Nathan M Springer

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/5889823/publications.pdf Version: 2024-02-01



NATHAN M SPRINCEP

#	Article	IF	CITATIONS
1	The B73 Maize Genome: Complexity, Diversity, and Dynamics. Science, 2009, 326, 1112-1115.	12.6	3,612
2	Improved maize reference genome with single-molecule technologies. Nature, 2017, 546, 524-527.	27.8	1,113
3	Comparative population genomics of maize domestication and improvement. Nature Genetics, 2012, 44, 808-811.	21.4	816
4	Differentiation of the maize subgenomes by genome dominance and both ancient and ongoing gene loss. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4069-4074.	7.1	644
5	Maize Inbreds Exhibit High Levels of Copy Number Variation (CNV) and Presence/Absence Variation (PAV) in Genome Content. PLoS Genetics, 2009, 5, e1000734.	3.5	484
6	Genome-wide patterns of genetic variation among elite maize inbred lines. Nature Genetics, 2010, 42, 1027-1030.	21.4	439
7	Widespread natural variation of DNA methylation within angiosperms. Genome Biology, 2016, 17, 194.	8.8	436
8	Advancing Crop Transformation in the Era of Genome Editing. Plant Cell, 2016, 28, tpc.00196.2016.	6.6	429
9	Genome-wide discovery and characterization of maize long non-coding RNAs. Genome Biology, 2014, 15, R40.	9.6	419
10	Progress Toward Understanding Heterosis in Crop Plants. Annual Review of Plant Biology, 2013, 64, 71-88.	18.7	393
11	Transposable Elements Contribute to Activation of Maize Genes in Response to Abiotic Stress. PLoS Genetics, 2015, 11, e1004915.	3.5	346
12	Discovery of induced point mutations in maize genes by TILLING. BMC Plant Biology, 2004, 4, 12.	3.6	342
13	Pervasive gene content variation and copy number variation in maize and its undomesticated progenitor. Genome Research, 2010, 20, 1689-1699.	5.5	309
14	Allelic variation and heterosis in maize: How do two halves make more than a whole?. Genome Research, 2007, 17, 264-275.	5.5	306
15	Cis-transcriptional Variation in Maize Inbred Lines B73 and Mo17 Leads to Additive Expression Patterns in the F1 Hybrid. Genetics, 2006, 173, 2199-2210.	2.9	253
16	Widespread long-range cis-regulatory elements in the maize genome. Nature Plants, 2019, 5, 1237-1249.	9.3	250
17	Epigenetic and Genetic Influences on DNA Methylation Variation in Maize Populations. Plant Cell, 2013, 25, 2783-2797.	6.6	227
18	Reciprocal Silencing, Transcriptional Bias and Functional Divergence of Homeologs in Polyploid Cotton (Gossypium). Genetics, 2009, 182, 503-517.	2.9	212

