

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19	A novel strategy of transcription regulation by intragenic nucleosome ordering. Genome Research, 2010, 20, 59-67.	5.5	64
20	Experiments Confirm the Influence of Genome Long-Range Correlations on Nucleosome Positioning. Physical Review Letters, 2007, 99, 218103.	7.8	60
21	Analysis of fine-scale mammalian evolutionary breakpoints provides new insight into their relation to genome organisation. BMC Genomics, 2009, 10, 335.	2.8	58
22	Nucleosome positioning by genomic excluding-energy barriers. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22257-22262.	7.1	54
23	Human Genome Replication Proceeds through Four Chromatin States. PLoS Computational Biology, 2013, 9, e1003233.	3.2	54
24	From DNA Sequence Analysis to Modeling Replication in the Human Genome. Physical Review Letters, 2005, 94, 248103.	7.8	52
25	Open chromatin encoded in DNA sequence is the signature of â€˜masterâ€™ replication origins in human cells. Nucleic Acids Research, 2009, 37, 6064-6075.	14.5	52
26	Revealing Long-Range Interconnected Hubs in Human Chromatin Interaction Data Using Graph Theory. Physical Review Letters, 2013, 111, 118102.	7.8	52
27	An Exponential Core in the Heart of the Yeast Protein Interaction Network. Molecular Biology and Evolution, 2005, 22, 421-425.	8.9	50
28	Multiscale analysis of genome-wide replication timing profiles using a wavelet-based signal-processing algorithm. Nature Protocols, 2013, 8, 98-110.	12.0	50
29	Strain-specific genes of Helicobacter pylori: distribution, function and dynamics. Nucleic Acids Research, 2001, 29, 4395-4404.	14.5	43
30	Thermodynamics of DNA Loops with Long-Range Correlated Structural Disorder. Physical Review Letters, 2005, 95, 068101.	7.8	43
31	Genome sequences and great expectations. Genome Biology, 2000, 2, interactions0001.1.	9.6	40
32	COmplete GENome Tracking (COGENT): a flexible data environment for computational genomics. Bioinformatics, 2003, 19, 1451-1452.	4.1	40
33	Thermodynamics of fractal signals based on wavelet analysis: application to fully developed turbulence data and DNA sequences. Physica A: Statistical Mechanics and Its Applications, 1998, 254, 24-45.	2.6	39
34	DNA Replication Timing Data CorroborateIn SilicoHuman Replication Origin Predictions. Physical Review Letters, 2007, 99, 248102.	7.8	39
35	FORK-seq: replication landscape of the Saccharomyces cerevisiae genome by nanopore sequencing. Genome Biology, 2020, 21, 125.	8.8	39
36	Wavelet-based multifractal analysis. Scholarpedia Journal, 2008, 3, 4103.	0.3	39

