## Michael C Schatz

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/4367667/publications.pdf

Version: 2024-02-01

160 papers 37,803 citations

9234 74 h-index 154 g-index

234 all docs

234 docs citations

times ranked

234

44676 citing authors

#	Article	IF	CITATIONS
1	The contribution of de novo coding mutations to autism spectrum disorder. Nature, 2014, 515, 216-221.	13.7	2,188
2	Evolution of genes and genomes on the Drosophila phylogeny. Nature, 2007, 450, 203-218.	13.7	1,886
3	Phased diploid genome assembly with single-molecule real-time sequencing. Nature Methods, 2016, 13, 1050-1054.	9.0	1,658
4	De Novo Gene Disruptions in Children on the Autistic Spectrum. Neuron, 2012, 74, 285-299.	3.8	1,311
5	The complete sequence of a human genome. Science, 2022, 376, 44-53.	6.0	1,222
6	GenomeScope: fast reference-free genome profiling from short reads. Bioinformatics, 2017, 33, 2202-2204.	1.8	1,183
7	Accurate detection of complex structural variations using single-molecule sequencing. Nature Methods, 2018, 15, 461-468.	9.0	1,175
8	Genome Sequence of Aedes aegypti, a Major Arbovirus Vector. Science, 2007, 316, 1718-1723.	6.0	1,025
9	Accurate circular consensus long-read sequencing improves variant detection and assembly of a human genome. Nature Biotechnology, 2019, 37, 1155-1162.	9.4	1,010
10	A whole-genome assembly of the domestic cow, Bos taurus. Genome Biology, 2009, 10, R42.	13.9	1,005
11	Big Data: Astronomical or Genomical?. PLoS Biology, 2015, 13, e1002195.	2.6	995
12	The draft genome of the transgenic tropical fruit tree papaya (Carica papaya Linnaeus). Nature, 2008, 452, 991-996.	13.7	964
13	KBase: The United States Department of Energy Systems Biology Knowledgebase. Nature Biotechnology, 2018, 36, 566-569.	9.4	955
14	Hybrid error correction and de novo assembly of single-molecule sequencing reads. Nature Biotechnology, 2012, 30, 693-700.	9.4	946
15	Draft Genome Sequence of the Sexually Transmitted Pathogen Trichomonas vaginalis. Science, 2007, 315, 207-212.	6.0	731
16	GenomeScope 2.0 and Smudgeplot for reference-free profiling of polyploid genomes. Nature Communications, 2020, 11, 1432.	5.8	660
17	GAGE: A critical evaluation of genome assemblies and assembly algorithms. Genome Research, 2012, 22, 557-567.	2.4	597
18	Assemblathon 2: evaluating de novo methods of genome assembly in three vertebrate species. GigaScience, 2013, 2, 10.	3.3	582