#	Article	IF	CITATIONS
19	Parent-of-Origin Effects on Gene Expression and DNA Methylation in the Maize Endosperm. Plant Cell, 2011, 23, 4221-4233.	6.6	189
20	Transposable element influences on gene expression in plants. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2017, 1860, 157-165.	1.9	188
21	Draft Assembly of Elite Inbred Line PH207 Provides Insights into Genomic and Transcriptome Diversity in Maize. Plant Cell, 2016, 28, 2700-2714.	6.6	183
22	Exploiting induced and natural epigenetic variation for crop improvement. Nature Reviews Genetics, 2017, 18, 563-575.	16.3	183
23	The maize W22 genome provides a foundation for functional genomics and transposon biology. Nature Genetics, 2018, 50, 1282-1288.	21.4	183
24	RNA-directed DNA methylation enforces boundaries between heterochromatin and euchromatin in the maize genome. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14728-14733.	7.1	179
25	Comparative Analysis of SET Domain Proteins in Maize and Arabidopsis Reveals Multiple Duplications Preceding the Divergence of Monocots and Dicots. Plant Physiology, 2003, 132, 907-925.	4.8	176
26	Heterosis Is Prevalent for Multiple Traits in Diverse Maize Germplasm. PLoS ONE, 2009, 4, e7433.	2.5	173
27	Spreading of Heterochromatin Is Limited to Specific Families of Maize Retrotransposons. PLoS Genetics, 2012, 8, e1003127.	3.5	166
28	Genetic Perturbation of the Maize Methylome. Plant Cell, 2014, 26, 4602-4616.	6.6	158
29	Allele-Specific Expression Patterns Reveal Biases and Embryo-Specific Parent-of-Origin Effects in Hybrid Maize. Plant Cell, 2007, 19, 2391-2402.	6.6	157
30	Reshaping of the maize transcriptome by domestication. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11878-11883.	7.1	154
31	Maize Gene Atlas Developed by RNA Sequencing and Comparative Evaluation of Transcriptomes Based on RNA Sequencing and Microarrays. PLoS ONE, 2013, 8, e61005.	2.5	152
32	Heritable Epigenetic Variation among Maize Inbreds. PLoS Genetics, 2011, 7, e1002372.	3.5	150
33	Gene expression analyses in maize inbreds and hybrids with varying levels of heterosis. BMC Plant Biology, 2008, 8, 33.	3.6	145
34	Natural variation for gene expression responses to abiotic stress in maize. Plant Journal, 2017, 89, 706-717.	5.7	145
35	The Composition and Origins of Genomic Variation among Individuals of the Soybean Reference Cultivar Williams 82 Â Â. Plant Physiology, 2011, 155, 645-655.	4.8	137
36	Genomic Distribution of H3K9me2 and DNA Methylation in a Maize Genome. PLoS ONE, 2014, 9, e105267.	2.5	137

#	Article	IF	CITATIONS
37	Genome-wide mapping of transcriptional enhancer candidates using DNA and chromatin features in maize. Genome Biology, 2017, 18, 137.	8.8	134
38	Comprehensive analysis of imprinted genes in maize reveals allelic variation for imprinting and limited conservation with other species. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 19639-19644.	7.1	131
39	Epigenetics: Beyond Chromatin Modifications and Complex Genetic Regulation. Plant Physiology, 2014, 165, 933-947.	4.8	126
40	Distribution, functional impact, and origin mechanisms of copy number variation in the barley genome. Genome Biology, 2013, 14, R58.	8.8	125
41	Maize Chromomethylase <i>Zea methyltransferase2</i> Is Required for CpNpG Methylation. Plant Cell, 2001, 13, 1919-1928.	6.6	120
42	Brd1 Gene in Maize Encodes a Brassinosteroid C-6 Oxidase. PLoS ONE, 2012, 7, e30798.	2.5	116
43	Epigenetics and crop improvement. Trends in Genetics, 2013, 29, 241-247.	6.7	110
44	A Comprehensive Analysis of Alternative Splicing in Paleopolyploid Maize. Frontiers in Plant Science, 2017, 8, 694.	3.6	109
45	The effect of artificial selection on phenotypic plasticity in maize. Nature Communications, 2017, 8, 1348.	12.8	105
46	Genomic imprinting, methylation and molecular evolution of maize Enhancer of zeste (Mez) homologs. Plant Journal, 2007, 49, 325-337.	5.7	97
47	Genomic Distribution of Maize Facultative Heterochromatin Marked by Trimethylation of H3K27. Plant Cell, 2013, 25, 780-793.	6.6	91
48	Genomic features shaping the landscape of meiotic double-strand-break hotspots in maize. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12231-12236.	7.1	91
49	Repeat subtraction-mediated sequence capture from a complex genome. Plant Journal, 2010, 62, 898-909.	5.7	89
50	Creating Order from Chaos: Epigenome Dynamics in Plants with Complex Genomes. Plant Cell, 2016, 28, 314-325.	6.6	89
51	<i>ragged seedling2</i> Encodes an ARGONAUTE7-Like Protein Required for Mediolateral Expansion, but Not Dorsiventrality, of Maize Leaves Â. Plant Cell, 2010, 22, 1441-1451.	6.6	85
52	Mendelian and Non-Mendelian Regulation of Gene Expression in Maize. PLoS Genetics, 2013, 9, e1003202.	3.5	84
53	Minimal evidence for consistent changes in maize DNA methylation patterns following environmental stress. Frontiers in Plant Science, 2015, 6, 308.	3.6	82
54	Sequence Relationships, Conserved Domains, and Expression Patterns for Maize Homologs of the Polycomb Group GenesE(z), esc, andE(Pc). Plant Physiology, 2002, 128, 1332-1345.	4.8	79