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37	From Genes to Genomes: Universal Scale-invariant Properties of Microbial Chromosome Organisation. Journal of Molecular Biology, 2003, 332, 617-633.	4.2	38
38	Nucleotide composition effects on the long-range correlations in human genes. European Physical Journal B, 1998, 1, 259-263.	1.5	37
39	Bifractality of human DNA strand-asymmetry profiles results from transcription. Physical Review E, 2007, 75, 032902.	2.1	37
40	Multifractal analysis of dynamic infrared imaging of breast cancer. Europhysics Letters, 2013, 104, 68001.	2.0	34
41	Effect of Genomic Long-Range Correlations on DNA Persistence Length: From Theory to Single Molecule Experiments. Journal of Physical Chemistry B, 2010, 114, 5125-5143.	2.6	33
42	Formation and positioning of nucleosomes: Effect of sequence-dependent long-range correlated structural disorder. European Physical Journal E, 2006, 19, 263-277.	1.6	32
43	From Simple Bacterial and Archaeal Replicons to Replication N/U-Domains. Journal of Molecular Biology, 2013, 425, 4673-4689.	4.2	32
44	Wavelet Analysis of DNA Bending Profiles reveals Structural Constraints on the Evolution of Genomic Sequences. Journal of Biological Physics, 2004, 30, 33-81.	1.5	30
45	Developmental and cancer-associated plasticity of DNA replication preferentially targets GC-poor, lowly expressed and late-replicating regions. Nucleic Acids Research, 2018, 46, 10157-10172.	14.5	30
46	Structural organization of human replication timing domains. FEBS Letters, 2015, 589, 2944-2957.	2.8	28
47	Inferring Where and When Replication Initiates from Genome-Wide Replication Timing Data. Physical Review Letters, 2012, 108, 268101.	7.8	25
48	Evidence of selection for an accessible nucleosomal array in human. BMC Genomics, 2016, 17, 526.	2.8	25
49	Probabilistic annotation of protein sequences based on functional classifications. BMC Bioinformatics, 2005, 6, 302.	2.6	24
50	Beyond 100 genomes. Genome Biology, 2003, 4, 402.	9.6	23
51	Human ORC/MCM density is low in active genes and correlates with replication time but does not delimit initiation zones. ELife, 2021, 10, .	6.0	23
52	CoGenT++: an extensive and extensible data environment for computational genomics. Bioinformatics, 2005, 21, 3806-3810.	4.1	22
53	Wavelet-based method to disentangle transcription- and replication-associated strand asymmetries in mammalian genomes. Applied and Computational Harmonic Analysis, 2010, 28, 150-170.	2.2	22
54	Embryonic Stem Cell Specific â€œMasterâ€•Replication Origins at the Heart of the Loss of Pluripotency. PLoS Computational Biology, 2015, 11, e1003969.	3.2	22

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55	SWDreader: A wavelet-based algorithm using spectral phase to characterize spike-wave morphological variation in genetic models of absence epilepsy. Journal of Neuroscience Methods, 2015, 242, 127-140.	2.5	20
56	Comparative Multifractal Analysis of Dynamic Infrared Thermograms and X-Ray Mammograms Enlightens Changes in the Environment of Malignant Tumors. Frontiers in Physiology, 2016, 7, 336.	2.8	18
57	Influence of the sequence on elastic properties of long DNA chains. Physical Review E, 2003, 67, 032901.	2.1	16
58	Linking the DNA strand asymmetry to the spatio-temporal replication program. European Physical Journal E, 2012, 35, 92.	1.6	16
59	Megabase Replication Domains Along the Human Genome: Relation to Chromatin Structure and Genome Organisation. Sub-Cellular Biochemistry, 2013, 61, 57-80.	2.4	15
60	Genome-wide mapping of individual replication fork velocities using nanopore sequencing. Nature Communications, 2022, 13, .	12.8	15
61	CORRIE: enzyme sequence annotation with confidence estimates. BMC Bioinformatics, 2007, 8, S3.	2.6	14
62	Spontaneous emergence of sequence-dependent rosettelike folding of chromatin fiber. Physical Review E, 2008, 77, 061923.	2.1	14
63	The eukaryotic bell-shaped temporal rate of DNA replication origin firing emanates from a balance between origin activation and passivation. ELife, 2018, 7, .	6.0	14
64	Revealing intermittency in experimental data with steep power spectra. Europhysics Letters, 2010, 90, 50007.	2.0	13
65	Linking the DNA strand asymmetry to the spatio-temporal replication program. European Physical Journal E, 2012, 35, 123.	1.6	13
66	Gene organization inside replication domains in mammalian genomes. Comptes Rendus - Mecanique, 2012, 340, 745-757.	2.1	12
67	From the chromatin interaction network to the organization of the human genome into replication N/U-domains. New Journal of Physics, 2014, 16, 115014.	2.9	12
68	Sensitive Hg²⁺ Ion Detection Using Metal Enhanced Fluorescence of Novel Polyvinyl Pyrrolidone (PVP)-Templated Gold Nanoparticles. Applied Spectroscopy, 2018, 72, 1645-1652.	2.2	12
69	Ubiquitous human â€˜masterâ€™ origins of replication are encoded in the DNA sequence via a local enrichment in nucleosome excluding energy barriers. Journal of Physics Condensed Matter, 2015, 27, 064102.	1.8	11
70	Combining multifractal analyses of digital mammograms and infrared thermograms to assist in early breast cancer diagnosis. AIP Conference Proceedings, 2016, , .	0.4	11
71	Multi-scale structural community organisation of the human genome. BMC Bioinformatics, 2017, 18, 209.	2.6	11
72	Deciphering DNA replication dynamics in eukaryotic cell populations in relation with their averaged chromatin conformations. Scientific Reports, 2016, 6, 22469.	3.3	9