#	Article	IF	CITATIONS
19	Draft Genome of the Filarial Nematode Parasite <i>Brugia malayi</i> . Science, 2007, 317, 1756-1760.	6.0	571
20	CloudBurst: highly sensitive read mapping with MapReduce. Bioinformatics, 2009, 25, 1363-1369.	1.8	551
21	The advantages of SMRT sequencing. Genome Biology, 2013, 14, .	3.8	487
22	Major Structural Differences and Novel Potential Virulence Mechanisms from the Genomes of Multiple Campylobacter Species. PLoS Biology, 2005, 3, e15.	2.6	483
23	The pineapple genome and the evolution of CAM photosynthesis. Nature Genetics, 2015, 47, 1435-1442.	9.4	472
24	Quake: quality-aware detection and correction of sequencing errors. Genome Biology, 2010, 11, R116.	13.9	470
25	RaGOO: fast and accurate reference-guided scaffolding of draft genomes. Genome Biology, 2019, 20, 224.	3.8	469
26	Major Impacts of Widespread Structural Variation on Gene Expression and Crop Improvement in Tomato. Cell, 2020, 182, 145-161.e23.	13.5	464
27	Allele-defined genome of the autopolyploid sugarcane Saccharum spontaneum L Nature Genetics, 2018, 50, 1565-1573.	9.4	463
28	Assemblathon 1: A competitive assessment of de novo short read assembly methods. Genome Research, 2011, 21, 2224-2241.	2.4	443
29	Searching for SNPs with cloud computing. Genome Biology, 2009, 10, R134.	13.9	437
30	Piercing the dark matter: bioinformatics of long-range sequencing and mapping. Nature Reviews Genetics, 2018, 19, 329-346.	7.7	395
31	Assembly of large genomes using second-generation sequencing. Genome Research, 2010, 20, 1165-1173.	2.4	390
32	Multi-Platform Next-Generation Sequencing of the Domestic Turkey (Meleagris gallopavo): Genome Assembly and Analysis. PLoS Biology, 2010, 8, e1000475.	2.6	348
33	Oxford Nanopore sequencing, hybrid error correction, and de novo assembly of a eukaryotic genome. Genome Research, 2015, 25, 1750-1756.	2.4	331
34	Genome of the long-living sacred lotus (Nelumbo nucifera Gaertn.). Genome Biology, 2013, 14, R41.	13.9	329
35	Genome sequence and rapid evolution of the rice pathogen Xanthomonas oryzae pv. oryzae PXO99A. BMC Genomics, 2008, 9, 204.	1.2	327
36	The advantages of SMRT sequencing. Genome Biology, 2013, 14, 405.	3.8	324

#	Article	IF	CITATIONS
37	Insight into the evolution of the Solanaceae from the parental genomes of Petunia hybrida. Nature Plants, 2016, 2, 16074.	4.7	311
38	Assemblytics: a web analytics tool for the detection of variants from an assembly. Bioinformatics, 2016, 32, 3021-3023.	1.8	295
39	Aluminum tolerance in maize is associated with higher <i>MATE1</i> gene copy number. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5241-5246.	3.3	265
40	Genome assembly forensics: finding the elusive mis-assembly. Genome Biology, 2008, 9, R55.	13.9	248
41	Cloud computing and the DNA data race. Nature Biotechnology, 2010, 28, 691-693.	9.4	242
42	High-throughput sequence alignment using Graphics Processing Units. BMC Bioinformatics, 2007, 8, 474.	1.2	237
43	A robust benchmark for detection of germline large deletions and insertions. Nature Biotechnology, 2020, 38, 1347-1355.	9.4	233
44	Whole genome de novo assemblies of three divergent strains of rice, Oryza sativa, document novel gene space of aus and indica. Genome Biology, 2014, 15, 506.	3.8	228
45	Interactive analysis and assessment of single-cell copy-number variations. Nature Methods, 2015, 12, 1058-1060.	9.0	220
46	Complete genomic and epigenetic maps of human centromeres. Science, 2022, 376, eabl4178.	6.0	204
47	Genomic Analyses of the Microsporidian Nosema ceranae, an Emergent Pathogen of Honey Bees. PLoS Pathogens, 2009, 5, e1000466.	2.1	194
48	Accurate de novo and transmitted indel detection in exome-capture data using microassembly. Nature Methods, 2014, 11, 1033-1036.	9.0	194
49	Two New Complete Genome Sequences Offer Insight into Host and Tissue Specificity of Plant Pathogenic Xanthomonas spp. Journal of Bacteriology, 2011, 193, 5450-5464.	1.0	189
50	The genetic and epigenetic landscape of the <i>Arabidopsis</i> centromeres. Science, 2021, 374, eabi7489.	6.0	188
51	Rate of meristem maturation determines inflorescence architecture in tomato. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 639-644.	3.3	171
52	Targeted nanopore sequencing by real-time mapping of raw electrical signal with UNCALLED. Nature Biotechnology, 2021, 39, 431-441.	9.4	160
53	Current challenges in de novo plant genome sequencing and assembly. Genome Biology, 2012, 13, 243.	13.9	157
54	Complex microbiome underlying secondary and primary metabolism in the tunicate- <i>Prochloron (i) symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E1423-32.</i>	3.3	146