#	Article	IF	CITATIONS
55	Transgene-Induced RNA Interference as a Tool for Plant Functional Genomics. Methods in Enzymology, 2005, 392, 1-24.	1.0	78
56	B73-Mo17 Near-Isogenic Lines Demonstrate Dispersed Structural Variation in Maize Â. Plant Physiology, 2011, 156, 1679-1690.	4.8	76
57	Consistent and Heritable Alterations of DNA Methylation Are Induced by Tissue Culture in Maize. Genetics, 2014, 198, 209-218.	2.9	76
58	Transposable elements contribute to dynamic genome content in maize. Plant Journal, 2019, 100, 1052-1065.	5.7	76
59	Dynamic Patterns of Gene Expression Additivity and Regulatory Variation throughout Maize Development. Molecular Plant, 2019, 12, 410-425.	8.3	69
60	Stable unmethylated DNA demarcates expressed genes and their cis-regulatory space in plant genomes. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 23991-24000.	7.1	67
61	High-Throughput Genetic Mapping of Mutants via Quantitative Single Nucleotide Polymorphism Typing. Genetics, 2010, 184, 19-26.	2.9	66
62	Population-level analysis reveals the widespread occurrence and phenotypic consequence of DNA methylation variation not tagged by genetic variation in maize. Genome Biology, 2019, 20, 243.	8.8	65
63	Nonadditive Expression and Parent-of-Origin Effects Identified by Microarray and Allele-Specific Expression Profiling of Maize Endosperm. Plant Physiology, 2007, 145, 411-425.	4.8	64
64	Evolutionary Divergence of Monocot and Dicot Methyl-CpG-Binding Domain Proteins. Plant Physiology, 2005, 138, 92-104.	4.8	62
65	Examining the Causes and Consequences of Context-Specific Differential DNA Methylation in Maize. Plant Physiology, 2015, 168, 1262-1274.	4.8	62
66	Post-conversion targeted capture of modified cytosines in mammalian and plant genomes. Nucleic Acids Research, 2015, 43, e81-e81.	14.5	62
67	Meta Gene Regulatory Networks in Maize Highlight Functionally Relevant Regulatory Interactions. Plant Cell, 2020, 32, 1377-1396.	6.6	60
68	Evolutionary and functional genomics of DNA methylation in maize domestication and improvement. Nature Communications, 2020, 11, 5539.	12.8	59
69	Inheritance Patterns and Stability of DNA Methylation Variation in Maize Near-Isogenic Lines. Genetics, 2014, 196, 667-676.	2.9	58
70	Heritable Epigenomic Changes to the Maize Methylome Resulting from Tissue Culture. Genetics, 2018, 209, 983-995.	2.9	57
71	The genomic ecosystem of transposable elements in maize. PLoS Genetics, 2021, 17, e1009768.	3.5	57
72	Monitoring the interplay between transposable element families and DNA methylation in maize. PLoS Genetics, 2019, 15, e1008291.	3.5	56