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73	Numerical Study of Novel Ratiometric Sensors Based on Plasmonâ€"Exciton Coupling. Applied Spectroscopy, 2017, 71, 2377-2384.	2.2	9
74	Epigenetic regulation of the human genome: coherence between promoter activity and large-scale chromatin environment. Frontiers in Life Science: Frontiers of Interdisciplinary Research in the Life Sciences, 2013, 7, 44-62.	1.1	8
75	From elasticity to inelasticity in cancer cell mechanics: A loss of scale-invariance. AIP Conference Proceedings, 2016, , .	0.4	8
76	Evidence for DNA Sequence Encoding of an Accessible Nucleosomal Array across Vertebrates. Biophysical Journal, 2018, 114, 2308-2316.	0.5	8
77	Generalized wormlike chain model for long-range correlated heteropolymers. Europhysics Letters, 2009, 86, 48001.	2.0	6
78	Large replication skew domains delimit GC-poor gene deserts in human. Computational Biology and Chemistry, 2014, 53, 153-165.	2.3	5
79	A Wavelet-Based Method for Multifractal Analysis of Medical Signals: Application to Dynamic Infrared Thermograms of Breast Cancer. Communications in Computer and Information Science, 2014, , 288-300.	0.5	5
80	Coupling between Sequence-Mediated Nucleosome Organization and Genome Evolution. Genes, 2021, 12, 851.	2.4	5
81	Holographic study of a vibrating bell: An undergraduate laboratory experiment. American Journal of Physics, 1998, 66, 380-385.	0.7	4
82	Organization of DNA Replication Origin Firing in Xenopus Egg Extracts: The Role of Intra-S Checkpoint. Genes, 2021, 12, 1224.	2.4	4
83	Applications of Hybrid Nanoparticles in Biosensors. , 2019, , 431-455.		3
84	Revisiting polymer statistical physics to account for the presence of long-range-correlated structural disorder in 2D DNA chains. European Physical Journal E, 2011, 34, 119.	1.6	2
85	The Role of Nucleosome Positioning in Genome Function and Evolution. , 2018, , 41-79.		2
86	FractalsFractal and WaveletsWavelets : What Can We Learn on Transcription and Replication from Wavelet-Based Multifractal AnalysisMultifractal analysis of DNA SequencesDNA sequence ?. , 2009, , 3893-3924.		2
87	Atomic Force Microscopy In Solution Shows Nucleosome Positioning By Excluding Genomic Energy Barriers. Biophysical Journal, 2009, 96, 419a.	0.5	0
88	Publisherâ€™s Note: Inferring Where and When Replication Initiates from Genome-Wide Replication Timing Data [Phys. Rev. Lett.108, 268101 (2012)]. Physical Review Letters, 2012, 109, .	7.8	0
89	Genome-wide alterations of the DNA replication program during tumor progression. AIP Conference Proceedings, 2016, , .	0.4	0
90	FractalsFractal and WaveletsWavelets : What Can We Learn on Transcription and Replication from Wavelet-Based Multifractal AnalysisMultifractal analysis of DNA SequencesDNA sequence ?. , 2012, , 606-636.		0

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91	FORK-seq: Single-Molecule Profiling of DNA Replication. Methods in Molecular Biology, 2022, 2477, 107-128.	0.9	0