#	Article	IF	CITATIONS
55	From telomere to telomere: The transcriptional and epigenetic state of human repeat elements. Science, 2022, 376, eabk3112.	6.0	146
56	Reducing INDEL calling errors in whole genome and exome sequencing data. Genome Medicine, 2014, 6, 89.	3.6	144
57	A complete reference genome improves analysis of human genetic variation. Science, 2022, 376, eabl3533.	6.0	144
58	Complex rearrangements and oncogene amplifications revealed by long-read DNA and RNA sequencing of a breast cancer cell line. Genome Research, 2018, 28, 1126-1135.	2.4	142
59	Extending reference assembly models. Genome Biology, 2015, 16, 13.	3.8	139
60	Metassembler: merging and optimizing de novo genome assemblies. Genome Biology, 2015, 16, 207.	3.8	127
61	Design patterns for efficient graph algorithms in MapReduce. , 2010, , .		123
62	Whole genome de novo assemblies of three divergent strains of rice, Oryza sativa, document novel gene space of aus and indica. Genome Biology, 2014, 15, 506.	13.9	123
63	Assembly complexity of prokaryotic genomes using short reads. BMC Bioinformatics, 2010, 11, 21.	1.2	120
64	Genomic survey of the ectoparasitic mite Varroa destructor, a major pest of the honey bee Apis mellifera. BMC Genomics, 2010, 11, 602.	1.2	118
65	Epigenetic patterns in a complete human genome. Science, 2022, 376, eabj5089.	6.0	118
66	Genomic dark matter: the reliability of short read mapping illustrated by the genome mappability score. Bioinformatics, 2012, 28, 2097-2105.	1.8	116
67	Reference quality assembly of the 3.5-Gb genome of Capsicum annuum from a single linked-read library. Horticulture Research, 2018, 5, 4.	2.9	113
68	Assembly of the 373k gene space of the polyploid sugarcane genome reveals reservoirs of functional diversity in the world's leading biomass crop. GigaScience, 2019, 8, .	3.3	106
69	Chromosomal-Level Assembly of the Asian Seabass Genome Using Long Sequence Reads and Multi-layered Scaffolding. PLoS Genetics, 2016, 12, e1005954.	1.5	105
70	Paragraph: a graph-based structural variant genotyper for short-read sequence data. Genome Biology, 2019, 20, 291.	3.8	104
71	SplitMEM: a graphical algorithm for pan-genome analysis with suffix skips. Bioinformatics, 2014, 30, 3476-3483.	1.8	102
72	A multi-task convolutional deep neural network for variant calling in single molecule sequencing. Nature Communications, 2019, 10, 998.	5.8	102