#	Article	IF	CITATIONS
73	Assessing the Efficiency of RNA Interference for Maize Functional Genomics. Plant Physiology, 2007, 143, 1441-1451.	4.8	55
74	The importance of dominance and genotype-by-environment interactions on grain yield variation in a large-scale public cooperative maize experiment. G3: Genes, Genomes, Genetics, 2021, 11, .	1.8	52
75	Genetic Determinants for Enzymatic Digestion of Lignocellulosic Biomass Are Independent of Those for Lignin Abundance in a Maize Recombinant Inbred Population. Plant Physiology, 2014, 165, 1475-1487.	4.8	51
76	Genotype-by-environment interactions affecting heterosis in maize. PLoS ONE, 2018, 13, e0191321.	2.5	51
77	Isolation of Plant DNA for PCR and Genotyping Using Organic Extraction and CTAB. Cold Spring Harbor Protocols, 2010, 2010, pdb.prot5515.	0.3	50
78	The repetitive landscape of the 5100 Mbp barley genome. Mobile DNA, 2017, 8, 22.	3.6	49
79	Reassess the <i>t</i> Test: Interact with All Your Data via ANOVA. Plant Cell, 2015, 27, 2088-2094.	6.6	48
80	Optimization of multiplexed CRISPR/Cas9 system for highly efficient genome editing in <i>Setaria viridis</i> . Plant Journal, 2020, 104, 828-838.	5.7	48
81	Identification of the expressome by machine learning on omics data. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 18119-18125.	7.1	47
82	A Recommendation for Naming Transcription Factor Proteins in the Grasses. Plant Physiology, 2009, 149, 4-6.	4.8	45
83	Utility of Climatic Information via Combining Ability Models to Improve Genomic Prediction for Yield Within the Genomes to Fields Maize Project. Frontiers in Genetics, 2020, 11, 592769.	2.3	44
84	Maternal and paternal alleles exhibit differential histone methylation and acetylation at maize imprinted genes. Plant Journal, 2008, 56, 903-912.	5.7	43
85	The limited role of differential fractionation in genome content variation and function in maize (<i>Zea mays L</i> .) inbred lines. Plant Journal, 2018, 93, 131-141.	5.7	42
86	Detection of DNA Methylation by Whole-Genome Bisulfite Sequencing. Methods in Molecular Biology, 2018, 1676, 185-196.	0.9	39
87	Profiling expression changes caused by a segmental aneuploid in maize. BMC Genomics, 2008, 9, 7.	2.8	38
88	Insights into the Effects of Long-Term Artificial Selection on Seed Size in Maize. Genetics, 2014, 198, 409-421.	2.9	38
89	Maize genomes to fields (C2F): 2014–2017 field seasons: genotype, phenotype, climatic, soil, and inbred ear image datasets. BMC Research Notes, 2020, 13, 71.	1.4	38
90	Co-expression network analysis of duplicate genes in maize (Zea mays L.) reveals no subgenome bias. BMC Genomics, 2016, 17, 875.	2.8	36

#	Article	IF	CITATIONS
91	Genomic limitations to <scp>RNA</scp> sequencing expression profiling. Plant Journal, 2015, 84, 491-503.	5.7	34
92	Challenges of Translating Gene Regulatory Information into Agronomic Improvements. Trends in Plant Science, 2019, 24, 1075-1082.	8.8	34
93	Classifying coldâ€stress responses of inbred maize seedlings using <scp>RGB</scp> imaging. Plant Direct, 2019, 3, e00104.	1.9	34
94	Dynamic Patterns of Transcript Abundance of Transposable Element Families in Maize. G3: Genes, Genomes, Genetics, 2019, 9, 3673-3682.	1.8	32
95	Chromosome-level genome assembly of a regenerable maize inbred line A188. Genome Biology, 2021, 22, 175.	8.8	32
96	Natural Variation for Alleles Under Epigenetic Control by the Maize Chromomethylase <i>Zmet2</i> . Genetics, 2007, 177, 749-760.	2.9	31
97	Prediction of conserved and variable heat and cold stress response in maize using cis-regulatory information. Plant Cell, 2022, 34, 514-534.	6.6	30
98	CHH DNA methylation increases at 24â€ <i>PHAS</i> loci depend on 24â€nt phased small interfering RNAs in maize meiotic anthers. New Phytologist, 2021, 229, 2984-2997.	7.3	29
99	Variation in DNA Methylation Patterns is More Common among Maize Inbreds than among Tissues. Plant Genome, 2013, 6, plantgenome2012.06.0009.	2.8	28
100	Shaping a better rice plant. Nature Genetics, 2010, 42, 475-476.	21.4	27
101	Maize Carbohydrate Partitioning Defective33 Encodes an MCTP Protein and Functions in Sucrose Export from Leaves. Molecular Plant, 2019, 12, 1278-1293.	8.3	26
102	Discovering Functional Modules across Diverse Maize Transcriptomes Using COB, the Co-Expression Browser. PLoS ONE, 2014, 9, e99193.	2.5	25
103	Maize Genomes to Fields: 2014 and 2015 field season genotype, phenotype, environment, and inbred ear image datasets. BMC Research Notes, 2018, 11, 452.	1.4	25
104	UAVâ€based imaging platform for monitoring maize growth throughout development. Plant Direct, 2020, 4, e00230.	1.9	25
105	Epigenetic features drastically impact CRISPR–Cas9 efficacy in plants. Plant Physiology, 2022, 190, 1153-1164.	4.8	25
106	Changes in genome content generated via segregation of nonâ€allelic homologs. Plant Journal, 2012, 72, 390-399.	5.7	24
107	Potential roles for transposable elements in creating imprinted expression. Current Opinion in Genetics and Development, 2018, 49, 8-14.	3.3	21
108	Relative utility of agronomic, phenological, and morphological traits for assessing genotypeâ€byâ€environment interaction in maize inbreds. Crop Science, 2020, 60, 62-81.	1.8	21

#	Article	IF	CITATIONS
109	DNA demethylation affects imprinted gene expression in maize endosperm. Genome Biology, 2022, 23, 77.	8.8	20
110	Subtle Perturbations of the Maize Methylome Reveal Genes and Transposons Silenced by Chromomethylase or RNA-Directed DNA Methylation Pathways. G3: Genes, Genomes, Genetics, 2018, 8, 1921-1932.	1.8	19
111	Idea Factory: the Maize Genomes to Fields Initiative. Crop Science, 2019, 59, 1406-1410.	1.8	18
112	Utilizing temporal measurements from UAVs to assess root lodging in maize and its impact on productivity. Field Crops Research, 2021, 262, 108014.	5.1	18
113	Stories that can't be told by SNPs; DNA methylation variation in plant populations. Current Opinion in Plant Biology, 2021, 61, 101989.	7.1	17
114	Disruption of Imprinting by <i>Mutator</i> Transposon Insertions in the 5′ Proximal Regions of the <i>Zea mays Mez1</i> Locus. Genetics, 2009, 181, 1229-1237.	2.9	16
115	Singleâ€parent expression drives dynamic gene expression complementation in maize hybrids. Plant Journal, 2021, 105, 93-107.	5.7	16
116	Genetic and epigenetic variation in transposable element expression responses to abiotic stress in maize. Plant Physiology, 2021, 186, 420-433.	4.8	16
117	Whole-genome variation of transposable element insertions in a maize diversity panel. G3: Genes, Genomes, Genetics, 2021, 11, .	1.8	16
118	The maize gene <i>maternal derepression of r1</i> encodes a DNA glycosylase that demethylates DNA and reduces siRNA expression in the endosperm. Plant Cell, 2022, 34, 3685-3701.	6.6	16
119	Variation and Inheritance of Small RNAs in Maize Inbreds and F1 Hybrids. Plant Physiology, 2020, 182, 318-331.	4.8	14
120	Assessing the regulatory potential of transposable elements using chromatin accessibility profiles of maize transposons. Genetics, 2021, 217, 1-13.	2.9	14
121	Genetic Control of Maize Shoot Apical Meristem Architecture. G3: Genes, Genomes, Genetics, 2014, 4, 1327-1337.	1.8	13
122	Genome-wide nucleotide patterns and potential mechanisms of genome divergence following domestication in maize and soybean. Genome Biology, 2019, 20, 74.	8.8	13
123	Opportunities to Use DNA Methylation to Distil Functional Elements in Large Crop Genomes. Molecular Plant, 2019, 12, 282-284.	8.3	12
124	Maize decrease in DNA methylation 1 targets RNA-directed DNA methylation on active chromatin. Plant Cell, 2021, 33, 2183-2196.	6.6	11
125	High-Resolution Genotyping via Whole Genome Hybridizations to Microarrays Containing Long Oligonucleotide Probes. PLoS ONE, 2010, 5, e14178.	2.5	11
126	Paramutation in evolution, population genetics and breeding. Seminars in Cell and Developmental Biology, 2015, 44, 33-38.	5.0	10