#	Article	IF	Citations
73	Comparative genomics of mutualistic viruses of Glyptapanteles parasitic wasps. Genome Biology, 2008, 9, R183.	13.9	101
74	Indel variant analysis of short-read sequencing data with Scalpel. Nature Protocols, 2016, 11, 2529-2548.	5 <b>.</b> 5	99
75	Genome and transcriptome of the regeneration-competent flatworm, <i>Macrostomum lignano</i> Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12462-12467.	3.3	90
76	Cultivation and Complete Genome Sequencing of Gloeobacter kilaueensis sp. nov., from a Lava Cave in Kīlauea Caldera, Hawai'i. PLoS ONE, 2013, 8, e76376.	1.1	85
77	Optimizing data intensive GPGPU computations for DNA sequence alignment. Parallel Computing, 2009, 35, 429-440.	1.3	83
78	Genome assembly and geospatial phylogenomics of the bed bug Cimex lectularius. Nature Communications, 2016, 7, 10164.	5.8	79
79	Benchmarking challenging small variants with linked and long reads. Cell Genomics, 2022, 2, 100128.	3.0	77
80	High-coverage sequencing and annotated assemblies of the budgerigar genome. GigaScience, 2014, 3, 11.	3.3	75
81	Comprehensive analysis of structural variants in breast cancer genomes using single-molecule sequencing. Genome Research, 2020, 30, 1258-1273.	2.4	72
82	Addressing confounding artifacts in reconstruction of gene co-expression networks. Genome Biology, 2019, 20, 94.	3.8	68
83	The DNA data deluge. IEEE Spectrum, 2013, 50, 28-33.	0.5	67
84	Hawkeye: an interactive visual analytics tool for genome assemblies. Genome Biology, 2007, 8, R34.	13.9	66
85	Hypo-osmotic-like stress underlies general cellular defects of aneuploidy. Nature, 2019, 570, 117-121.	13.7	66
86	Duplication of a domestication locus neutralized a cryptic variant that caused a breeding barrier in tomato. Nature Plants, 2019, 5, 471-479.	4.7	66
87	Applying Rapid Whole-Genome Sequencing To Predict Phenotypic Antimicrobial Susceptibility Testing Results among Carbapenem-Resistant Klebsiella pneumoniae Clinical Isolates. Antimicrobial Agents and Chemotherapy, 2019, 63, .	1.4	62
88	The bracteatus pineapple genome and domestication of clonally propagated crops. Nature Genetics, 2019, 51, 1549-1558.	9.4	60
89	Inverting the model of genomics data sharing with the NHGRI Genomic Data Science Analysis, Visualization, and Informatics Lab-space. Cell Genomics, 2022, 2, 100085.	3.0	59
90	A diploid assembly-based benchmark for variants in the major histocompatibility complex. Nature Communications, 2020, 11, 4794.	5.8	56

#	Article	IF	CITATIONS
91	Recurrent noncoding regulatory mutations in pancreatic ductal adenocarcinoma. Nature Genetics, 2017, 49, 825-833.	9.4	55
92	Hawkeye and AMOS: visualizing and assessing the quality of genome assemblies. Briefings in Bioinformatics, 2013, 14, 213-224.	3.2	54
93	Nanopore sequencing meets epigenetics. Nature Methods, 2017, 14, 347-348.	9.0	53
94	Parrot Genomes and the Evolution of Heightened Longevity and Cognition. Current Biology, 2018, 28, 4001-4008.e7.	1.8	52
95	The evolution of inflorescence diversity in the nightshades and heterochrony during meristem maturation. Genome Research, 2016, 26, 1676-1686.	2.4	51
96	Hybrid assembly with long and short reads improves discovery of gene family expansions. BMC Genomics, 2017, 18, 541.	1.2	51
97	Parliament2: Accurate structural variant calling at scale. GigaScience, 2020, 9, .	3.3	51
98	Ribbon: intuitive visualization for complex genomic variation. Bioinformatics, 2021, 37, 413-415.	1.8	48
99	Revealing Biological Modules via Graph Summarization. Journal of Computational Biology, 2009, 16, 253-264.	0.8	47
100	Complete telomere-to-telomere <i>de novo</i> assembly of the <i>Plasmodium falciparum</i> genome through long-read (>11 kb), single molecule, real-time sequencing. DNA Research, 2016, 23, 339-351.	1.5	47
101	Structure and evolution of a proviral locus of Glyptapanteles indiensis bracovirus. BMC Microbiology, 2007, 7, 61.	1.3	45
102	Novel circular RNA circNF1 acts as a molecular sponge, promoting gastric cancer by absorbing miR-16. Endocrine-Related Cancer, 2019, 26, 265-277.	1.6	45
103	Antibiotic pressure on the acquisition and loss of antibiotic resistance genes in Klebsiella pneumoniae. Journal of Antimicrobial Chemotherapy, 2018, 73, 1796-1803.	1.3	44
104	Automated correction of genome sequence errors. Nucleic Acids Research, 2004, 32, 562-569.	6.5	42
105	LRSim: A Linked-Reads Simulator Generating Insights for Better Genome Partitioning. Computational and Structural Biotechnology Journal, 2017, 15, 478-484.	1.9	42
106	The Challenge of Small-Scale Repeats for Indel Discovery. Frontiers in Bioengineering and Biotechnology, 2015, 3, 8.	2.0	41
107	Scikit-ribo Enables Accurate Estimation and Robust Modeling of Translation Dynamics at Codon Resolution. Cell Systems, 2018, 6, 180-191.e4.	2.9	41
108	Biological data sciences in genome research. Genome Research, 2015, 25, 1417-1422.	2.4	40