#	Article	IF	CITATIONS
127	Using multiple reference genomes to identify and resolve annotation inconsistencies. BMC Genomics, 2020, 21, 281.	2.8	10
128	Plant height heterosis is quantitatively associated with expression levels of plastid ribosomal proteins. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	10
129	Density Stress has Minimal Impacts on the Barley or Maize Seedling Transcriptome. Plant Genome, 2011, 4, .	2.8	9
130	Opportunities and challenges in phenotyping row crops using droneâ€based RGB imaging. The Plant Phenome Journal, 2022, 5, .	2.0	9
131	Small RNAs: How Seeds Remember To Obey Their Mother. Current Biology, 2009, 19, R649-R651.	3.9	8
132	Utilization of deletion bins to anchor and order sequences along the wheat 7B chromosome. Theoretical and Applied Genetics, 2014, 127, 2029-2040.	3.6	8
133	News from the plant world: Listening to transcription. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2017, 1860, 1-2.	1.9	8
134	Hybrid Decay: A Transgenerational Epigenetic Decline in Vigor and Viability Triggered in Backcross Populations of Teosinte with Maize. Genetics, 2019, 213, 143-160.	2.9	7
135	Widespread imprinting of transposable elements and variable genes in the maize endosperm. PLoS Genetics, 2021, 17, e1009491.	3.5	6
136	A comparative genomic hybridization approach to study gene copy number variations among chinese hamster cell lines. Biotechnology and Bioengineering, 2017, 114, 1903-1908.	3.3	5
137	BII-Implementation: The causes and consequences of plant biodiversity across scales in a rapidly changing world. Research Ideas and Outcomes, 0, 7, .	1.0	5
138	Bisulfite Sequence Analyses Using CyVerse Discovery Environment: From Mapping to DMRs. Current Protocols in Plant Biology, 2016, 1, 510-529.	2.8	4
139	Intragenic Meiotic Crossovers Generate Novel Alleles with Transgressive Expression Levels. Molecular Biology and Evolution, 2018, 35, 2762-2772.	8.9	4
140	The Plant Genome: Decoding the Transcriptional Hardwiring. , 0, , 196-228.		4
141	Realizing the potential of genomics for crop improvement. Briefings in Functional Genomics, 2010, 9, 93-94.	2.7	3
142	Weeding out bad alleles. Nature Plants, 2018, 4, 193-194.	9.3	3
143	The Maize Methylome. Compendium of Plant Genomes, 2018, , 81-96.	0.5	3
144	Stability of DNA methylation and chromatin accessibility in structurally diverse maize genomes. G3: Genes, Genomes, Genetics, 2021, 11, .	1.8	3

#	Article	IF	CITATIONS
145	Utilizing spatial variability from hyperspectral imaging to assess variation in maize seedlings. The Plant Phenome Journal, 2021, 4, e20013.	2.0	3
146	Characterizing introgression-by-environment interactions using maize near isogenic lines. Theoretical and Applied Genetics, 2020, 133, 2761-2773.	3.6	2
147	Epigenetic Phenomena and Epigenomics in Maize. , 2009, , 119-147.		2
148	Genomeâ€wide loss of <scp>CHH</scp> methylation with limited transcriptome changes in <i>Setaria viridis</i> DOMAINS REARRANGED METHYLTRANSFERASE (<scp>DRM</scp>) mutants. Plant Journal, 2022, 111, 103-116.	5.7	2
149	Chapter 3 Epigenetics. Advances in Agronomy, 2008, 100, 59-80.	5.2	1
150	Imprinting in Maize. , 2009, , 429-440.		1
151	Transposable elements: Microbiomes in the genomes. Nature Plants, 2015, 1, 15004.	9.3	1
152	A capture-based assay for detection and characterization of transposon polymorphisms in maize. G3: Genes, Genomes, Genetics, 2021, 11, .	1.8	1