#	Article	IF	CITATIONS
109	TGF- $\hat{l}^2$ reduces DNA ds-break repair mechanisms to heighten genetic diversity and adaptability of CD44+/CD24 $\hat{a}^2$ cancer cells. ELife, 2017, 6, .	2.8	37
110	Local adaptation and archaic introgression shape global diversity at human structural variant loci. ELife, 2021, 10, .	2.8	33
111	Conservation Genomics of the Declining North American Bumblebee Bombus terricola Reveals Inbreeding and Selection on Immune Genes. Frontiers in Genetics, 2018, 9, 316.	1.1	31
112	Genomic diversity of SARS-CoV-2 during early introduction into the Baltimore–Washington metropolitan area. JCI Insight, 2021, 6, .	2.3	31
113	Genotyping in the Cloud with Crossbow. Current Protocols in Bioinformatics, 2012, 39, Unit15.3.	25.8	30
114	Clonal Hematopoiesis Before, During, and After Human Spaceflight. Cell Reports, 2020, 33, 108458.	2.9	30
115	The rise of a digital immune system. GigaScience, 2012, 1, 4.	3.3	29
116	Dual functions of Macpiwi1 in transposon silencing and stem cell maintenance in the flatworm <i>Macrostomum lignano</i> . Rna, 2015, 21, 1885-1897.	1.6	26
117	Characterization of Insertion Sites in Rainbow Papaya, the First Commercialized Transgenic Fruit Crop. Tropical Plant Biology, 2008, 1, 293-309.	1.0	25
118	Rapid parallel genome indexing with MapReduce., 2011,,.		25
119	Teaser: Individualized benchmarking and optimization of read mapping results for NGS data. Genome Biology, 2015, 16, 235.	3.8	25
120	De novo genome assembly of <i>Candida glabrata</i> reveals cell wall protein complement and structure of dispersed tandem repeat arrays. Molecular Microbiology, 2020, 113, 1209-1224.	1.2	25
121	Integrated Microbial Survey Analysis of Prokaryotic Communities for the PhyloChip Microarray. Applied and Environmental Microbiology, 2010, 76, 5636-5638.	1.4	24
122	A plasmid locus associated with Klebsiella clinical infections encodes a microbiome-dependent gut fitness factor. PLoS Pathogens, 2021, 17, e1009537.	2.1	20
123	iGenomics: Comprehensive DNA sequence analysis on your Smartphone. GigaScience, 2020, 9, .	3.3	19
124	Computational thinking in the era of big data biology. Genome Biology, 2012, 13, 177.	13.9	18
125	Precise detection of de novo single nucleotide variants in human genomes. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5516-5521.	3.3	18
126	Genomeâ€wide patterns of transposon proliferation in an evolutionary young hybrid fish. Molecular Ecology, 2019, 28, 1491-1505.	2.0	18

#	Article	IF	CITATIONS
127	Vargas: heuristic-free alignment for assessing linear and graph read aligners. Bioinformatics, 2020, 36, 3712-3718.	1.8	17
128	The genomic basis of evolutionary differentiation among honey bees. Genome Research, 2021, 31, 1203-1215.	2.4	17
129	Cell wall protein variation, breakâ€induced replication, and subtelomere dynamics in <i>Candida glabrata</i> . Molecular Microbiology, 2021, 116, 260-276.	1.2	16
130	Natural Genetic Diversity in Tomato Flavor Genes. Frontiers in Plant Science, 2021, 12, 642828.	1.7	16
131	Pan-genomic matching statistics for targeted nanopore sequencing. IScience, 2021, 24, 102696.	1.9	15
132	Molecular genetic diversity and characterization of conjugation genes in the fish parasite Ichthyophthirius multifiliis. Molecular Phylogenetics and Evolution, 2015, 86, 1-7.	1.2	14
133	The human origin recognition complex is essential for pre-RC assembly, mitosis, and maintenance of nuclear structure. ELife, $2021,10,10$	2.8	14
134	High resolution copy number inference in cancer using short-molecule nanopore sequencing. Nucleic Acids Research, 2021, 49, e124-e124.	6.5	14
135	Complete Sequence of a 641-kb Insertion of Mitochondrial DNA in the <i>Arabidopsis thaliana</i> Nuclear Genome. Genome Biology and Evolution, 2022, 14, .	1.1	14
136	Sapling: accelerating suffix array queries with learned data models. Bioinformatics, 2021, 37, 744-749.	1.8	13
137	An anchored chromosomeâ€scale genome assembly of spinach improves annotation and reveals extensive gene rearrangements in euasterids. Plant Genome, 2021, 14, e20101.	1.6	13
138	Artificial Intelligence and Cardiovascular Genetics. Life, 2022, 12, 279.	1.1	13
139	The missing graphical user interface for genomics. Genome Biology, 2010, 11, 128.	13.9	11
140	16GT: a fast and sensitive variant caller using a 16-genotype probabilistic model. GigaScience, 2017, 6, 1-4.	3.3	11
141	SNPC-1.3 is a sex-specific transcription factor that drives male piRNA expression in C. elegans. ELife, 2021, 10, .	2.8	7
142	Sixty years of genome biology. Genome Biology, 2013, 14, 113.	13.9	6
143	NanoBLASTer: Fast alignment and characterization of Oxford Nanopore single molecule sequencing reads. , 2016, , .		6
144	Samovar: Single-Sample Mosaic Single-Nucleotide Variant Calling with Linked Reads. IScience, 2019, 18, 1-10.	1.9	6

#	Article	IF	CITATIONS
145	Recovering rearranged cancer chromosomes from karyotype graphs. BMC Bioinformatics, 2019, 20, 641.	1.2	4
146	Optimized sample selection for cost-efficient long-read population sequencing. Genome Research, 2021, 31, 910-918.	2.4	4
147	The DNA60IFX contest. Genome Biology, 2013, 14, 124.	3.8	3
148	Graph genomes article collection. Genome Biology, 2019, 20, 25.	3.8	3
149	Answering the demands of digital genomics. Concurrency Computation Practice and Experience, 2014, 26, 917-928.	1.4	2
150	Machine learning based prediction of gliomas with germline mutations obtained from whole exome sequences from TCGA and 1000 Genomes Project. , 2019, , .		2
151	On Algorithmic Complexity of Biomolecular Sequence Assembly Problem. Lecture Notes in Computer Science, 2014, , 183-195.	1.0	2
152	Skyhawk: an artificial neural network-based discriminator for reviewing clinically significant genomic variants. International Journal of Computational Biology and Drug Design, 2020, 13, 431.	0.3	2
153	In memory of James Taylor: the birth of Galaxy. Genome Biology, 2020, 21, 105.	3.8	1
154	Democratizing long-read genome assembly. Cell Systems, 2021, 12, 945-947.	2.9	1
155	Same-Cell Co-Occurrence of RAS Hotspot and BRAF V600E Mutations in Treatment-Naive Colorectal Cancer. JCO Precision Oncology, 2022, 6, e2100365.	1.5	1
156	Illuminating the genetics of complex human diseases. BMC Proceedings, 2012, 6, .	1.8	0
157	Large-scale Sequencing and Assembly of Cereal Genomes Using Blacklight. , 2014, , .		0
158	Bioinformatics of DNA. Proceedings of the IEEE, 2017, 105, 419-421.	16.4	0
159	A master regulator of regeneration. Science, 2019, 363, 1152-1153.	6.0	0
160	Abstract 850: Comprehensive genome and transcriptome structural analysis of a breast cancer cell line using single molecule sequencing., 2016,,.		0